



# Report and Recommendation of the President to the Board of Directors

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Project Number: 40555  
October 2009

Proposed Asian Development Fund Grant  
Kingdom of Cambodia: Strengthening Technical and  
Vocational Education and Training Project

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 15 October 2009)

Currency Unit	–	riel (KR)
KR1.00	=	\$0.00024015
\$1.00	=	KR4,164

## ABBREVIATIONS

ADB	–	Asian Development Bank
CIEDC	–	Cambodia–India Entrepreneurship Development Center
DGTVET	–	Directorate General of Technical and Vocational Education and Training
EA	–	executing agency
ESDP	–	Education Sector Development Program
FMA	–	financial management assessment
GDP	–	gross domestic product
GEMAP	–	gender and ethnic minorities analysis and action plan
GTZ	–	German Agency for Technical Cooperation
ICT	–	information and communication technology
ILO	–	International Labour Organization
LMIS	–	labor market information system
M&E	–	monitoring and evaluation
MEF	–	Ministry of Economy and Finance
MOEYS	–	Ministry of Education, Youth and Sport
MOLVT	–	Ministry of Labor and Vocational Training
MTTDP	–	Medium-Term TVET Development Plan
NGO	–	nongovernment organization
NSDP	–	National Strategic Development Plan, 2006–2010
NTB	–	National Training Board
NTDP	–	National TVET Development Plan
NTF	–	National Training Fund
NQF	–	national qualifications framework
NVQF	–	national vocational qualifications framework
NTTI	–	National Technical Training Institute
PCU	–	project coordination unit
PTB	–	provincial training board
PTC	–	provincial training center
RTC	–	regional training center
TVET	–	technical and vocational education and training
UNDP	–	United Nations Development Programme
VETMIS	–	vocational education and training management information system
VSTP	–	voucher skills training program

## NOTE

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

<b>Vice-President</b>	C. Lawrence Greenwood, Jr., Operations 2
<b>Director General</b>	A. Thapan, Southeast Asia Department (SERD)
<b>Director</b>	S. Lateef, Social Sectors Division, SERD
<b>Team leader</b>	W. Duncan, Principal Education Specialist, SERD
<b>Team members</b>	E. Fischelis, Counsel, Office of the General Counsel N. LaRocque, Education Specialist, SERD S. Mar, Social Sector Officer, Cambodia Resident Mission, SERD

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## CONTENTS

	<b>Page</b>
GRANT AND PROJECT SUMMARY	i
I. THE PROPOSAL	1
II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES	1
A. Performance Indicators and Analysis	1
B. Analysis of Key Problems and Opportunities	5
C. Lessons Learned	9
III. THE PROPOSED PROJECT	10
A. Impact and Outcome	10
B. Outputs	10
C. Special Features	14
D. Project Investment Plan	14
E. Financing Plan	15
F. Implementation Arrangements	15
IV. PROJECT BENEFITS, IMPACTS, ASSUMPTIONS, AND RISKS	20
A. Expected Benefits and Impacts	20
B. Assumptions, Risks, and Mitigating Measures	23
V. ASSURANCES	24
VI. RECOMMENDATION	24
APPENDIXES	
1. Design and Monitoring Framework	25
2. Summary Subsector Assessment	30
3. External Assistance	37
4. Establishing an Integrated System of Professional Support	39
5. Financing and Implementing the Voucher Skills Training Program	41
6. Developing and Implementing Skills Standards	44
7. Detailed Cost Estimates and Financing Plan	46
8. Project Management Structure	48
9. Implementation Schedule	49
10. Procurement Plan	52
11. Funds Flow with Accounting and Reporting Arrangements	57
12. Summary Poverty Reduction and Social Strategy	58
13. Gender and Ethnic Minorities Analysis and Action Plan	61
SUPPLEMENTARY APPENDIXES	
A. Summary Evaluation of the Pilot Voucher Skills Training Program	
B. Implementation Strategies for Regional Training Centers	
C. Procedures for Phased Extension of Voucher Skills Training Program	
D. Strategies for Development of Management Capacity	
E. Human Resources Development Plan	
F. Systems for Institutional Monitoring	

- G. Strategies for Development of Technical and Vocational Education and Training Information Systems
- H. Strategies for Career Guidance
- I. Procurement Capacity Assessment
- J. Consulting Services and Outline Terms of Reference
- K. Good Governance Framework
- L. Financial Management Capacity Assessment
- M. Financial and Economic Analysis

## GRANT AND PROJECT SUMMARY

<b>Recipient</b>	Kingdom of Cambodia
<b>Classification</b>	Targeting classification: General intervention Sector (subsector): Education (technical education and vocational skills training) Themes (subthemes): <b>Social development</b> (human development), capacity development (institutional development), gender equity (human capabilities) Location impact: Rural (high), urban (low), national (medium)
<b>Environment Assessment</b>	Category C
<b>Project Description</b>	<p>The Project will support the Government's strategies to reduce poverty and achieve socioeconomic development for all Cambodians. These include (i) promotion of vocational and skills training to ensure continuing improvement in national productivity; (ii) creation of jobs in the formal and nonformal sectors; (iii) an increase in agricultural productivity to create jobs in rural areas; and (iv) the establishment of technical vocational education and training (TVET) networks to assist both men and women, especially the poor, disabled and vulnerable, to respond to labor market needs.</p> <p>The Project will help ensure an expanded public TVET system that is endorsed by industry and is better aligned with the skills requirements of the formal and informal economies. The project will develop replicable models for transforming the system so it is more relevant to industry, focusing initially on three industry sectors: mechanics, construction, and business services and information and communication technologies (ICT). These models can be used as the basis for continued reform in other industry sectors.</p> <p>Three outputs will be produced. The first will be better access to formal mid-level TVET that is linked to identified industry demand, and employs industry-endorsed skills and competency standards as the basis for training. Five of the 21 provincial training centers (PTCs) will be transformed into regional training centers (RTCs) to expand access to formal mid-level TVET programs in rural areas. Hostels for women will increase their access to these programs. Independent industry advisory groups, consisting primarily of employers, will be established in the three industry sectors, and will review and endorse standards and curriculum and assessment procedures.</p> <p>The second output will be an extension of national access, especially of the young and unemployed, to the nonformal TVET training offered through PTCs. The Voucher Skills Training Program (VSTP) piloted under the Asian Development Bank (ADB) Second Education Sector Development Program provides basic nonformal short, community-responsive skills training in poor communes. It will be revised and</p>

expanded and will provide qualifications that allow course graduates to enter the next level of training. PTCs will be strengthened and helped to support and manage the program, while two new PTCs will be established to allow delivery of the VSTP in all 23 rural provinces.

The third output will be stronger capacity for policy development, planning and management through support to the Directorate General of Technical and Vocational Education and Training (DGTVET) of the Ministry of Labor and Vocational Training (MOLVT), provincial offices and training institutions. Two policy studies will establish the long-term direction and development of the TVET system, and explore ways of improving financing. Subsequently, a new Medium Term TVET Development Plan and Medium Term Expenditure Framework, 2011–2015 will be formulated. Management information and labor market information systems will be developed to improve system management and planning. Career guidance in schools and a system for disseminating career advice will also be instituted.

### **Rationale**

Current public TVET provision does not fully meet the need for basic and mid-level skills in the formal and informal economies. Lack of access to formal training on a national basis, weak links with industry, lack of entrepreneurial focus, poor quality control, and inadequate institutional financing continue to limit the quantity and quality of system output.

The current global economic downturn has increased the need for strategies that will lead to a wider, more internationally competitive production base. Greater investment in formal vocational skills formation is essential to ensure the expansion of the skilled labor force, and a substantial increase in productivity through more effective and efficient training.

### **Impact and Outcome**

The Project is expected to expand the employment-ready, national mid-level workforce in both rural and urban areas. By 2020, it is expected that there will be at least a 30% increase in the number of employees holding formal TVET qualifications, and greater employer satisfaction with employees holding new formal TVET qualifications.

The expected outcome is an expanded and more integrated training system that is endorsed by industry and better aligned with the basic and mid-level skills requirements of the formal and informal economies in the three industry sectors of mechanics, construction and business services and ICT. Key success indicators by 2015 will include (i) a 20% increase in enrollments in the three sectors; (ii) a 25% increase in the number of graduates from formal programs in the three sectors; (iii) a 400% increase in national access to nonformal, basic skills training programs requested by communities; (iv) a 20% increase in the number of women graduating from formal courses in RTCs and polytechnics or institutes; (v) at least 50% of all participants in the nonformal VSTP programs to be women; (vi) 40% of nonformal VSTP training to be enterprise- or center-based and (vii) 40% of graduates from enterprise- and center-based VSTP training to be placed in full-time employment or self-employment.

<b>Project Investment Plan</b>	The investment cost of the project is estimated at \$27.52 million, including taxes and duties of \$2.06 million.
<b>Financing Plan</b>	An Asian Development Fund grant of \$24.50 million is proposed, supported by \$3.02 million from the Government of Cambodia.
<b>Period of Utilization</b>	1 February 2010–31 July 2015
<b>Estimated Project Completion Date</b>	31 January 2015
<b>Executing Agency</b>	Ministry of Labor and Vocational Training (MOLVT)
<b>Implementation Arrangements</b>	<p>MOLVT will be the Executing Agency and DGTVET the Implementing Agency. DGTVET will establish the project coordination unit (PCU) under the guidance of the project director (the secretary of state), who will oversee overall project implementation. The PCU will be headed by a project coordinator (the director general, DGTVET), and will be responsible for day-to-day project implementation, planning and budgeting, procurement, disbursement, monitoring, supervising, overseeing of implementation in the training institutions, and submitting the required reports to the Government and ADB.</p> <p>The PCU will have at least 15 staff members, including procurement, finance, monitoring, and administrative staff. Project implementation will occur through all departments of DGTVET, with selected technical specialists from each department supporting the implementation of the project's technical programs and working closely with the relevant consultants.</p> <p>The National Training Board will act as the steering committee, chaired by a Deputy Prime Minister, and will provide overall guidance to the Project on general policy and strategic directions, and ensure coordination with the concerned ministries and institutions.</p>
<b>Procurement</b>	All ADB-financed goods, works and services for the Project will be procured in accordance with the ADB's <i>Procurement Guidelines</i> (2007, as amended from time to time).
<b>Consulting Services</b>	The Project will be supported by 600 person-months of consultancy services (160 person-months international and 440 person-months national). The consultants will provide technical support for implementation, system and institutional monitoring, training and staff upgrading, and project monitoring. All consultants will be selected in accordance with ADB's <i>Guidelines on the Use of Consultants</i> (2007, as amended from time to time). The project implementation consultants will be engaged through a firm on the basis of quality- and cost-based selection with an 80:20 weighting. Individual consultants will be engaged to give direct support to the PCU. DGTVET will be responsible for selecting and hiring consultants.

## **Project Benefits and Beneficiaries**

The direct beneficiaries of the proposed project will be the 267,000 trainees: 2,200 in formal TVET institutions and 54,000 taking 1–6 month courses and 210,000 taking nonformal training under the VSTP in PTCs. The primary beneficiaries will be the rural underemployed, including workers recently displaced from the garment and other industries hit hard by the global financial crisis. The VSTP trainees will receive skills that will raise their productivity and incomes. By helping to provide higher incomes and greater economic activity for this otherwise low-skilled, underemployed and low-income section of the population, the country as a whole will benefit.

The upgrading of teacher training and the development of new industry standards and curricula will benefit about 600 TVET trainee teachers per year. The graduate teachers will be more capable of delivering mid-level skills training of the type and quality the modern corporate sector requires. The major benefits from the establishment of the five RTCs will be (i) 1,350 new skilled graduates per annum entering the labor market; (ii) greater access to mid-level training for school-leavers outside the Phnom Penh region; and (iii) improved and safer access for young women in provincial areas.

Other direct beneficiaries will include instructors and administrative staff in all formal and nonformal training institutions; and the staff of DGTVET and the provincial offices of the Labor and Vocational Training Department.

## **Risks and Assumptions**

The Government places a high priority upon TVET and it is assumed that this will continue into the medium term. Although there is a risk that a delay in the global recovery could reduce the impact of this strategy in the short term, over the longer term it will assist in lifting the skills and productivity of workers. A closer aligning of local labor force skills with industry requirements will allow Cambodian skilled workers to replace foreign skilled workers.

While the TVET system will continue to focus on nonformal, rural-based training to improve livelihoods, the Government's reform agenda proposes a parallel focus on formal, better quality vocational training to create a more highly skilled, internationally competitive workforce.

Another important assumption is that, with a more accessible TVET system that is more relevant to industry and produces more appropriately trained graduates, trust by enterprises in the employment-readiness of TVET graduates will grow. It is also assumed that, with more positive employment outcomes from TVET-level skilled training, more school leavers and graduates will seek vocational training. Reforms to be undertaken by the Project to strengthen industry links and introduce career counseling and job placement services will increase the appreciation of vocational training among students and their families.

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on the proposed grant to the Kingdom of Cambodia for the Strengthening Technical and Vocational Education and Training Project. The design and monitoring framework is in Appendix 1.

## II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

2. The Cambodian economy is in transition and is particularly vulnerable to global economic and financial turmoil. Until recently, its traditional agrarian economy was largely insulated from external influences, but even the rural sector has been affected by the current economic crisis.

### A. Performance Indicators and Analysis

3. Most labor force participants are employed in the agricultural sector; in 2004, 24% of labor force participants had either no or only some formal education; a further 43% had not completed primary school; and over 75% were own account workers or employed as unpaid family workers. Only about 15% of employment is wage employment in the private sector. Official figures indicate that very few of those employed as mid-level technicians or in craft trades have technical vocational education and training (TVET), and most have only low levels of formal schooling.<sup>1</sup>

4. Over 80% of Cambodians still live in rural areas, and about 68% of the labor force is employed in agriculture. However, productivity is low and agriculture's contribution to gross domestic product (GDP) was only 7% in 2007. The manufacturing sector is small, employing only about 9% of the labor force in 2008, but it comprised 23% of GDP. The manufacturing sector also led the growth in GDP and non-agricultural employment over the decade prior to the worldwide economic downturn in 2008. The garment industry is by far the largest area of manufacturing, accounting for almost 75% of all manufacturing, 90% of manufacturing jobs growth, and 70% of export revenue in 2008. The services sector is the largest contributor to GDP, accounting for almost 42% of GDP, and is the second largest employer after agriculture. From 2003–2008, employment growth in the services sector was dominated by tourism.

5. Cambodia suffers from low productivity in its main economic sectors in comparison with other countries in the Association of South East Asian Nations, and with the People's Republic of China and India. Employment losses due to the economic downturn have been significant, especially in the garment industry, although the most likely outcome is underemployment rather than unemployment. Many of the least-skilled who have been retrenched have returned to their rural communities to work as unpaid family workers and own-account workers. The recovery of economic growth and development is linked to the global economy. The Asian Development Bank (ADB) and the World Bank have both identified a lack of adequate investment in formal vocational skills training and a shortage of skilled labor as impediments to a speedy recovery, and to improvement in sector productivity.

6. **Technical and vocational education and training system.** This system is in its infancy as a discrete post-school vocational training system that emerged from the Ministry of

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<sup>1</sup> There is no up-to-date, detailed information on employment in the mid-level occupations (International Standard Classification of Occupations 2008 major occupational groups 3 to 8), for which TVET provides the skills training. The last labor force survey conducted by the National Institute of Statistics was in 2001, and the latest occupational statistics are from the intercensal population survey of 2004.

Education, Youth and Sport (MOEYS) in 2005 with the creation of the Ministry of Labor and Vocational Training (MOLVT). The National Training Board (NTB) is the apex body for TVET policy formation and for the approval of strategies to implement that policy. The NTB is chaired by a deputy prime minister and includes senior representatives of all ministries involved in economic development and training. There is also limited private sector membership. The DGTNET acts as the secretariat for the NTB. The National TVET Development Plan, 2006–2011 identifies economic development and poverty alleviation as the twin thrusts of the TVET system. The summary subsector assessment is in Appendix 2.

7. The public TVET system managed by MOLVT is essentially supply-driven and comprises 25 provincial training centers (PTCs) delivering nonformal programs in rural areas; and 11 polytechnics and institutes delivering formal TVET courses from post-lower secondary to degree level to a predominantly urban-based population. Some health and agriculture institutions are still managed by their respective ministries, but come under the NTB. In addition private providers and nongovernment organizations offer mostly short nonformal programs. Enterprises conduct their own in-house training, including apprenticeship schemes. The system is small and remains largely uncoordinated and unregulated.

8. Formal TVET is provided in polytechnics and technical institutes at certificate, diploma and degree level. Courses last longer than 1 year. In 2008, there were only 2,200 graduates from certificate and diploma courses, of whom just over 1,500 were graduates of technical programs. A further 765 graduated with a TVET bachelor's degree, about half of which were in technical fields. Despite a 90% unemployment rate for recent university graduates, the number of students in TVET degree programs continues to increase while nondegree programs are losing students. Most of the degree courses are in business studies and management, with the certificate and diploma level focusing on technical and trades areas. All except two of the polytechnics and institutes are in Phnom Penh.

9. The formal TVET system recruits from lower-secondary graduates for certificate courses, and from upper-secondary graduates for diplomas and degrees. The Cambodian school system remains highly pyramidal, especially in rural areas, where only 30% of school starters reach grade 9 and 9% reach grade 12. Nationally, 4,600 students complete grade 9 but do not continue to grade 10. This is the feeder group for certificate programs. A further 90,500 drop out at grades 7, 8 and 9 (81,000 of whom live in rural areas) and are generally ineligible to enter formal TVET.

10. High schools currently graduate about 40,000 grade 12 students per year, which is projected to increase to 190,000 per year by 2015 if current trends continue. As only 10% of current high school graduates can be accommodated in universities, the demand for alternative higher education will grow dramatically. The formal TVET system can now absorb only 4,000 students annually, but more could be accommodated if facilities were better utilized. Although there is strong pressure to expand TVET programs at the upper level, further expansion needs to be linked to real employment growth and opportunities.

11. Nonformal TVET is offered through the 25 PTCs that were established to provide short nonformal training programs to address social dislocation and poverty. Programs initially focused on basic agriculture, construction, motor repair skills; crafts; and basic food processing. Subsequently, programs to provide extended training in 3–4 month programs in wider basic technical skills were developed largely through ADB project support under the First and Second

Education Sector Development Programs (ESDP).<sup>2</sup> Such programs provide a continuing local source of skills access in predominantly rural areas. Short agricultural courses averaging 2 weeks still make up the majority of PTC programs (46%). There are also courses of 3-4 months in technical trades (15%), textiles and garments (10%), hairdressing and beauty (5%), with computing, tourism and hospitality, business, art, design, and languages making up the remaining 25%.

12. The Voucher Skills Training Program (VSTP) successfully piloted a model for delivering large-scale nonformal programs to communes and villages in skills that they identified and requested, with over 46,000 participants in 2008 alone. Most of this training was delivered in the communities. The VSTP also encompasses short, more structured, courses delivered in the PTCs (e.g., motorcycle repair, small engine maintenance, weaving, and hairdressing), as well as enterprise-based training, under which enterprises are contracted to provide on-the-job training to individual trainees for about 4 months. Under the pilot VSTP, 60% of training was community-based, 10% was delivered as short courses in PTCs, and 40% was enterprise-based (see Supplementary Appendix A for a summary evaluation of the pilot).

13. There is an array of other nonformal training, including that offered by private providers and nongovernment organizations (NGOs). The major NGO provider of technical skills training is Don Bosco which has operated technical schools and training centers since 1991. Other noninstitutional NGO provision varies widely depending on donor finance, and concentrates on nonformal agricultural provision, crafts, textiles and garments. The available registration data indicate that 30–50 organizations train 300–500 people per year in short programs that last from 1 week to 1 month. About 750 private business concerns also offer fee-paying services, of which almost half are in Phnom Penh. The majority (60%) offer computer training and/or English, or are private driving schools or dancing academies. A further 30% are small businesses (e.g., auto repair and electrical maintenance) which offer informal apprenticeships through a pay-and-work arrangement.

14. TVET instructors are recruited from the ranks of degree and diploma holders in relevant fields, but low salaries make it difficult to attract candidates with up-to-date industrial and enterprise experience. After completing pedagogical training in the National Technical Training Institute (NTTI), they can teach in a polytechnic, technical institute, or PTC. Among polytechnic and institute teachers, one-third have a master's degree and two-thirds an undergraduate degree or diploma. About 90% of PTC staff have a degree or diploma. About 75% of instructors have completed 12 months of pedagogical training at NTTI. However, this training does not prepare instructors adequately in community and enterprise development, in working with industry, in understanding the employment market, microenterprise support, career guidance, or, most importantly, hands-on practical skills in their technology. The result is a poor fit between the skills of the teaching staff and the needs of enterprises, particularly in technical fields. To compensate, most institutions hire part-time staff with more current knowledge. However, as their hourly rate far exceeds that of full-time staff, they are primarily assigned to fee-paying programs, where they generally contribute little to institutional development and their skills and knowledge are rarely transferred.

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<sup>2</sup> ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Cambodia for the Education Sector Development Program*. Manila; ADB. 2004. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Cambodia for the Second Education Sector Development Program*. Manila.

15. **National qualifications framework (NQF).** There is currently no NQF or approved skills standards. However, the Government recognizes that an NQF is critical for the overall education and training system. An NQF is a unified system of national qualifications covering schools, vocational education and training, and the higher education sector. It links together all of these qualifications into a national system of educational recognition and provides flexible pathways between different education and training sectors (e.g., between TVET and higher education). As an initial step, MOLVT has agreed to focus on the TVET band of the NQF and to create a national vocational qualifications framework (NVQF) until the full framework can be agreed.

16. **Financing.** Since it was established, the Directorate General of Technical and Vocational Education and Training (DGTNET) has received an annual average funding increase of 45%, bringing the 2009 budget to \$2.55 million. Almost half of this (\$1.2 million) was allocated to training programs, with 45% for nonformal training and 55% for formal training. Per capita spending on nonformal training has varied considerably, but under the VSTP it was generally too low, especially for enterprise-based training, and needs to be raised to include the cost of effective monitoring. Per capita spending on formal training is quite high at \$143 for 2007 and 2008, or 32.5% of per capita GDP, compared with \$123 (28% of per capita GDP) for higher education. Government institutions may not charge fees to students who gain places in full-time post secondary programs through the public examination system. Institutions receive a grant from Government to cover recurring costs and staff salaries are paid centrally. However, many institutions also cater to fee-paying private students, whose fees are set to at least cover costs. In some cases, private students outnumber regular (non-fee-paying) students. There is a significant demand for fee-paying post-secondary education, but this is generally not for traditional TVET occupations. Fee-paying courses generate significant revenues for institutions, but can also skew their training priorities. Ambiguities in the enforcement of regulations mean that institutions cannot build these revenues into their budgets. Their status as directly-managed public institutions is a clear disincentive to revenue generation.

17. **Performance.** In 2008, the formal TVET system produced just under 2,200 graduates, for a labor force of roughly 7.5 million people. Of these, 1,500 graduated from technician-craft-trades courses; the remainder were from management, business studies and information and communication technology (ICT). Only 0.8% of the literate adult population holds a TVET qualification. The small size of the system greatly reduces the capacity of TVET to contribute to the country's economic development. Furthermore, the formal system remains largely supply-driven. The nonformal training system under the PTCs, on the other hand, is widely regarded as successful. An assessment of trainee income 6 months after VSTP training completion indicated that more than 50% of program graduates reported their income had increased by at least 15%. The evaluation identified ways in which the program could be improved, such as more effective oversight and agreed competency and financing standards. A significant drawback is that participants receive no certification and therefore cannot proceed to higher training. In general, more effective system regulation, setting of standards, and integration of the formal and nonformal sectors to broaden training opportunities would strengthen the TVET system.

18. **ADB country strategy.** Since the early 1990s, ADB's country strategy has included the building of national capacity for human development. Three earlier projects have laid a good foundation for ADB's present and future work in TVET. The Basic Skills Project<sup>3</sup> established the framework for development and management of the TVET system. In particular, this involved

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<sup>3</sup> ADB. 1995. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Cambodia for the Basic Skills Project*. Manila.

setting up a National Training Board to oversee and coordinate all TVET and the National Training Fund (NTF) through which Government funds all of its TVET programs. Other important elements included a national center for instructor training and curriculum development and a microcredit scheme, as well as improvement of training institutions. The First and Second Education Sector Development Programs (ESDP) strengthened this emerging system through support for planning, management and monitoring, and further expansion and upgrading of training institutions (footnote 2). Extensive support for nonformal training was provided under the Second ESDP, which successfully introduced the VSTP for rural basic skills training that is responsive to community needs.

19. Most successful TVET development interventions are long-term. The Project is the latest in a series of interventions that began in 1996 with the Basic Skills Project and continued through the two ESDPs, with the aim of creating a demand-driven TVET system that is demand driven and relevant to industry. These projects and programs have put in place a sound policy framework and management structure, but the formal TVET system remains small and driven by supply rather than the needs of industry. The rural–urban and nonformal–formal training divides restrict the opportunities for rural youth, while the academic entry requirements for formal courses and the lack of training pathways between the formal and nonformal systems close off further training opportunities for many. This Project addresses these shortcomings by developing models for a system that is more relevant to industry. The first steps will involve building a more integrated system by systematizing and upgrading nonformal training, expanding access to formal courses in rural areas, developing an NVQF and skills standards, and devising procedures to allow progress from the nonformal to the formal system. Replicating the model into other industry sectors, developing a full NQF, and assuring the pathways between nonformal and formal training will be carried out in the next project.

20. **Government policy.** The national socioeconomic planning framework for Cambodia is the Rectangular Strategy for Growth, Phase II, which was launched in September 2008. Its strategies include improvements to productivity and diversification of agriculture, private sector development, employment generation, and human resource development. The National Strategic Development Plan (NSDP), 2006–2010, based on the Rectangular Strategy, reiterates the importance of capacity building and human resource development. Stated strategies include (i) promotion of vocational and skills training; (ii) creation of jobs in both formal and informal sectors; (iii) an increase in agricultural productivity to increase rural employment; and (iv) the establishment of TVET and training networks to assist both men and women, especially the poor, disabled and vulnerable, to respond to labor market needs.

21. The NSDP is implemented through detailed plans from each ministry. The Strategic Plan of the MOLVT, 2006–2010 identifies strategies designed to develop the economy and reduce poverty, including the development of technical and vocational skills. The MOLVT plan aims to (i) establish TVET links with enterprises; (ii) establish mechanisms for labor market information; (iii) service both formal and informal sectors; (iv) upgrade TVET through a NVQF, competency standards and testing, training of trainers, and accreditation of TVET programs and institutions; (v) modernize training facilities and equipment; (vi) strengthen local planning for local training needs; (vii) establish new centers in unserved provinces; (viii) expand TVET provision through the NTF to reduce poverty more widely; (ix) encourage certificate-based TVET programs in all provinces and municipalities; and (x) encourage TVET institutions to generate their own income.

## **B. Analysis of Key Problems and Opportunities**

22. There are several major issues relating to the Government's expectation of TVET, the

lack of interest in TVET training among Cambodia's urban youth, and the low quality and relevance of existing programs.

23. **Technical and vocational education and training has a dual role.** TVET is typically the primary source of mid-level craft, trades and technician skills training for those seeking to enter the labor force for the first time; workers already in the labor force seeking to upgrade their skills; and those wishing to re-enter the labor force. The focus is primarily on mid-level occupations. The TVET system produces technicians, para-professionals, and skilled workers and is integral to the growth and development of all sectors of a modern economy, providing training in the core skill range employed in most agricultural, industrial and service sector operations.

24. However, in Cambodia, the TVET system plays a dual role. With 80% of the population living outside the cities and industrializing areas, poverty alleviation interventions must be directed primarily at rural communities. TVET has a broad focus—it is expected to help improve agricultural productivity through training and, coupled with increased microfinance, to provide the rural population with livelihood skills for self-employment. At the same time, the Government recognizes that the economy needs to diversify, and to do so it needs to attract new investment and new industries. The TVET system is expected to provide the pool of skilled labor that can contribute to greater productivity in existing industries and help to attract investment in new, competitive industries. This dual requirement would be demanding in any circumstances, but is especially so in a new system with limited capacity and resources.

25. The two training systems that have arisen to meet these different demands are run as largely separate systems. In addition to the geographical divide (in general, nonformal courses are offered in rural areas and formal training in urban areas), there are further divides in the types of institutions offering the training, in their funding and operations, and, importantly, in their certification. While formal training programs are certified, nonformal programs are not. Graduates of nonformal course cannot enter formal courses on the basis of their nonformal training, nor can they receive credit for other training. Indeed, people who have not graduated from grade 9 cannot enter formal training. This lack of pathways between the two systems is a severe constraint on increased equity, efficiency, and broadened access to TVET.

26. **Low demand for technical training.** While the demand for places in nonformal TVET courses in agriculture and livelihood skills is high, the demand for TVET training places in technical and trades areas is relatively low. The growth in student numbers in the post-secondary TVET institutions is largely at the degree level, and, in response to student demand, it is biased toward business and commerce rather than mid-level technical skills. However, until the recent downturn, the economy generated about 50,000 new wage jobs per year, of which it can be assumed that about 65%–70% were in mid-level skilled occupations. Skill shortages therefore sat side-by-side with substantial unemployment and underemployment. Market demand has been met by employers recruiting foreign workers, and/or by taking on unskilled school leavers. Some of these they have trained themselves, while others have been left to perform at productivity levels below those of their counterparts across the region.

27. The drop in demand may be linked to both increasing participation rates in upper secondary schooling, and the urban–rural divide in formal training provision. In urban areas, 90% of grade 9 students continue to grade 10, giving many of these students the chance to enter degree programs. The transition rate in rural areas is 80%. However, rural students who wish to take formal vocational courses must currently relocate to Phnom Penh. This can be difficult as many TVET trainees come from the middle to lower income groups. Moving to the capital is even more difficult for girls as they require supervised accommodation. As a result,

almost 5,000 students, or 20% of those currently taking uncertified nonformal courses in PTCs, have completed grade 9. Students living in rural areas need access to formal TVET training in mid-level skills.

28. The changing structure of enrollments in the general education system has implications for TVET programs. There are two issues. First, there is a high (50%) dropout from lower secondary education (approximately 133,000 students in school year 2007/08). This group is ineligible for formal TVET courses as all have a minimum entry requirement of a lower secondary school pass. Second, there is now a very high transition rate from lower secondary to upper secondary school, meaning that if a student does complete grade 9, he or she is very likely to continue to grade 10. This means that the traditional source of recruitment for Cambodia's TVET certificate courses is drying up.<sup>4</sup> The current structure of TVET programs may not be pitched at the right level, as formal entry-level programs are currently geared toward an ever-shrinking group of students who have completed grade 9 while failing to serve a very large group of grade 7–9 school leavers. A complete rethink and revamp appears necessary.

29. There are rigidities in the system which limit the attractiveness of TVET to young people. At present, students cannot move from nonformal to formal TVET without completing lower secondary school. There is no formal equivalence either between TVET qualifications and general education qualifications, which means that students who choose TVET cannot move back into the general education system without additional study. Consequently, TVET institutions now offer their own bachelor degrees. A system that allows study pathways at all levels would enhance the relevance and attractiveness of TVET as a study and career choice.

30. There is a general lack of awareness of TVET careers and the availability of skills training programs. Further, institutions, instructors and curricula are not adequately focused on the major issue of employment. To address this, MOLVT has just announced that it will open new job centers, in association with the International Labour Organization (ILO), that will bring together employers, potential workers, and training providers. Better matching of TVET trainees with vacancies for skilled jobs should eventually increase TVET demand. A comprehensive program of career guidance and counseling in secondary schools at the provincial and municipal levels will be put in place. The PTCs will support this by conducting outreach programs in schools to introduce TVET as a viable pathway to employment after graduation. For TVET to be acceptable to secondary school graduates, it must be seen to lead to employment.

31. **Skills supply and demand mismatch.** The combination of growing demand for skilled labor, the limited supply of TVET, and the lack of close links with industry has contributed to a shortage of skilled workers in particular fields, which can inhibit economic growth. A recent World Bank study<sup>5</sup> found that, while there was no evidence of generalized skill constraints in Cambodia, technical and vocational training was an exception, with evidence of mismatches between the skills required in the labor market and those being produced by post-secondary educational institutions. A key aspect of this mismatch is that post-secondary institutions tend to produce too many generalists (e.g., managers) and too few graduates with specific skills (e.g., accounting or information technology). A United Nations Development Programme (UNDP) study in May 2009<sup>6</sup> found that a lack of skills and a poorly trained workforce were

<sup>4</sup> There is a higher dropout rate (30%) at the grade 10 level, especially in rural areas. Nationally, 33,000 students dropped out of grade 10 in SY 2007/08, of whom 26,000 lived in rural areas. Some of these students could be targeted for TVET programs.

<sup>5</sup> World Bank. 2007. *Sharing Growth: Equity and Development in Cambodia*. Washington, DC.

<sup>6</sup> Referenced in Green, Nathan. 2009. *Education Reform 'Urgent'*. Available: [http://www.seameo-innotech.org/resources/seameo\\_country/educ\\_news/cambodia/cambodiaClips\\_28may09.htm](http://www.seameo-innotech.org/resources/seameo_country/educ_news/cambodia/cambodiaClips_28may09.htm).

among the most commonly cited constraints by businesses in Cambodia. According to the study, Cambodia suffers from a lack of highly trained workers across a range of vocational skill areas, including construction (e.g., carpenters, electricians, welders, architects, and engineers) and information technology. Employers have responded to such shortages by hiring skilled workers from neighboring countries, a point that is echoed by the World Bank and a United States Agency for International Development survey of garment manufacturers in 2006.<sup>7</sup> The World Bank and UNDP recommend TVET reforms, including increasing the private sector role in the planning and delivery of vocational training.

32. **Poor teaching and management.** With a few exceptions, the quality of teaching throughout both the public and private TVET system needs substantial improvement. The PTCs and polytechnics have few teaching resources, curricula are not linked to industry practice and standards, and assessment lacks reliability and validity. Almost all TVET instructors and teacher trainers lack industrial experience, with the result that theory is emphasized at the expense of practice. This is reinforced by the absence of adequate, industry-relevant equipment and training facilities in most institutions. There are no national teacher competency standards, and there are no nationally approved curricula. Voluntary upgrading and updating of full-time teaching staff is rare and NTTI does not provide inservice training. The preservice training program offered by NTTI is particularly unsuited to the work of PTCs. Most TVET instructors in 7 PTCs teach 3-month courses in such subjects as dressmaking, weaving, and small engine repair. However, the instructors lack skills to help communities develop training requirements and to link microcredit with training to support demand-driven community-based education for poverty alleviation.

33. Only one-third of PTCs are managed effectively. A further one-third need improvement, while the remaining one-third are considered moribund. A survey of PTCs has indicated that there are a few exceptional institutions that are managed effectively. Through an entrepreneurial approach, these directors have managed to mobilize support from the local community, from local enterprises, and other nongovernment sources. The same applies to polytechnics. The best PTC and polytechnic managers provide a source of guidance on how institutional management can be strengthened and made more relevant to managing entrepreneurial institutions. Another issue that needs to be addressed is the fact that many curricula are rarely updated after teachers complete their training. Any updating which does occur tends to be through the individual efforts of part-time teachers with regular jobs where they work with more recent technology. Thus, curricula depend on the caliber of the teachers in each institution.

34. **Weak industry links.** Despite the existence of the NTB, industry does not appear to be actively involved in the planning and development of TVET at the national level. The same is true at the institutional level, with few public institutions having industry advisory bodies, industry input into curriculum development, tracer studies of graduate employment, or on-the-job training through student placements. As a result, training programs are not meeting the needs of employers. The USAID study of the garment sector (footnote 7) found that employers hired foreign workers because they were unable to find mid-level, skilled Cambodian technicians and managers.

35. **Other external support.** ADB's initial support to TVET built on support from the United Nations Development Programme and ILO that began in the early 1990s and initially focused on basic employment training for returnees, the displaced, demobilized soldiers, and female heads of

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<sup>7</sup> Nathan Associates, Inc. 2006. *Cambodia Garment Industry Workforce Assessment: Identifying Skill Needs and Sources of Supply*. Phnom Penh: United States Agency for International Development.

household. Subsequent initiatives supported the development of skills for training needs assessment, curriculum and program development and instructor training. Assistance to MOEYS was provided by German development assistance through GTZ to develop recommendations for a national training framework and staff training, and to plan an integrated national TVET system. ADB's broad support for general education and TVET over the following decade has been further enhanced by specific support from other donors. This included (i) Japan International Cooperation Agency support (1990–2000) for an automotive training and auto repair center, and ongoing provision of specialist volunteers across several of the MOLVT training institutions; (ii) Republic of Korea development assistance (2005–2009) for skills standards and the establishment of the National Polytechnic Institute of Cambodia; and (iii) grant assistance for the support of the Cambodia–India Entrepreneurship Development Center from the India Technical and Economic Cooperation, 2004–2007. A National Garment Training Institute, proposed for funding by the Garment Manufacturers' Association of Cambodia and Agence Française de Développement, may provide a model for future public–private TVET initiatives in key sectors (see Appendix 3 for a summary of external assistance).

### C. Lessons Learned

36. Industry links are the single most important factor in TVET success, as measured by employment outcomes. In Cambodia, links between the TVET system and industries and enterprises are *ad hoc*. The NTB provides a potential bridge between the training system and industry but it focuses more on policy development and system governance than on the practical work of developing standards, qualifications, and assessment practices that are relevant to industry. In other countries, sector-specific industry training bodies have been established and these are also proposed for this Project in the form of industry advisory groups, to be established in the three industry sectors. Experience shows that industry must have ownership of the standards and play a major role in the assessment of trainees. Lessons from two evaluations of VSTP pilots<sup>8</sup> have been incorporated to ensure that the new national program will (i) have a better balance between enterprise-based skills training and agricultural skills, (ii) give greater power to communes and PTCs to make training more demand-driven and responsive to community needs, (iii) give formal recognition for training, and (iv) provide training for microenterprise development. The central importance of entrepreneurial institutional management is also acknowledged through a comprehensive management training program.

37. **Project approach.** As there is an absence of labor market data, it is not yet possible to identify and address specific skills shortages with any validity, so the Project has not been designed to target specific shortages. Instead, the objective is to build a platform for continued reform by developing replicable models so the system can be made more relevant to industry. The key steps will include the establishment of industry advisory groups; the development of skills standards led by these groups; development of curricula and assessment procedures; retraining of instructors, including skills training; upgrading of facilities if needed; and training institute directors to operate in more enterprise-directed ways. Eventually this approach will need to be replicated in all major employment sectors.

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<sup>8</sup> MOLVT. 2008. *Improving the Effectiveness and Efficiency of the Voucher Skills Training Program*. Phnom Penh; and MOLVT. 2009. *Community Responsive Technical and Vocational Education. The Voucher Skills Training Program: The Cambodian Experience in Seven Pilot Provinces*. Phnom Penh.

38. The three sectors (mechanics, construction, and business services and ICT) were chosen to develop this model because they (i) represent general, mainstream skill areas with substantial national coverage, (ii) are representative of skills provision in Cambodia, (iii) cover both the lower and mid-levels of skills employment and (iv) are offered in all PTCs. The selection was based on data collected from employers and center directors, data on graduate placement and the rate of growth in these sectors, and training demand. A further consideration for including business and ICT is that it is the only area of TVET training where girls and young women are represented.

39. The challenges identified in the TVET system can be addressed through complementary reforms to improve the quality of, and access to, nonformal and formal TVET. The longer-term goal is a competency-based system that is responsive to the needs of industry and establishes pathways between formal and nonformal training. Within nonformal TVET, VSTP will be expanded and an urban VSTP piloted to achieve national access. VSTP will be supported by programs to improve instructor performance, institutional management, program development and assessment, and links with the local community and potential employers in PTCs. Within formal TVET, the strategy will focus on developing replicable pilots in the three sectors, along with support for the retraining of teacher trainers; development of new standards, qualifications, curriculum and assessment tools that are relevant to industry; and better institutional management. Substantial support will be provided for management training, the development of an NVQF, a vocational education and training management information system (VETMIS), and a labor market information system (LMIS) will strengthen the capacity of DGTVET to manage the reform agenda.

### **III. THE PROPOSED PROJECT**

#### **A. Impact and Outcome**

40. The Project is expected to expand the employment-ready, national mid-level work force in both rural and urban areas. By 2020, it is expected that there will be at least a 30% increase in the number of employees holding formal TVET qualifications, and greater employer satisfaction with employees holding new formal TVET qualifications.

41. The expected outcome is an expanded, enterprise-endorsed and more integrated training system that will be better aligned to the basic and mid-level skills requirements of the formal and informal economies in mechanics, construction, and business services and ICT. Key success indicators to be achieved by 2015 include (i) a 20% increase in enrollments in the three sectors; (ii) a 25% increase in the number of graduates from formal programs in the three sectors; (iii) a 400% increase in national access to nonformal, basic skills training programs requested by communities, including microenterprise training; (iv) a 20% increase in the number of women graduating from formal courses in RTCs and polytechnics/institutes; (v) at least 50% of all participants in the nonformal VSTP programs to be women; (vi) 40% of nonformal VSTP training to be enterprise- or center-based and (vii) 40% of graduates from enterprise- and center-based VSTP training to be placed in full-time employment or self-employment.

#### **B. Outputs**

42. The Project will produce three outputs: (i) more industry-relevant formal training programs in mechanics, construction, and ICT and business; (ii) expanded and better quality nonformal training; and (iii) strengthened institutional capacity to plan and manage the TVET system.

## 1. Formal Programs that are more Relevant to Industry

43. The Project will improve access to formal TVET that is linked to the demands of industry and will use industry-endorsed skills competency standards as the basis for the training curriculum, trainer training, training equipment, and an assessment of trainee performance. It will also facilitate expanded access to formal training for girls.

44. **Upgrade five provincial training centers to regional training centers.** PTCs in five provinces (Battambang, Kampot, Siem Reap, Svay Rieng and Takeo) will be expanded and upgraded to RTCs so they can offer formal TVET programs in rural areas at entry, mid-level, and technician levels in mechanics, construction, and ICT and business. The RTC training programs will be based on the new standards and curriculum. In addition, the RTCs will be the venue for regional inservice training for instructors, organized from the NTTI. The institutional management and development skills of the RTC directors will be sharpened through comprehensive training and mentoring. ICT training, trainer training and subject- and technology-based upgrading will be provided to all RTC instructors. The Project will also support the construction of hostels for female trainees in each RTC. The PTCs to be upgraded were chosen on the basis of their institutional performance, geographic location and a growing enterprise base that could absorb skilled graduates.

45. **Develop training modules based on skills standards and train trainers.** The Project will develop competency standards for mechanics, construction, and ICT and business. Capacity will be built among lead teachers from the specialist institutes, trainers from NTTI, and senior officers of DGTVET. In addition, curricula and learning materials for the new standards will be produced for the PTCs and RTCs; equipment for the new curriculum will be installed; assessment procedures will be developed; and assessors trained. Effective implementation of the new standards-based programs will be supported through regular training of all PTC and RTC teachers in TVET skills development and instructional techniques for the new curriculum.

46. **Increase industry involvement.** Independent industry advisory groups consisting primarily of employers will be established in each industry sector to review standards, endorsement, and ongoing assistance in curriculum, training development, and assessment procedures. More contracting of small-scale employers for VSTP training will also occur, both through increased allocations of training hours and increased numbers of trainees.

47. **Strengthen the National Technical Training Institute for system upgrading.** An important project initiative is the establishment of a new, integrated system to develop skills standards, curriculum and training materials, and TVET teacher training. This will be achieved through the closer integration of institutions in pedagogy, technical skills development and entrepreneurship. NTTI will be the lead institution for teacher training and curriculum and three specialist institutes in mechanics, construction, and ICT and business will be responsible for developing skills standards and training models for the target industry sectors (the Industrial Technical Institute, the National Institute of business and the Preah Kossomak Polytechnic Institute). A fourth institute (the Cambodia-India Entrepreneurship Development Center) will be responsible for entrepreneurship. Each technology institution will bring together an industry advisory group; provide technical direction for the development of skills standards; assist the development of curriculum and learning materials; support the training of assessors from industry; provide skills strengthening for NTTI trainees and in-service training; and monitor training in the PTCs. The technical skills of lead teachers from each institute will be upgraded through regional training, and training equipment to match the new curriculum will be provided. A postgraduate TVET teacher-training program will also be introduced (Appendix 4).

## 2. Expanded and Better Quality Nonformal Training

48. The second output of the Project will extend national access to (i) nonformal TVET training (including in urban areas); (ii) training provision for the young and unemployed, female and male; and (iii) nonformal programs at different levels that yield qualifications allowing graduates to enter the next level of training.

49. **Establish provincial training centers in unserved provinces.** PTCs now exist in 21 of the 23 rural provinces. All PTCs target rural poverty alleviation through courses that relate directly to enhancement of family income. The Project will support the development of a PTC in the provincial capitals in each of the two remaining rural provinces (Mondulhiri and Preah Vihear), providing classrooms, workshops, equipment and teacher upgrading. Women will make up 50% of enrollments at the newly constructed PTCs in Mondulhiri and Preah Vihear. The Project will also support the rehabilitation of existing PTCs as needed.

50. **Extend the voucher skills training program to all provinces.** The pilot VSTP supported the development and delivery of nonformal, community-responsive training in seven of the poorest provinces, covering 90,000 participants. The communes selected received a “voucher” to fund training linked to local commune planning. Under this Project, a revised VSTP will be extended to all 24 provinces (with a further 210,000 participants). Provinces will progressively engage with the scheme, to allow strengthening and preparation of inexperienced PTCs. Each province will be funded for a 2-year period. To improve the quality of training, the expanded VSTP will be modified through (i) reductions in group size in field-based training, (ii) greater emphasis on enterprise attachments and center-based training and combinations of both, (iii) new incentives for placing VSTP graduates in employment, and (iv) the implementation of a pilot urban VSTP. The pilot will be located in Phnom Penh and will be implemented in the automotive sector through contracted enterprise placements, administered by the Japan Vocational Center, a training institution under MOLVT. At least 50% of the recipients of training under the expanded and rural VSTP will be women (see Appendix 5 for more information on the VSTP).

51. **Develop directors and staff of provincial training centers.** The Project will strengthen management capacity in all 24 institutions to develop and manage demand-responsive training. PTC directors who implemented the pilot VSTP will mentor other directors. DGTVET confirms that some of the best PTC directors are women, and they will play a key role in the training and mentoring strategy for other directors. Staff directly managing the VSTP will be trained in (i) linking with small employers through informal apprenticeships, (ii) management and planning, (iii) finance, (iv) community outreach, entrepreneurship, and revenue generation, (v) provincial training board (PTB) support, (vi) career guidance and job placement for graduates, and (vii) data reporting.

52. **Upgrade training on skills standards in the provincial training centers.** All PTC instructors will be trained for the new curriculum through in-service training in the five RTCs. Equipment will be provided to the PTCs to meet the training requirements of the three industry sectors. Assessment services and new procedures for recognition of prior learning will be provided to give workers credit for training and to support progress to further training. Technical staff from the NTTI complex and DGTVET will undertake regular mentoring and compliance visits.

53. **Increasing accessibility to structured skills training.** Currently, graduates from nonformal training in PTCs cannot continue to government-provided mid-level training unless they have higher academic qualifications (i.e., they have completed lower secondary school).

The Project will take the first steps toward a more integrated system by developing new courses, curricula and standards to systematize nonformal training by introducing pathways to higher levels of training within the nonformal system. To improve the pathways between nonformal and formal programs, strategies that allowing more students to progress from nonformal to mid-level formal programs will be identified. This will eventually allow PTC graduates to enter mid-level programs in the RTCs and elsewhere.

### **3. Strengthened Institutional Capacity to Plan and Manage Technical and Vocational Education and Training**

54. The Project will strengthen the capacity of DGTVET, provincial offices, and the training institutions in policy development, management and supervision; planning; budget preparation and disbursement; financial management and reporting requirements; information collection, processing, analysis and dissemination; quality assurance; and system governance and support. The proposed strategies for the development of management capacity are in Supplementary Appendix D and the human resource development plan is in Supplementary Appendix E.

55. **Assess technical and vocational education and training policies.** The evolution of the Cambodian economy, changes in the educational and social preferences of Cambodians that affect demand for education, and dramatic improvements in access to basic education, suggest that it is time to review the TVET policy framework in Cambodia. The Project will undertake a comprehensive review of current policies, strategies and structures to identify the reforms needed to help match the system to the needs of industry while still serving the needs of those who lack academic qualifications. The study will examine the levels of training, the qualifications offered, and pathways between different levels and types of training, as well as the regulatory and financing framework for the TVET system, the scope for public-private partnerships in training provision, and improved institutional financing. A second study will look at potential sources of additional financing, including a training levy. Both studies will help to ensure that the TVET system can develop according to the country's emerging needs and demands.

56. **Strengthen planning capacity.** DGTVET will formulate a new Medium-Term TVET Development Plan (MTTDP), a Medium-Term Expenditure Framework, 2012–2014 and annual operational plans for 2010 to 2015. The Project will support system planning through a senior level study tour on regional TVET policy for NTB and PTB members and senior officials. Support will also be provided for annual NTB policy reviews as a basis for preparing the MTTDP, the annual plan, and the expenditure framework.

57. **Strengthen management capacity.** To build a stronger system for DGTVET monitoring of training institutions, officers will be trained in system management, supervision and development (Supplementary Appendix D). Financial management in PTCs and DGTVET will be strengthened, as well as the institutional management and development skills of directors in all PTCs, RTCs, and polytechnics. All mid-level female DGTVET officers will be selected for regional training, while 50% of officers selected from the provincial Labor and Vocational Training Department will also be women.

58. **Improve technical and vocational education and training information systems.** System management and planning will be supported by the design, development, and commissioning of a vocational education and training management information system (VETMIS) and a labor market information system (LMIS) to provide essential data on the training system and the skill requirements of industry. ICT facilities and training will be provided for MOLVT and all of its training institutions and provincial offices. Gender- and, where relevant,

ethnicity-disaggregated indicators, including those related to TVET outcomes, efficiency and effectiveness, will be incorporated into the VETMIS and LMIS. Further information is in Supplementary Appendix G.

59. **Develop and implement skills standards.** The expertise and systems for skills standards development in partnership with industry will be supported, leading to the agreement of an NVQF by 2015. Project activities will target the three selected industry sectors to ensure full development of relevant standards and capacity building, and effective industry and enterprise links for later replication and extension to other skills areas. Training will be provided to relevant national and provincial officers in the development and implementation of the new national skills standards-based training system and skills assessment. More detail on the development and implementation of skills standards is in Appendix 6.

60. **Introduce career information systems.** The Project will develop and distribute career guidance materials for schools, and develop a web portal for dissemination of career guidance information, to encourage young people to take up vocational training and consider a related career. The materials and outreach activities will also encourage young women to take up training in nontraditional skills areas. As a condition of involvement in the VSTP, PTCs will be required to designate a staff member to take responsibility for career guidance and employment placement for graduates of the program (Supplementary Appendix H).

### C. Special Features

61. **Focused approach.** The Project will focus on only three industry sectors, which will be used as models for system and training development. Previous projects have shown the difficulty of ensuring sustainable change across many sectors and institutions. The activities in each sector will focus on (i) program development against industry-approved competency standards, (ii) training curriculum and skills testing, and (iii) teacher training in the new curriculum. The lessons learned from the initial three sectors will then be used in others.

62. **Policy and regulation.** The project will contribute significantly to strengthening TVET management by developing a wide range of policies, regulations, and strategies, including (i) the MTTDP, (ii) annual development plans for TVET, (iii) VETMIS and LMIS, (iv) TVET information management policy, (v) NVQF; (vi) TVET institutions management regulation and policy, and (vii) financial management and reporting systems. These areas are crucial for enhancing and strengthening the TVET system in Cambodia.

63. **Industry and private sector participation.** A significant innovation to strengthen industry involvement in TVET will be the establishment of sector-specific industry advisory groups in the three priority sectors. These groups will be responsible for the development (or adaptation) of industry-relevant standards that specify the level of competence required for TVET qualifications. They will also be significantly involved in assessing the competency attainment of trainees, and will advise the NTB on skill development needs in their sectors by drawing up and regularly updating national sector skill development plans. These plans will assist the NTB to determine priorities for national vocational skill formation.

### D. Project Investment Plan

64. The project investment cost is estimated at \$27.52 million, including taxes and duties of \$2.06 million (7.5%) and contingencies of \$2.49 million (9.0%). The foreign exchange component of the project is estimated at \$12.27 million (44.6%) while the local currency component is \$15.25 million (55.4%). Expenditure on the VSTP is estimated to be \$6.24 million

(24.9% of the base cost); equipment and furniture \$5.09 million (20.3%); consulting services \$4.12 million (16.4%); civil works \$3.30 million (13.2%); training \$1.89 million (7.6%); surveys and studies \$0.4 million (1.6%); learning materials \$0.26 million (1.1%); and administrative support costs \$3.75 million (15%).

## E. Financing Plan

65. The Government has requested a grant of \$24.5 million from the Asian Development Fund (ADF) to help finance the Project. The Government's contribution of \$3.02 million will be in the form of the land for the two new PTCs, accommodation for the PCU, additional DGTVET staff, as well as taxes and charges foregone. The ADF grant will fund 89% of the proposed project, with the Government accounting for the remaining 11% (Table 2). Detailed costings are provided in Appendix 7.

**Table 1: Project Investment Plan<sup>a</sup>**  
(\$'000)

Item	Output	Amount
<b>A</b>	<b>Base Cost<sup>b</sup></b>	
	1. Formal Programs are More Industry Relevant	7,587
	2. Expanded and Better Quality Nonformal Training	12,138
	3. Strengthened Capacity to Plan and Manage TVET	3,005
	4. Project Management	2,297
	<b>Subtotal (A)</b>	<b>25,028</b>
<b>B</b>	<b>Contingencies<sup>c</sup></b>	<b>2,491</b>
	<b>Total (A+B)</b>	<b>27,519</b>

TVET = technical and vocational education and training.

<sup>a</sup> Includes taxes and duties of \$2.06 million

<sup>b</sup> In mid-2009 prices.

<sup>c</sup> Physical contingencies computed at 5% for civil works and 5% for field research and development, training, surveys and studies. Price contingencies computed at 3% on foreign exchange costs and 3% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

Source: Asian Development Bank estimates.

**Table 2: Financing Plan**  
(\$ million)

Source	Total	%
Asian Development Bank	24.50	89.0
Government	3.02	11.0
<b>Total</b>	<b>27.52</b>	<b>100.0</b>

Source: Asian Development Bank estimates.

## F. Implementation Arrangements

### 1. Project Management

66. MOLVT will be the Executing Agency (EA) and DGTVET will be the Implementing Agency. DGTVET will establish the PCU under the guidance of the project director (the secretary of state, MOLVT), who will oversee overall project implementation. The PCU will be headed by a project coordinator (the director general, DGTVET) who will be responsible for day-to-day project implementation, planning and budgeting, procurement, disbursement, monitoring,

supervising, overseeing of implementation in the training institutions, and submitting required reports to the Government and ADB. The project coordinator will be supported by an executive administration officer. The PCU will have at least 15 staff members, including procurement, finance, monitoring and reporting, and administrative staff. Project implementation will occur through all departments of DGTVET, with selected technical specialists from each department supporting the implementation of the project's technical programs and working closely with the relevant consultants. PCU activities will be assisted by an international finance consultant, an international monitoring and evaluation (M&E) consultant, a national M&E consultant, and a national consultant in civil works and procurement. The NTB will act as the steering committee, chaired by a deputy prime minister, and will provide overall guidance to the Project on general policy and strategic directions, and ensure coordination with the concerned ministries and institutions. The project management structure is in Appendix 8.

## **2. Implementation Period**

67. The Project will be implemented over 5 years, from 1 February 2010 to 31 January 2015. The implementation schedule is provided as Appendix 9.

## **3. Procurement**

68. All ADB-financed goods, works and services will be procured in accordance with the ADB's *Procurement Guidelines* (2007, as amended from time to time). The project director, assisted by the project staff, will be responsible for all procurement. The indicative procurement plan and a procurement capacity assessment have been prepared, along with details of the proposed equipment and unit costs of inputs.

69. Supply contracts for goods such as laboratory and workshop equipment estimated at \$500,000 equivalent or more will be awarded on the basis of international competitive bidding. Supply contracts for goods such as motorcycles, computers and office equipment of more than \$50,000 but less than \$500,000 will follow national competitive bidding procedures. Items costing less than \$50,000 will be procured through shopping. Details of procurement packages and technical specifications must be submitted to Ministry of Economy and Finance (MEF) and ADB for approval before procurement. The procurement plan is in Appendix 10.

70. Civil works under the Project will consist of construction and/or rehabilitation of training facilities, workshops, and dormitories. Civil works contracts estimated at \$1 million or more will be awarded on the basis of international competitive bidding. Civil works contracts of more than \$50,000 but less than \$1 million will be procured through national competitive bidding procedures, and contracts less than \$50,000 may be procured through shopping.

71. The procurement capacity assessment reveals that the DGTVET is experienced in the procurement of goods, but less experienced in procuring works and services and consultants, and the site management and monitoring of civil works (Supplementary Appendix I). Training and mentoring will be provided by the consultants to strengthen capacity, specifically in the preparation of bid documents and bid evaluation reports for civil works, bid evaluation, training of PCU staff, and procurement review committees on procurement regulations and ADB guidelines, preparation of detailed lists, and technical specifications of equipment, and selection and contracting of consulting services.

#### **4. Consulting Services**

72. The Project will be supported by 600 person-months of consultants (160 person-months of international and 440 person-months of national consultants). The consulting services are designed to assist the Project to achieve sustainable outcomes by providing technical support for implementation, system and institutional monitoring and training planning, management, and delivery and staff upgrading. Ten of the international and nine of the national specialists will assist with skills standards and curriculum development, management and instructor training, development of management information systems and a web site, and implementation of the VSTP. Two of the international and two national consultants will support the PCU in finance, monitoring and evaluation, procurement and civil works. All consultants will be selected in accordance with ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). Project implementation consultants will be engaged through a firm on the basis of quality- and cost-based selection with an 80:20 weighting. MOLVT, through the PCU, will be responsible for selecting and hiring consultants. Additional individual consultants will be hired to support the PCU as needed. The Project will also recruit consulting or other firms who will facilitate regional training and study tours as well as carry out M&E baseline and impact studies using the consultants' qualification selection method. In-country training will also be arranged using the consultants' qualification selection method. Outline terms of reference for consultants are provided in Supplementary Appendix J.

#### **5. Advance Contracting**

73. The EA will undertake advance contracting of consultants to speed up project implementation. DGTJET may start consultant selection, but this will not include the signing of contracts. An individual consultant may be hired to assist in this process.

#### **6. Anticorruption Policy**

74. ADB's *Anticorruption Policy* (1998, as amended to date) was explained to and discussed with the MEF and the MOLVT. Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Project. To support these efforts, relevant provisions of ADB's *Anticorruption Policy* are included in the grant regulations and the bidding documents for the Project. In particular, all contracts financed by ADB in connection with the Project shall include provisions specifying the right of ADB to audit and examine the records and accounts of the EA and all contractors, suppliers, consultants, and other service providers as they relate to the Project.

75. The Project incorporates several additional measures to deter corruption and increase transparency. The Project will (i) build capacity within DGTJET and training institutions to understand and comply with ADB and government procedures as outlined in the project administration memorandum; and (ii) widely publicize in training institutions and MOLVT the existence of the integrity division within ADB's Office of the Auditor General, as the initial point of contact for allegations of fraud, corruption, and abuse in ADB-financed projects. A project webpage will be developed to disclose information about project matters, including procurement. The project good governance framework is provided in Supplementary Appendix K.

76. The financial management capacity assessment (Supplementary Appendix L) identified areas where strengthening is required and these have been addressed in the proposed project activities and specialist services, training, and hardware and software equipment inputs. The

Project will develop a financial management system, which will embrace training institutions as well as MOLVT and provincial offices. This will be a component of the Project's planned VETMIS. There will also be a comprehensive training program for Department of Finance and State Property, provincial office and TVET institution staff in principles and practice of financial management. MOLVT financial management activities at all levels will be supported with suitable equipment and software. With these actions, and current reforms in financial management, the assessment concluded that MOLVT will be able to successfully manage the project.

## **7. Disbursement Arrangements**

77. A deposit account, under the control of the MEF, will be established at the National Bank of Cambodia. A second generation imprest account under the control of MOLVT will be established at a commercial bank acceptable to ADB. The imprest account will have an initial advance ceiling of \$2 million, or the estimated expenditures to be funded from the imprest account for the first 6 months, whichever is lower. This account, and all subsidiary accounts, will be established, managed, replenished and liquidated in accordance with ADB's *Loan Disbursement Handbook* (2007, as amended from time to time). The amount to be deposited into the second generation account shall be equivalent to the initial deposit into the imprest account. The statement of expenditure procedure may be used to liquidate or replenish the second generation imprest account for contracts not exceeding \$100,000. Funds for VSTP will be transferred directly from the second generation imprest account to the bank accounts of the PTCs, each of which will be authorized to make payments agreed under the VSTP to PTBs, commune councils and approved training providers. As the statement of expenditure procedure cannot be used at the PTCs (or the provincial level), all supporting documents, including evidence of expenditures, will be retained by the PCU. The funds flow and acquittal and financial reporting mechanisms are shown in Appendix 11.

## **8. Accounting, Auditing, and Reporting**

78. Each project beneficiary institution will be required to keep separate accounts and evidence of expenditures. Each institution will submit to the PCU quarterly and annual financial reports. The PCU will review and retain supporting documents, including evidence of expenditures funded from the imprest account which will be maintained by MOLVT. The PCU may from time to time arrange semi-annual audits of accounts and records. In cases where financial or other irregularities have occurred in relation to project funds, the PCU may suspend project supported activities at the institution involved until the case is resolved to the satisfaction of the PCU. Matters of funds recovery will be determined on the advice of the PCU in collaboration with ADB.

79. MOLVT will maintain records and accounts adequate to identify all goods and services financed from the ADB grant proceeds, and ensure that all accounts and financial statements are audited annually by a certified, independent external auditor acceptable to ADB, and in accordance with corporate accounting standards in use in Cambodia at the time of each audit. The auditor will prepare a report on the use of grant funds, compliance with grant covenants, use of the imprest account(s), and statement of expenditure procedures; issue findings of any irregularities or discrepancies; and recommend corrective measures so that financial statements and audited accounts will be certified by the auditor as meeting generally accepted corporate accounting practices in Cambodia. The auditor will provide and describe audit standards and key procedures used in their report.

80. MOLVT will submit the audited financial statements and the auditor's report on the project accounts, including separate opinions on the imprest account and use of the statement of expenditure, to ADB in English within 6 months from the end of each fiscal year. The PCU will prepare and submit to ADB and DGTVET quarterly reports on the status and progress of project implementation and use of funds within 1 month of the completion of each quarter. The reports will be in a format acceptable to ADB and indicate progress made against established targets; status of performance against stated indicators; problems encountered and remedial actions taken; financial- and procurement-related information; compliance with grant covenants; and a proposed program of activities for the following quarter. Within 3 months following the physical completion of the project, the Government will prepare and submit to ADB a project completion report in the agreed format.

## **9. Project Performance Monitoring and Evaluation**

81. A comprehensive and gender-disaggregated project management and evaluation system will be designed for the Project. This will include all levels of TVET reform activity, including NTB, DGTVET, provincial offices, industry advisory groups, TVET institutions, and the Project itself. It will specifically measure the impact, outcome and outputs of proposed TVET reform, concurrently evaluating the specific contribution of the Project to the achievement of reform goals during Project implementation. In addition to the monitoring of project performance, the proposed system will assist the development of M&E as an integrated, mainstream activity of the TVET system itself.

82. The comprehensive set of targets and indicators in the design and monitoring framework are at the core of project performance monitoring and evaluation. A comprehensive study will be undertaken during the first year to establish baseline data for all targets and indicators in the design and monitoring framework. Comprehensive data on the TVET system will be collected, including enrollments by program and qualification, completion rates, teachers and teacher qualifications, and detailed breakdowns of programs offered and qualifications obtained. As part of this study, analyses of each of the three priority industry sectors will be carried out, focusing particularly on the profile of the members of each workforce holding TVET qualifications, current employer satisfaction with TVET system graduates, and the expected skill needs in the medium term. These analyses will be required to disaggregate data by gender, where relevant. Data generated by baseline studies will provide, in part, an information foundation upon which the VETMIS and LMIS will be constructed. Independent midterm and final evaluation studies based on the design and monitoring framework will also be conducted, covering the industry sector analyses as part of the assessment of project results. The baseline, midterm, and final evaluation studies will be contracted to a firm. Some of the data gathering and analysis relating to the industry sectors may be contracted to peak industry bodies. The PCU will be responsible for monitoring and reporting on project implementation progress and performance, assisted by international and national consultants. A user manual for Project M&E will be developed.

## **10. Project Review**

83. The Government and ADB will review the Project's progress and MOLVT's use of funds, jointly at least twice a year. They will jointly undertake a midterm review shortly after the PCU's submission of the third annual report. The midterm review will focus on overall project strategy and achievements, which may require adjustments of targets and processes and reallocation of resources. Specifically, the midterm review will (i) review the project scope, design, implementation arrangements, institutional development, and capacity building; (ii) assess project implementation against projections and performance indicators; (iii) review compliance

with grant covenants; (iv) identify critical issues, problems, and constraints; and (v) recommend changes in project design or implementation. One month before the review, the PCU will submit to ADB a comprehensive report on each of these issues. Finally, a project completion report will be prepared to assess early impact and identify lessons learned.

#### **IV. PROJECT BENEFITS, IMPACTS, ASSUMPTIONS, AND RISKS**

##### **A. Expected Benefits and Impacts**

###### **1. Project Economic and Financial Justification**

84. The direct beneficiaries of the proposed project will be the 267,000 trainees who receive training under the Project: 2,200 in formal TVET institutions, and, in PTCs, about 54,000 from short courses and 210,000 from nonformal training under the VSTP. Other direct beneficiaries include (i) teacher trainers and trainee teachers at the NTTI; (ii) instructors and management staff in the existing long-course training institutes, the five upgraded RTCs and two new PTCs and other existing PTCs; and (iii) the management and administrative staff of DGTVE and the provincial offices of the Labor and Vocational Training Department.

85. The primary beneficiaries will be the rural underemployed, including displaced workers from the garment industry and other industries hit hard by the global financial crisis and economic downturn, who will receive training under the scheme. Most have few skills and are early school leavers with no formal post-school training. The expanded VSTP will reach an estimated 210,000 people. The training they receive will be PTC-, enterprise- and community-based, but it is expected that the majority will receive community-based training.

86. The expected benefits VSTP trainees will receive are skills, primarily in aspects of non-paddy agriculture that will raise their productive contribution to their communities. In turn, this is expected to (i) raise their earnings potential, and therefore contribute to their family and community incomes; and (ii) lead to greater diversity in and increased production of non-paddy agriculture, which will then raise the sector GDP. By helping to provide greater economic activity and a better chance of making an independent livelihood for this otherwise low-skilled, underemployed and low-income section of the population, the country as a whole stands to benefit.

87. About 5,000 trainees completed PTC courses (non-VSTP) in 2008, mostly in agriculture-related programs. It is expected that project interventions will (i) expand that number by an estimated 600 a year, through the construction and equipping of two new PTCs; (ii) promote greater diversity in the training programs offered by PTCs; and (iii) improve the learning experience of those that enroll in them. These quantitative and qualitative improvements are expected to provide PTC trainees with skills that are more relevant to the changing needs of local informal economies.

88. The establishment of the NTTI training complex and the development of the new industry standards and curricula are projected to produce about 300 TVET teacher graduates per year after the re-organized NTTI is fully operational. These graduates will be capable of delivering the mid-level skills training of the type and quality the modern corporate sector requires. The upgrading of five PTCs into RTCs will be a major initiative. The expected benefits will be (i) an estimated 1,350 new skilled graduates per annum entering the labor market; (ii) greater access to this level of training for school-leavers outside the Phnom Penh region; and (iii) through the special RTC dormitory provisions, better and safer access for young women in provincial areas.

89. The additional 1,350 graduates entering the labor force each year from the upgraded RTCs will almost treble that entering from DGTVET long-course institutes at present. This will put pressure on the relatively small corporate wage sector. However, they will form an important pool of mid-level skilled workers that employers will be able to draw on as Cambodian economic development and growth picks up. It is expected that the RTC upgrade initiative will generate an economic internal rate of return (EIRR) of 13.2%. An assessment of training outcomes of the VSTP pilot showed that the program generated increases in average family income as high as 30% 3 months after training was completed, and 98% after 6 months. Taken together with the 12.5% estimated rate of return on the RTC upgrades, these VSTP impacts demonstrate the high economic benefits the project will generate.

90. The EIRR will be sensitive to changes in economic circumstances, and in particular how these impact upon the labor force experiences of RTC graduates. The most likely variations yielded EIRRs in the range 10%–15%, with a strong centering on 12%–13% (see the economic and financial analysis in Supplementary Appendix M).

91. Management and administrative staff of DGTVET will benefit from training and upgraded equipment and systems support. Included in project interventions are activities aimed at strengthening their financial management capacity. The immediate effect will be a better understanding of the issues and principles that underlie their work, practical and organizational skills that will help them perform better, and up-to-date systems, hardware and software. It can be expected that the TVET system as a whole will benefit from the more effective planning and management that will result. In turn, employers and industry will benefit from a TVET subsector that is more responsive to their needs for more and better-trained mid-level skilled workers.

## **2. Financial Impact and Sustainability**

92. The project requires a total Government contribution of \$3.02 million over the 5-year life of the project, with the biggest contribution in the form of taxes and charges foregone on machinery, equipment and supplies. Other contributions include the land upon which the two new PTCs are to be built and office space for the PCU. The only contribution that has budgetary implications for the Government over the life of the project is an estimated \$0.35 million resulting from the additional staff required at the new PTCs, the RTCs, and at NTTI.

93. It appears that the project is financially sustainable. The post-project incremental personnel expenditure, estimated at about 6% of the 2009 annual budget of \$2.52 million, can be absorbed. However, responsibility for some of the 22% incremental increase for operations on non-VSTP programs will fall to the individual PTCs and polytechnics and institutes (which may be able to meet this requirement from discretionary fee income, unlike PTCs, which do not charge fees). However, the proposed financial management training throughout the project will help ensure that PTC budgets improve to enable them to plan for this post-project cost.

94. The expansion of VSTP represents the single largest project initiative. If it is to be maintained at the project level after the Project ends, it is estimated that a further increase of 28% over DGTVET's 2009 budget would be needed by 2015. However, DGTVET has enjoyed an average annual increase of 45% in TVET funding from 2005 to 2009 and continues to be a high Government priority. There is no evidence that this level of increase will not continue, at least until the end of the project. This would provide more resources than needed to cover all VSTP funding and all other post-project funding (an overall increase of 89% is needed). In any case, as the large expansion of VSTP is partly a response to the current economic downturn, it may not have to continue at the same level after the Project.

95. To further safeguard sustainability, the Project will help in the development of the new 5-year NTDP, 2011–2015, scheduled for development by the end of 2010. A program-focused medium-term expenditure framework (to reflect the new program budget approach being piloted by MEF in DGTVET), will be formulated in conjunction with the new NTDP. The expenditure framework, once agreed with MEF, will provide a stable framework for medium-term government financing to TVET; an approach that will help ensure that the major outputs and outcomes from the project will be sustainable in the longer term.

### **3. Social Aspects**

96. Poverty is widespread in Cambodia. However, until the current global economic downturn, the country was making good progress in reducing poverty. The GDP per capita was growing at an average annual rate of about 10% until 2007–2008, and the poverty rate, as high as 45% in the mid-1990s, fell to about 30%. In recent years, these gains have slowed or reversed as the country's key export industries have been badly hit. Not only has this affected GDP, but displaced workers, mainly women from the garment industry, have swelled the numbers of the unemployed and underemployed in rural areas. TVET is seen as a key driver of Government strategies to provide young early school-leavers, people with few if any skills, the underemployed in rural areas and displaced factory workers with training that will make them more attractive to employers and provide them with the opportunity to earn a living. Nonformal TVET plays a particularly important role in this regard and therefore receives substantial support under the proposed Project. The VSTP will provide greatly expanded access to nonformal programs, while the two new PTCs will be in provinces that are among the least developed and have the highest proportions of ethnic minorities. All other PTCs will have equipment and program upgrades, along with professional development of instructors, to enable them to deliver better and more relevant training for the most deprived. Special attention will be given to delivering training programs that are attractive to women.

97. The planned development of five RTCs will help to reduce poverty by increasing access to long-course programs outside Phnom Penh. It is expected that improved course offerings in relevant areas, as well as well-equipped dormitories, canteens and kitchen facilities dedicated to female students, will help attract more women. The summary poverty reduction and social strategy is in Appendix 12.

### **4. Gender Benefits**

98. Women are under-represented in the formal TVET system. The Project will address this by promoting increased enrollments of women in ICT and business. Career guidance courses in schools and training institutions will encourage girls to enter non-traditional training areas. The inclusion of women's hostels in the RTCs will also increase the likelihood that women will undertake formal training. Nonformal training has provided many training opportunities to women. Even though the training was not linked to qualifications, it led to increases in rural incomes. Under the pilot VSTP, 60% of trainees were women. One reason was that the training was short, community-based, and directly linked to daily productive activities. Under the expanded VSTP, the Project will encourage women to train not only in basic agricultural skills, but also in non-paddy agriculture and service-related skills that will further contribute to their livelihood as self-employed or unpaid family workers. More women will be encouraged to join the 1–6 month PTC-based courses and enterprise-based training as these can qualify graduates to continue to more advanced training. Studies will be carried out by the PTCs to identify new courses that are attractive to women and that also provide good jobs, such as electronics and graphic design. The gender and ethnic minorities analysis and action plan

includes several measures to promote opportunities for women and women's empowerment (Appendix 13).

## **5. Environmental Aspects**

99. No negative environmental effect is anticipated. The upgrading of five PTCs to RTCs will be carried out on existing training center property, while the two new PTCs will be constructed on vacant government land that has already been identified and confirmed in writing.

### **B. Assumptions, Risks, and Mitigating Measures**

100. An important justification for the planned Project is the need, in the current global economic situation, for Cambodia to develop a wider, more internationally competitive production base, including an adequate skills base to take advantage of a recovery. The Cambodian government is placing a high priority upon TVET and it is assumed that this will continue into the medium term. Although there is a risk that a major delay in global recovery could reduce the impact of this strategy in the short term, over the longer term the strategy will lift the skills and productivity of Cambodian workers. By more closely aligning local labor force skills with industry requirements, the strategy will allow Cambodian skilled workers to replace skilled foreign workers.

101. While the latest government plans show that the TVET system will continue to have a major focus on the provision of nonformal rural-based training, they also propose a concurrent focus on the provision of formal, better quality vocational training in both urban and rural areas to create a more highly skilled, internationally competitive workforce. In effect, the Government is using the downturn as a catalyst both to achieve productivity improvements in existing key industries and to prepare for a more robust, broader economic base for the country post-recovery. There appears to be little risk that recovery and economic growth will not result in employment growth in those sectors crucial to the Cambodian economy.

102. Another important assumption underpinning the reform agenda is that, with a more accessible and industry-relevant TVET system producing more appropriately trained graduates, enterprises' trust in the employment-readiness of graduates of the system will grow. It is also assumed that, with more positive employment outcomes from TVET-level skilled training, more school leavers and graduates will seek vocational training. To address the low regard with which both industry and many potential trainees hold publicly-provided TVET, the Project will support the creation of key sector-specific industry advisory groups to ensure industry ownership of the outcomes of TVET reforms. In addition, the planned establishment of a new National Employment Agency to facilitate the matching of TVET graduates with skill vacancies and to advocate on behalf of TVET training through career counseling and guidance in secondary schools should contribute to a marked improvement in community perceptions of the worth of vocational training and the occupations to which it leads.

103. The TVET system has failed to keep up with recent changes to the economy, changes in the social demand for technical training, and significantly increased access to formal education that have reduced the demand for skills training. However, the Government is keen to undertake a comprehensive reform of the system. This will be supported through the Project by major policy and regulatory studies, followed by implementation of their recommendations, including the development of long-awaited industry-endorsed skills standards and an NVQF.

104. Current proposals for decentralization and deconcentration may lead to major changes in the policy making and governance of TVET during the Project. To mitigate these risks, the Project will (i) inform key stakeholders at the national level through the NTB and at the sub-national level through the PTBs; and (ii) build on lessons learned and existing arrangements for implementing demand-driven community-based skills training through commune councils.

## V. ASSURANCES

105. In addition to the standard assurances, the Government has given the following specific assurances, which will be incorporated in the legal documents.

- (i) The Government will ensure that construction of the new PTCs and RTCs will be on the sites identified and agreed between MOLVT and ADB. The Government will ensure that these sites are not changed. Prior to an award of any civil works contract, the Government will ensure that: (a) legal title to the land on which the construction will be done is transferred to MOLVT; and (b) no land acquisition or resettlement is required at the relevant site. Although the identified and agreed sites are currently unoccupied, in the event that land acquisition and resettlement is required for any activities funded under the Project, the Government will ensure that land acquisition and resettlement is carried out in accordance with ADB's *Involuntary Resettlement Policy* (1995).
- (ii) The Government will continue to provide support for VSTP after Project support is completed in each province.
- (iii) To ensure that women benefit equally from the Project, the Government and MOLVT will ensure that the Project will be carried out in accordance with ADB's *Policy on Gender and Development* (1998) and will meet the targets outlined in the DMF attached in Appendix 1 and the gender and ethnic minorities analysis and action plan attached in Appendix 13.

## VI. RECOMMENDATION

106. I am satisfied that the proposed grant would comply with the Articles of Agreement of the Asian Development Bank (ADB), and acting in the absence of the President, under the provisions of Article 35.1 of the Articles of Agreement of ADB, I recommend that the Board approve the grant not exceeding \$24,500,000 to the Kingdom of Cambodia from ADB's Special Funds resources for the Strengthening Technical and Vocational Education and Training Project, on terms and conditions that are substantially in accordance with those set forth in the draft Grant Agreement presented to the Board.

C. Lawrence Greenwood, Jr.  
Vice-President

21 October 2009

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicator	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> An expanded, employment-ready mid-level workforce in rural and urban areas, including both men and women</p>	<p>Against a 2010 baseline:</p> <p>A 30% increase in employees in the formal labor force holding formal TVET qualifications by 2020</p> <p>Increased employer satisfaction with the knowledge, skills and attitudes of employees holding new, formal TVET qualifications by 2020</p>	<p>Series of labor force studies disaggregated by qualification, gender, rural/urban area</p> <p>Series of employer satisfaction surveys</p>	<p><b>Assumption</b> Within 2–3 years, the economy recovers from the current downturn, resulting in FDI, local investment and GDP growth returning to 2007/2008 levels</p> <p><b>Risks</b> Persistent economic downturn causes low demand for skilled labor</p> <p>Continuing poor recognition of the productive value of skilled labor in wage differentials in most economic sectors</p>
<p><b>Outcome</b> An expanded, enterprise-endorsed public training system better aligned with the basic and mid-level skills requirements of the formal and informal economies in three industry sectors (mechanics, construction, and business services and information and communication technologies)</p>	<p>Against a 2010 baseline:</p> <p>A 20% increase in enrollments in certificate and diploma programs in the three industry sectors in public institutions by 2015, from an estimated baseline of 980</p> <p>A 25% increase in the number of graduates with formal TVET qualifications from public institutions by 2015, from an estimated baseline of 1,500</p> <p>A 20% increase in the number of women graduating from formal TVET courses in polytechnics, institutes, and RTCs by 2015, from an estimated baseline of 300)</p> <p>Enrollments in nonformal VSTP programs quadruple by 2015, from 53,000 in 2007/08, and 50% of participants are women</p> <p>40% of VSTP training (in terms of training hours) is through enterprise- and center-based training by 2015</p> <p>40% of graduates from VSTP enterprise- and center-based training are in relevant full-time employment or self-employment by 2015</p>	<p>Gender dis-aggregated enrollment data from public institutions</p> <p>Gender-disaggregated graduation data from all VSTP programs</p> <p>Tracer studies of VSTP graduates</p>	<p><b>Assumption</b> Government policy and budgets continue to give high priority to better employment outcomes for both rural and urban youth and the poor, through strategic investments and other support for basic and mid-level skill formation</p> <p><b>Risks</b> TVET training and careers are undervalued in the population at large</p> <p>Industry cooperation and collaboration in the development of national standards and qualifications is not forthcoming.</p>
<p><b>Outputs</b> 1. Formal programs that are more</p>	<p>Against a 2010 baseline:</p> <p>30% increase in the number of</p>	<p>Institutional records of</p>	<p><b>Assumption</b> Industry recognition of the improved quality of</p>

Design Summary	Performance Targets/Indicator	Data Sources/ Reporting Mechanisms	Assumptions and Risks
relevant to industry	<p>students entering certificate programs (grade 9+) by 2015</p> <p>Five upgraded RTCs established by 2015<sup>a</sup></p> <p>Three industry advisory groups established and operational by end 2010</p> <p>Industry advisory groups endorse skills standards for the three sectors by mid-2011</p> <p>Women make up 25% of industry advisory group membership</p> <p>Skills standards and skills-based training modules developed through industry-led process for certificate programs by 2012</p> <p>Coordinated system of professional support established to improve instructor training by 2012</p> <p>300 TVET instructors graduate each year from NTTI from 2011</p> <p>All instructors in the three sectors meet technical and pedagogical requirements by 2015</p>	<p>competency reporting by qualification, module, year, gender, and instructor(s)</p> <p>Compliance reports against agreed building and equipment standards</p> <p>Records of establishment and membership</p> <p>Statement of endorsement</p> <p>Records of certification</p> <p>M&amp;E reports</p> <p>Training records and records of certification</p>	<p>graduates results in better employment outcomes, which raises participation in quality TVET programs</p>
2. Expanded and better quality nonformal training	<p>VSTP extended to all provinces by 2015 with new operating guidelines</p> <p>Skills standards and skills-based training modules developed through an industry-led process for enterprise- and center-based programs</p> <p>New courses, curricula and standards to systematize nonformal training introduced by end 2013</p> <p>210,000 participants have completed VSTP training by 2015</p> <p>An additional 12% (600) have graduated from non-VSTP courses in PTCs (from 2008 baseline of 5,000)</p> <p>40% of VSTP training is enterprise- or center-based</p>	<p>PTC training records</p> <p>Revised guidelines</p> <p>NTTI records</p> <p>PTC enrollment data and records of award of certification.</p> <p>PTC enrollment data and records of award of certification</p>	<p><b>Assumption</b> Continuing development of the rural economy, e.g., through demand for increased productivity or through new investments in post harvest technology and small to medium-scale food processing will raise demand for more complex skill sets</p> <p><b>Risk</b> Increases in productivity through capital investment in equipment and machinery lead to reduced on- and off-farm employment</p>

Design Summary	Performance Targets/Indicator	Data Sources/ Reporting Mechanisms	Assumptions and Risks
	<p>80% of all trainees in enterprise- or center-based training in the three industry sectors will earn a new certificate of competency</p> <p>Two new PTCs have been constructed by end 2011</p> <p>PTC performance improved through better program planning and management, better financial management and data recording, increased community outreach, and more revenue generation by 2015<sup>b</sup></p> <p>All PTC instructors have completed the new teacher in-service training program by 2015<sup>c</sup></p>	<p>Certificates of completion issued</p> <p>PTC quarterly progress reports</p> <p>NTTI records</p>	
<p>3. Institutional capacity to plan and manage TVET is strengthened</p>	<p>Policy and road map for future development of TVET system agreed by MOLVT and NTB</p> <p>New medium-term TVET development plan developed by end 2010</p> <p>Draft medium-term expenditure framework (2011–2015) developed for TVET by end 2010</p> <p>Annual TVET operational plans, including specific annual targets and indicators developed for 2010–2014 along with annual performance reports</p> <p>Computerized VETMIS designed and installed across all sites by module according to a specified schedule.</p> <p>LMIS established by 2014</p> <p>NVQF constructed and approved by NTB by 2015</p> <p>DGTVET has implemented procedures for guiding and monitoring PTCs and RTCs by 2012.</p> <p>All female mid-level DGTVET officers will be selected for training</p> <p>30% of provincial MOLVT staff selected for regional training will be women</p>	<p>NTB minutes</p> <p>Plan published on schedule</p> <p>Plan published on schedule</p> <p>Published annual plans and performance reports on schedule</p> <p>VETMIS data reports by module can be generated at all sites</p> <p>LMIS data reports as specified generated at all required sites</p> <p>Sub-decree on NVQF signed by Prime Minister</p> <p>DGTVET reports of monitoring visits</p>	<p><b>Risks</b></p> <p>Industry cooperation and collaboration in the development of national standards and qualifications is minimal, if at all</p> <p>Proposed decentralization is not matched with clear delegations of authority, thereby creating confusion in roles and responsibilities</p>

Activities with Milestones	Inputs
<p><b>1. Formal Programs are More Relevant to Industry</b></p> <p>1.1 Upgrade five PTCs to RTCs by 2015</p> <p>1.1.1 Add skills workshops in three industry sectors (mechanics, construction and business and ICT) to each RTC by 2015</p> <p>1.1.2 Equip new skills workshops in RTCs by 2015.</p> <p>1.2 Develop and introduce competency-based training modules in the target sectors by end 2012</p> <p>1.2.1 Appoint four Phnom Penh institutions as national centers, one for each sector, by end first quarter (Q1), 2010</p> <p>1.2.2 Train two senior trainers in regional training programs in standards, curriculum and teaching skills in target programs by end 2010</p> <p>1.2.3 Develop competency standards for the target programs by end 2011</p> <p>1.2.4 Develop and produce RTC and PTC curriculum and learning materials for the target industry sectors by end 2012</p> <p>1.2.5 Equip new PTCs and RTCs by end 2014</p> <p>1.2.6 Train skills assessors for new standards in the target industry sectors and commence assessment by end 2012</p> <p>1.3 Train trainers for standards based training in the target industry sectors by end 2014</p> <p>1.3.1 Train all teachers in the target programs, pre-service and in-service, in new curriculum by end 2014</p> <p>1.4 Increase industry involvement in development and implementation of training programs by end 2012</p> <p>1.4.1 Establish three industry advisory groups and ensure functioning by end 2010</p> <p>1.4.2 Industry advisory groups to have formally endorsed competency standards that meet local industry requirements at the appropriate qualification level by end mid-2011.</p> <p>1.5 Strengthen NTTI complex for system upgrading, including enterprise-endorsed skills standards, upgraded training programs and materials, trainer training, and instructional monitoring and development, and support national implementation, by end 2012</p> <p>1.5.1 Appoint three institutions in NTTI complex as national centers for trainer and community development specialist pre-service and in-service training, by end Q1, 2010</p> <p>1.5.2 Train five senior trainers in regional programs in training methodologies, lifelong learning, and career guidance by end Q1 2012</p> <p>1.5.3 Develop new TVET trainer-training curriculum, including technical skills upgrading, pedagogy, microenterprise development and career guidance by end 2012.</p> <p><b>2. Expanded and Better Quality Nonformal Training</b></p> <p>2.1 Establish, construct and equip two new PTCs by end 2011</p> <p>2.2 Extend VSTP to all provinces, including an urban pilot in Phnom Penh, and monitor outcomes, by end 2015</p> <p>2.2.1 Train all PTC staff in VSTP operations by end 2013</p> <p>2.2.2 Implement new VSTP program in three phases</p> <p>2.3 Develop, deliver and coach PTC directors for implementation of VSTP</p> <p>2.3.1 Provide continuing support to all PTCs and complete strengthening of less able PTCs through intensive coaching programs by 2012</p> <p>2.4 Rehabilitate existing PTCs using a competitive selection process</p> <p>2.5 Implement PTC trainer training, and institutional monitoring and development, through NTTI complex by 2015.</p> <p><b>3. Strengthened Institutional Capacity to Plan and Manage TVET</b></p> <p>3.1 Strengthen management capacity at training institutions, provincial training boards and DGTVEET by end 2014</p> <p>3.1.1 Conduct training needs assessment for all managers in PTCs and DGTVEET</p> <p>3.1.2 Train all PTC directors in institutional management by end 2013, and implement consultant-led institutional mentoring to 2015</p>	<p><b>ADB: \$24.50 million</b></p> <p>Civil Works: \$2.64 million</p> <p>Machinery and Equipment: \$4.03 million</p> <p>Learning Materials: \$0.24 million</p> <p>Training: \$1.79 million</p> <p>Consultants: \$4.11 million</p> <p>VSTP: \$6.24 million</p> <p>Surveys and Studies: 0.36 million</p> <p>Incremental Administrative Costs: \$2.60 million</p> <p>Physical and Price Contingencies: \$2.49 million</p> <p><b>Government: \$3.02 million</b></p> <p>Civil Works: \$0.39 million</p> <p>Taxes and Duties: \$2.06 million</p> <p>Incremental Administrative Costs: \$0.57 million</p>

Activities with Milestones	
<p>3.1.3 Train 60 provincial officers in regional programs in TVET system management, supervision and development by end 2011, and on-the-job follow-up mentoring to 2015</p> <p>3.1.4 Complete regional study tour on TVET policy for 12 senior DGTNET officers and polytechnic directors (total 12) by end 2010</p> <p>3.1.5 Train 48 finance officers from PTCs (2 x 24 institutions) and 6 finance officers from DGTNET in basic accounting by end 2011</p> <p>3.1.6 Train relevant DGTNET officers in program performance monitoring (particularly VSTP) by mid 2010</p> <p>3.1.7 Produce a project finance and procurement manual by mid-2010.</p> <p>3.2 Improve TVET information systems including VETMIS and LMIS by 2013</p> <p>3.2.1 Improve ICT facilities in training institutions, provincial offices and MOLVT by end 2010 for implementation of new information systems by end 2010</p> <p>3.2.2 Improve ICT skills of personnel in training institutions, provincial offices and MOLVT by end 2010 to implement new information systems</p> <p>3.2.3 Establish system of localized standard classifications for occupations and industries compatible with NIS, ISCO and ISIC by end 2011</p> <p>3.2.4 Develop data structures, codes and terminology of relevant data to enable data collection for LMIS by end 2011</p> <p>3.2.5 Develop VETMIS and capacity to operate the system by end 2013</p> <p>3.2.6 Develop LMIS and capacity to operate the system by 2014</p> <p>3.3 Strengthen capacity of DGTNET as secretariat of NTB by end 2011.</p> <p>3.3.1 NTB, PTB, and senior MOLVT officers and polytechnic directors to have completed regional study tour on TVET policy review by end 2010</p> <p>3.3.2 Initiate annual NTB TVET workshop policy reviews by mid 2011</p> <p>3.3.3 Formulate new medium-term TVET development plan, 2011–2015 by end 2010 for approval by NTB</p> <p>3.3.4 Complete medium-term expenditure framework, 2011–2015 for TVET by end 2010 for approval by NTB</p> <p>3.3.5 Complete annual TVET development plans for each year from 2010</p> <p>3.4 Develop NVQF by 2014</p> <p>3.4.1 Train 15 DGTNET and provincial officers in regional programs in the management and use of NVQF by end 2010</p> <p>3.4.2 Complete user manual on the management and operation of the Cambodian NVQF by 2014</p> <p>3.5 Implement national system for career guidance by end 2012</p> <p>3.5.1 Develop and implement systems for career information</p> <p>3.5.2 Launch web portal for dissemination of career information and guidance by end 2012</p> <p>3.5.3 Print career guides and distribute to TVET institutions by end 2011</p>	

ADB = Asian Development Bank, DGTNET = Directorate General of Technical and Vocational Education and Training, FDI = foreign direct investment, GDP = gross domestic product, ICT = information and communication technology, ISCO = international standard classification of occupations, ISIC = international standard industry classification, LMIS = labor market information system, M&E = monitoring and evaluation, MOLVT = Ministry of Labor and Vocational Training, NIS = National Institute of Statistics, NTB = National Training Board, NTF = National Training Fund, NTTI = National Technical Training Institute, NVQF = national vocational qualifications framework, PCU = project coordination unit, PTB = provincial training board, PTC = provincial training center, RTC = regional training center, TVET = technical and vocational education and training, VETMIS = vocational education and training management information system, VSTP = Voucher Skills Training Program.

<sup>a</sup> Total civil works: 21 new classrooms, 27 classrooms upgraded, 18 new workshops, and 5 new student dormitories.

<sup>b</sup> A total of 159 principals and administrators will have been trained.

<sup>c</sup> Total teachers to be trained 1,025; new teacher graduates 300 per year.

## SUMMARY SUBSECTOR ASSESSMENT

### A. Economic Setting

1. Cambodia has reached an important juncture in its economic development. On the one hand, it is in transition from a traditional agrarian base to a more modern industrialized economy and, on the other, it is moving from a closed central command economy to one that is market-based and open to a competitive, global environment. At the same time, it has been caught up in a far-reaching economic recession and it possesses little of the financial capacity available to wealthier countries with which to protect its population.

2. Four years of double-digit gross domestic product (GDP) growth (averaging 11% per annum during 2004–2007) have been successfully translated into a reduction of the population living on or below the poverty line, from about 34% to 30% of the total. The Government recognizes that much more needs to be done, particularly now that these gains are at risk. With a small urban middle class and low rates of internal consumption, the external environment will continue to be the principal determinant of economic development.

3. Over 80% of Cambodians still live in rural areas, and about 68% of the labor force still finds employment in agriculture, but its productivity is very low. The estimated contribution to GDP of the whole agricultural sector was only 27% in 2007 and there has been little growth in real terms over recent years. There is little commercial, plantation-style agriculture or livestock production.

4. The economy is very dependent on three economic sectors: agriculture, services, and manufacturing. Manufacturing is built on a very narrow base, with the garment industry being its backbone, contributing 23% of GDP and accounting for almost 75% of all manufacturing, 90% of manufacturing jobs growth, and 70% of all export revenue. The services sector is the largest contributor to GDP, accounting for almost 42%, and it is also the next most important sector to agriculture in terms of employment. While trade and other private services (principally personal and business and financial services) lead the services sector, since 2003 employment growth in the sector has been dominated by tourism. The number of tourist arrivals has fallen only slightly during the current global crisis, but in the garment industry production and exports have dropped dramatically.

5. With these three sectors, in total, accounting for 85% of employment and 92% of GDP, the Government recognizes that the issue of productivity must be addressed, as must the need to attract new industries to increase the diversification of the economy. It strongly believes technical and vocational education and training (TVET) has an important role to play in the effort to meet these challenges, and it recognizes the need to transform TVET into a quality, demand-driven training system that is relevant to industry.

### B. General Education and Technical and Vocational Education and Training

6. Until 2005, formal TVET provision was under the control and academic structures of the Ministry of Education, Youth and Sports (MOEYS), as an integral part of a 16-year multi-track education system. The transfer of its post-grade 9 technical and TVET programs to the newly-formed Ministry of Labor and Vocational Training (MOLVT) in 2005 to form a discrete post grade 9 school vocational training system, has retained the basic pathway from grade 9 in basic education to TVET training under MOLVT, but has removed the former pathways between TVET and formal education at senior high school, graduate and postgraduate levels. Further, and perhaps more seriously, the retention of the grade 9 entry level as the basis for entry to

formal TVET programs has made transfer from the nonformal basic skills training, offered primarily in provincial training centers (PTCs), to the formal levels of TVET virtually impossible.

### C. Technical and Vocational Education and Training Under the Ministry of Labor and Vocational Training

7. In its first National TVET Development Plan, 2006–2011 (NTDP), MOLVT and its Directorate-General for TVET (DGTVET) identified poverty alleviation as the continuing principal thrust of TVET (as it had been under MOEYS). This focus was, and is still, consistent with the government's National Strategic Development Plan. Accordingly, MOLVT continued to direct a great deal of its limited resources under the National Training Fund for mostly nonformal, livelihood training in rural areas with high levels of poverty incidence. In its 2008 update of the NTDP, however, a new direction was signaled: "... (while) there will be proposals to add to our growing strength in community based skills development, (there will also be) ... a new emphasis on institution based TVET".<sup>1</sup> It was clear MOLVT had identified a need to redress the imbalance between nonformal training for basic skills and formal training for qualifications, with an increasing emphasis on formal training to meet the needs of the country's industrializing and corporate service sectors.

8. In 2009, the TVET system under DGTVET has 36 polytechnics and institutes and 25 PTCs and offering programs from basic skills to advanced degrees.

9. **Provincial training centers.** The 25 PTCs offer nonformal basic TVET training. They originated in the centers established under assistance from the United Nations Development Programme and the International Labour Organization in the mid-1990s to provide short nonformal training programs to address the then major problem of rural and urban social dislocation and poverty. Programs focused on basic agriculture, construction, metal cutting, electronics, motor repair skills, crafts and food processing skills. Subsequently, programs to provide extended training in 3- to 4-month programs in wider basic technical skills were developed, largely through Asian Development Bank (ADB) project support under the First and Second Education Sector Development Programs (ESDP). Such programs provide a continuing local source of skills access in predominantly rural areas. Table A2.1 summarizes recent training provision across all PTCs, and is representative of the majority of the training provision. No systematic data on work, employment or earnings outcomes are available.

**Table A2.1: Provincial Training Center Agriculture and Services Programs, 2007–2008**

<b>Training Program</b>	<b>No. of Trainees</b>	<b>Average Length</b>	<b>Person-Months</b>
Agriculture (including vegetable growing, poultry, pigs, poultry, cattle, fish, fertilizer, and basic veterinary science)	39,579	2 weeks	16,276
Technical Trades Skills (including mechanical, motor, electrical, electronics, plumbing, welding, and construction)	1,757	3 months	5,141
Textiles, Garments and Handicrafts	763	4.6 months	3,490
Hairdressing and Beauty	386	4.4 months	1,670
Computing	732	4.1 months	3,001
Tourism and Hospitality	1,008	2 weeks	327
Other (including business, art, design, and languages)	8,911	12 days	4,964
<b>Total</b>	<b>53,136</b>		<b>34,869</b>

Source: Project Preparatory Technical Assistance Survey, March 2009.

<sup>1</sup> DGTVET for the National Training Board. 2007. *The National TVET Development Plan, 2008 Update*. Phnom Penh.

10. There is wide variation in the coverage and quantity of provision between the centers, from centers offering as few as three programs for 60 students a year, to those offering 20 programs for 9,000 students. While this presumably reflects local demand for training to some extent, it is also clear that there is considerable variation in the effectiveness of the management of the different centers. Currently, there appears to be little established central (or provincial) support for PTC directors in such areas as center management, training procedures or professional development. Some centers have established viable links to local employers, and these do reflect local employment needs.

11. The variation in activity between the PTCs is reflected in a wide variation in the size of the teaching staff, with an average of 20 across all PTCs, but with a range of between 10 and 38 permanent teachers, and 11 to 46 when contractual teachers are included. Permanent teachers are generally recent graduates from the Phnom Penh formal technical training institutions and since 2000 have been required to complete formal teacher training as well. Currently, 74% of all permanent PTC teachers have a teacher training qualification in addition to a minimum bachelor or diploma level technical qualification. In general contractual teachers lack pedagogic training.

12. All PTC programs are nonformal, lack formal certification, and carry no credit or link to formal training. Overall, there is little employer input to curricula or to the determination of training needs, although some PTCs have now begun to develop significant community links following their involvement in the recent Voucher Skills Training Programs (VSTP) under the ADB Second ESDP Project. Some PTCs have also recently begun to review training provision in response to fee-paying student demand for basic business and information and communication technology (ICT) programs, although no approved central curriculum exists for these programs, or for certification or credit award of programs.

13. PTC trainees have generally had at least grade 5 formal education but this has not been a requirement. Table A2.2 summarizes data from a recent survey of all PTCs, and reflects one of the key issues for the ongoing development of a viable, more industry-responsive TVET system. Entry into certificated, longer program TVET training (longer than 1 year) currently requires the successful completion of grade 9 formal education, a qualification held by a minority of PTC trainees. The proportion of such trainees in programs covering the key TVET trade skills areas is relatively high (60%), but in agricultural programs 90% of trainees have not completed grade 9. The overall proportion of 14% indicates the main obstacle to introducing standard formal courses into most PTCs (see Table A2.2).

**Table A2.2: Provincial Training Center Trainees by Formal Education Level, Academic Year 2008/2009**

Education Level of Trainees	Agriculture		Trade Short		Total	
	Short Courses	%	Courses	%		%
Grade 9 pass or above	3,530	10	1,947	59	5,477	14
Grade 9 fail or below	31,917	90	1,344	41	33,261	86
<b>Total Trainees 2008/ 2009</b>	<b>35,447</b>	<b>100</b>	<b>3,291</b>	<b>100</b>	<b>38,738</b>	<b>100</b>

Note: Data by trainee numbers not adjusted for length of programs.

Source: Survey carried out for project preparatory technical assistance in July 2009.

14. **Voucher Skills Training Program.** The pilot VSTP provided financial allocations for training provision and support for program development, management and delivery, largely involving PTCs in the pilot areas. Training plans and delivery procedures were developed through the local commune councils, assisted by a community development specialist from the

relevant PTC. Programs focused on identified areas of local skills needs and employment or self-employment. The pilot program covered 201 communes in seven poor provinces, and 100,000 trainees. A major extension of the VSTP is planned under the proposed Project modified to reflect the lessons learned in the pilot.

15. **Formal training institutes.** The MOLVT institutes provide longer, formal, internally-linked programs after grade 9 from certificate to master's degree level (Table A2.3). Only 22% of students are enrolled in certificate-level programs, almost exclusively in technical areas. There are no mid-level business/ICT courses. Diploma and degree courses have become the first preference of most students, attracting 72% of all students in 2007/08.

16. The 10 post-secondary institutions occupy modern facilities in attractive surroundings, the majority in Phnom Penh. The current curricula for certificate, diploma and degree programs were largely developed through donor support over the last decade. Despite relatively recent teacher training for most staff through National Technical Training Institute (NTTI), many lack up-to-date, practical technical skills, and institute directors identify this as a major problem. As a result, programs at all levels appear to have become increasing academic and unrelated to skills performance, despite their original objectives.

**Table A2.3: Number of Graduates by Subject in MOLVT Formal Training Institutes, Academic Year 2007/2008**

Subject	Certificate	Diploma	Bachelor's	Master's	Total	Percentage of Total
<b>A. Technical</b>						
Mechanical	75	46			121	
Electrical	159	302	159	9	629	
Electronics	72	61	55		188	
Air Conditioning	60	32			92	
Construction	66	195	154	11	426	
<b>Subtotal (A)</b>	<b>432</b>	<b>636</b>	<b>368</b>	<b>20</b>	<b>1,456</b>	
<b>Percentage of Total</b>						<b>66.8</b>
<b>B. Computing</b>						
Information Technology		29	30		59	
CADCAM		12			12	
<b>Subtotal (B)</b>		<b>41</b>	<b>30</b>		<b>71</b>	
<b>Percentage of Total</b>						<b>3.3</b>
<b>C. Business</b>						
Management		21	212	109	342	
Business Administration		16			16	
Accounting		22	105		127	
Marketing		23	49		72	
<b>Subtotal (C)</b>		<b>82</b>	<b>366</b>	<b>109</b>	<b>557</b>	
<b>Percentage of Total</b>						<b>25.6</b>
<b>D. Other</b>						
Tourism		5			5	
English		31			31	
Graphic Design	59				59	
<b>Subtotal (D)</b>	<b>59</b>	<b>36</b>			<b>95</b>	
<b>Percentage of Total</b>						<b>4.4</b>
<b>Total</b>	<b>491</b>	<b>795</b>	<b>764</b>	<b>129</b>	<b>2,179</b>	
<b>Percentage of Total</b>	<b>22.5</b>	<b>36.5</b>	<b>35.1</b>	<b>6</b>	<b>100.1</b>	<b>100.1</b>

DGTVET = Directorate General of Technical and Vocational Education and Training, MOLVT = Ministry of Labor and Vocational Training, NTTI = National Technical Training Institute, TVET = technical and vocational education and training.

Source: DGTVET data, March 2009 (excludes NTTI teacher training).

17. Current staffing provision, qualifications of staff, and teacher training are summarized in Table A2.4. Across the post-secondary institutes, there appears to be a well-established tradition of maintaining links with industry for program support, work experience and graduate employment and, in the past at least, it appears there was high employment placement. Despite this, there is an increasing trend away from enrollment in the technical programs of the institutes, particularly in the major Phnom Penh institutions, and a growing move towards business and ICT. Such programs, often fee-paying, have become increasingly common in most institutes. For the most recent academic year, over one-third of all programs were in “computing, business and other” fields and, more significantly for the future, current business graduates at the bachelor’s degree level equal the total of technical graduates (Table A2.3). This trend does not appear to have occurred in the two institutions outside the capital, in Kampot and Battambang.

**Table A2.4: Teachers in Formal Training Institutes, Academic Year 2008/2009**

Institute	Teachers		Qualifications			Teacher Training
	Permanent	Contract	Master's	Bachelor's or Diploma	Other	
National Polytechnic Institute of Cambodia	42	47	24	49		42
National Institute of Business	34	10	33	5		34
National Technical Training Institute	28		4	26		28
Preah Kosomak Polytechnic	45	21	20	61		45
Polytechnic Institute of Battambang	30	14	6	24		20
Battambang Institute of Technology	34	7	3	16	7	24
Kampot Polytechnic Institute	38			38	2	32
Industrial Technical Institute	59	0	7	52		45
Cambodia–India Entrepreneurship Development Center	32	6	13	21		32
Cambodia–Thai Skills Development Center	19	4	4	8		19
<b>Total</b>	<b>361</b>	<b>109</b>	<b>114</b>	<b>399</b>	<b>9</b>	<b>321</b>

DGTVET = Directorate General of Technical and Vocational Education and Training, MOLVT = Ministry of Labor and Vocational Training.

Source: DGTVET data, May 2009.

18. **Teacher training in technical and vocational education and training.** The current 1-year TVET teacher-training program offered by NTTI was largely developed under the ADB Basic Skills Project.<sup>2</sup> It follows the then traditional teacher training model of formal lectures in psychology, curriculum development, pedagogy, philosophy of education and teaching materials (including practical development), plus formal practical training with at least one teaching class per week over eight weeks. No skills upgrading for specific skills teaching is included, although most teachers lack practical skills. Recently, components in community and entrepreneurship development have been added. Postings of newly trained teachers are made by DGTVET.

19. The proposed Project will support the development of a more experiential program directly focused on the practical training responsibilities of TVET teachers, and will include direct skills enhancement in the specialist teaching areas. It will include training for the community development activities of PTC instructors, and basic entrepreneurship training.

<sup>2</sup> ADB. 1995. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Cambodia for the Basic Skills Project*. Manila.

## D. Other Technical and Vocational Education and Training Provision

20. **Nongovernment organizations (NGOs).** The major NGO provider of technical skills training is Don Bosco, which has operated technical schools and training centers in Cambodia since 1991. In academic year 2008/2009, it offers 2-year programs with 526 trainees in welding, mechanical, electricity, auto mechanics, and electronics (electronics is open to both girls and boys). Printing was formerly offered but has now been suspended because of the lack of jobs. Programs are open to those who have undertaken grade 9 secondary education, although a successful exam pass is not required. Training is closely directed to employment, with work placements and assistance with job search on completion.

21. Other non-institutional NGO provision varies widely depending on donor finance, and concentrates on nonformal agricultural provision, crafts, textiles and garments. The limited available registration data indicates that about 30–50 organizations are involved in training for about 300–500 people per year in 1-week to 1-month programs.

22. **Private provision.** A 2009 survey of private providers estimated that about 750 private business concerns are offering fee-for-training services in Cambodia, of which 46% (345) were located in Phnom Penh. The majority (60%) offered computer training and/or English, or were private driving schools or dancing academies. A further 30% were small businesses (e.g., auto repair and electrical maintenance), which offered informal apprenticeships through a pay-and-work arrangement. The remaining 135 enterprises indicated that they trained in auto repair, painting and electrical, with a wide variation in fees charged and training arrangements. The total training capacity in the basic trade areas was a minimum of between 700 and 800 trainees per year for 6 to 12 months. Training center proprietors reported that most trainees obtained employment, and were assisted in doing so. No assessment of the training quality could be made.

23. **Formal apprenticeships.** All private enterprises employing 60 or more workers are obliged by law to take on an additional 10% of their workforce as apprentices. MOLVT reports that in 2008 there were about 100 registrations in technical trades and 6,200 in textiles/garments and tourism. No data on graduates are available.

## E. Major Issues

24. **System capacity.** Total current TVET capacity is limited. The estimated total formal training output in 2008 was about 2,500 in formal programs. Nonformal output is difficult to quantify because of the wide variation in program type and length but is probably about 8,000 in all program types, irrespective of length. Importantly, in 2008, the MOLVT institutes graduated fewer than 1,100 trainees with formal, vocational level qualifications at certificate and diploma levels. Correspondingly, only about 5,000 undertook PTC programs longer than 1–2 weeks. Before the current economic downturn, the main employer organizations pointed to the existence of skill shortages side by side with significant numbers of unemployed and underemployed unskilled adolescents and adults living on or below the poverty line. The result is that skilled jobs are often filled by relatively expensive imported labor, thus increasing the cost of production or, conversely, by unskilled or semi-skilled labor that requires significant on-the-job training, something that small and medium-sized employers are usually not adequately equipped to provide. Either way, the consequence is low productivity, often coupled with poor product quality.

25. **Access and equity.** Access to skills training is currently limited to the major urban areas, or to nonformal training in the PTCs. The Project will support the extension of training provided by PTCs to the remaining non-served provinces, and the upgrading of such training. It will also support the development of regional training centers to enable the efficient provision of wider access to advanced training, and as centers for TVET teacher upgrading.

26. **Quality and relevance.** The quality of teaching in most institutes and PTCs needs substantial improvement. Almost all TVET instructors lack industrial experience and there is a shortage of modern teaching resources. Curricula across the system are not linked to relevant industry practice and standards, and assessment lacks reliability and validity. Moreover, most institutions lack adequate, industry-relevant equipment and training facilities, so theory is emphasized at the expense of practice, thereby ensuring that measurement of competency attainment, a cornerstone of modern TVET, is pointless.

27. The Project will address these challenges through (i) development of new standards-based curriculum and training materials; (ii) a new teacher training curriculum; (iii) a system-wide teacher upgrading; (iv) provision of new facilities and equipment to meet the requirements of the new training curriculum; (v) the introduction of industry advisory committees to support and assist standards, curriculum, and assessment development; and (vi) institutional management development and support for the development of the capacity of DGTVE to coordinate and manage the reform agenda.

## EXTERNAL ASSISTANCE

Project Name	Value and Years	Focus of Assistance
ILO Employment Generation Program Vocational Training for Employment Generation (VTEG) UNDP/ILO Grant	\$18 million Phase 1 (1992–1997) Phase 2 (1997–1998)	Promoted and provided direct employment skills for rural and urban poor (including returnees, displaced persons, demobilized soldiers, disabled and female heads of households) through short vocational training programs for identified employment opportunities. Developed skills for training needs assessment, curriculum and program development and instructor training.
ILO Employment Generation Program Vocational Training for Poverty Alleviation (VTAP) UNDP/ILO Grant	\$12 million 1994–1998	Further development of systems and support mechanisms for skills training and implementation through development of a national training framework and training of officers from the MOEYS. Assistance to MOEYS for planning an integrated national TVET system.
National Strategy Plan for TVET UNDP/ILO/GTZ	1994 –1996	Assessment of existing TVET system; involvement of other ministries and stakeholders; identification of training needs for employment, self-employment and income generation; training technologies; system structures
Basic Skills Project ADB loan	\$20 million 1996–2002	Established (initial) National Training Board (NTB); National Training Fund (NTF) and the National Vocational Training Center (now National Technical Training Institute, NTTI). Assistance to provincial training centers and women's training centers, and support for system training and development)
Education Sector Development Program ADB loans and linked advisory assistance, 2004	\$20 program loan and \$18 million project loan 2002–2004	For TVET: established and continued upgrading to PTCs. Technical assistance for TVET staff upgrading and development of skills standards.
Second Education Sector Development Program ADB loan	\$20 program loan and \$25 million project loan and TA (0.5 million) 2005–2008	For TVET: development and support of the Voucher Skills Training Program (VSTP) as a community-based basic-skills demand-driven training scheme in trial provinces. Equipment and technical assistance for staff and system development through provincial training center upgrading, staff training and management support for implementation of VSTP.
Japanese Vocational Center Workshop and Technical School JICA grant assistance	1990–2000	Assistance for the establishment and continuing operation of an automotive training and commercial auto repair center, including senior staffing, equipment, programs and in-Japan staff training. (Initially under Ministry of Public Works and Transport, now MOLVT).
Japanese Overseas Cooperation Volunteers Program JICA	ongoing	Assistance through volunteers for training and development in air conditioning, automotive, dressmaking, computer graphics, engineering, systems engineering in DGTVET institutions, plus supporting training equipment and supplies.
Korean Development Assistance (Korean Research Institute for Vocational Training) Grant	\$1.2 million 2005–2009	Assistance for the establishment of a national qualifications framework and testing centers.
Technical Assistance for the Support of the Cambodia-India Entrepreneurship Development Center,	2004–2007	Provision of technical advisor, fellowships, and in-country staff development, for management and program development in entrepreneurship, SME development, accounting and business.

Project Name	Value and Years	Focus of Assistance
(CIEDC) ITEC grant		
Piloting the Post-Harvest Technology and Skills Bridging Program ADB grant	JFPR Grant \$2 million 2009	TVET skills bridging for out-of-school rural poor youth for income-earning activities in market-linked post-harvest employment, including basic education upgrading initiatives which will impact directly on the proposed Strengthening TVET project.
National Garment Training Institute AFD, GMAC, MOLVT	€3.8 million loan to GMAC. Not yet finalized	Establishment of an independent (public-private partnership) garment industry training and development center for: (i) skills training for access to employment; (ii) professional development; and (iii) advice and technical assistance.

AFD = Agence Française de Développement; GMAC = Garment Manufacturers Association in Cambodia; GTZ = German Agency for Technical Cooperation; ILO = International Labor Organization; ITEC = Indian Technical and Economic Cooperation; JICA = Japan International Cooperation Agency; MOEYS = Ministry of Education, Youth and Sport; MOLVT = Ministry of Labor and Vocational Training; PTC = Provincial Training Center; TVET = Technical and Vocational Education and Training; UNDP = United Nations Development Programme.

Source: Asian Development Bank.

1. The current system of technical and vocational education and training (TVET) reflects the major directions of external assistance to the subsector since the early 1980s following the end of the Khmer Rouge period. Initially assistance from the former Soviet Union, Viet Nam and countries in Eastern Europe resulted in large formal institutions for the training of skilled labor and technicians for specific, more-or-less guaranteed employment in state enterprises. By the mid-1990s, state-guaranteed employment of TVET graduates had ceased, program offerings in the formal institutions had few links to the needs of the newly emerging labor market, and enrollments in such institutions began to decline. At much the same time, the compounding effects of the long periods of social and economic dislocation, and lack of earning skills of returnees, the demobilized, disabled and displaced, and the abnormal proportions of households headed by women, had resulted in a cycle of increasing poverty, both rural and urban. Short vocational training programs for poverty alleviation and income supplementation activities became a significant part of donor and nongovernment organization responses.

2. While such short-term responses have continued, the ongoing series of projects largely assisted by the Asian Development Bank have also focused on the development of systems for governance, institutional development and professional development of TVET, and the revitalization of the TVET formal training sector, and in the longer term, skills, and advanced skills training. However, these reforms have not regained major public support for TVET, either in absolute terms or compared with the demand for university entry. The reforms do not appear to have been able to renew and maintain the key systemic links to enterprise essential for effective TVET planning, program redevelopment and provision, and the employment of its graduates.

3. The proposed Project will attempt to redirect the professional and operational focus and processes of TVET and its institutions to the labor market and the identified skills needs of enterprises. It will continue assistance for short training programs for poverty alleviation but will attempt to ensure that an increasing proportion of all training has links to defined skills standards and labor market needs, and carries recognition for entry and access to further levels of accepted market-linked skills training.

## **ESTABLISHING AN INTEGRATED SYSTEM OF PROFESSIONAL SUPPORT**

1. The Project will develop an integrated learning services system for the upgrading of technical and vocational education and training (TVET) teacher training, skills standards, testing and assessment; curriculum and training materials; and institutional management and upgrading.

### **A. Organization of Professional Support Services**

2. It is proposed that the major support activities for TVET will be channeled through a coordinated complex of senior TVET institutions in Phnom Penh based on the National Technical Training Institute (NTTI), which is responsible for TVET teacher training and development. Initially four institutions will be designated as national centers of competence (NCC): (i) Industrial Technical Institute (ITI); (ii) Preah Kossamak Polytechnic Institute (PPI); (iii) National Institute of Business (NIB); and (iv) the Cambodia-India Entrepreneurship Development Centre (CIEDC).

3. Three of the four NCCs will provide specialist system development support in a particular technology: (i) ITI in mechanics; (ii) PPI in construction; and (iii) NIB in business and information technology. The CIEDC will provide expert services for professional support and development for entrepreneurship and small and medium-sized enterprises across each of the three technology areas. NTTI will be responsible for TVET teacher training and upgrading, and will exercise overall coordination of the professional support services for the TVET system as a whole under DGTNET.

### **B. Proposed Professional Service Activities**

4. **Skills standards and curriculum.** In addition to its regular teaching role, each of the three technology institutions will (i) bring together an industry advisory group; (ii) translate existing international competency standards to Khmer for endorsement by the industry advisory group and, following endorsement; (iii) send the endorsed standards to the director of standards, Ministry of Labor and Vocational Training for posting on the NTB website; (iv) develop curricula and learning materials that meet these standards; (v) support the training of assessors from industry to ensure graduates meet the agreed standards; (vi) provide skills strengthening to NTTI students preparing to teach in the new curriculum in each target skill area; (vii) partner with NTTI on in-service training for current teachers in the technical areas for teaching against the new standards; and (viii) monitor the provision of training as required through visits to the PTCs and other institutions ensuring the use of the new curriculum.

5. Appropriate skills standards are available from countries such as Sri Lanka and the Philippines. These can be adapted for submission to the industry advisory groups for validation.

6. **Teacher training and upgrading through NTTI.** It is proposed that a new 1-year preservice teacher training program (and qualification) be developed to meet the specific functional needs of TVET trainers and community development specialists who will be employed for the provincial training centers (PTCs) and regional training centers (RTCs).

7. The proposed program will comprise: (i) pedagogy—directly under NTTI (240 hours); (ii) skills upgrading—by specialization in the appropriate NCC with a specific focus on the current technical skills-standards-based curriculum (240 hours); and (iii) community development, enterprise development, marketing and micro enterprise support—through CIEDC

(240 hours). The program will also include supervised teaching experience in the specific specialization of each trainee.

8. The Project will support the development of programs for specialist training and work-place implementation support for institutional managers, TVET trainers, community development specialists and finance officers. It will support professional services development with specialist fellowship training, consulting services, equipment and development and operational costs on the basis of performance-based milestones.

9. Teaching equipment for their specific target technologies will be provided to the NCCs. The three target technologies will be models for the development and implementation of other skills-standards-based training that can be adapted by other sectors in future. Project assistance will also be provided for the establishment of a central NTTI complex office and support unit.

### **C. Delivery of Teacher Training Through Regional Training Centers**

10. The five RTCs will have two major functions: (i) increasing access to technician level (grade 9 or equivalent plus 2 years) skills training, and (ii) providing facilities and support for the continuing in-service upgrading of existing TVET managers, trainers and staff by NTTI complex staff. The Project will provide each RTC with new workshops and laboratories in the three target technologies, new classroom space, equipment to meet the requirements of the new skills-standards-based curriculum in the three target technologies, and a female hostel for female PTC graduates and staff under the new professional support programs.

11. It is anticipated that the RTCs in Battambang, Kampot and Svay Rieng will begin training late in year 3 of the Project, while Takeo and Siem Reap will begin training late in year 4.

## FINANCING AND IMPLEMENTING THE VOUCHER SKILLS TRAINING PROGRAM

1. The Voucher Skills Training Program (VSTP) will be expanded to all 24 provinces under the Project. The revised procedures outlined below for this second phase reflect the lessons learned in the pilot phase, and the findings of a survey of about 4,000 of the 140,000 participants in the pilot program, plus provincial training centers (PTC) directors.

2. Adjustments have been made to reduce the cost of the program and to increase the number of trainees in the enterprise-based component (informal apprenticeship). An alternative microenterprise model has been introduced. Strategies have been developed to link training to appropriate entry-level standards in the new enterprise-endorsed curricula under the Project. A new urban-based model has been initiated. Clear guidelines on the allocation of training by delivery format using cost-per-training hour are provided to accelerate the expansion of VSTP in credit-earning technical skills.

### A. Rural Areas and Micro-Enterprise Provision

#### 1. Extending the Program to All Provinces

3. **Commune selection criteria.** In line with its objective of poverty alleviation through community-based skills training, the pilot VSTP selected the 40% poorest communes in the seven poorest provinces, as determined by the United Nations World Food Program, Commune Based Poverty Index, 2001. Selected communes were submitted to the Asian Development Bank for approval.

4. The expanded VSTP will include all provinces, and an estimated 210,000 of the poorest rural villagers will benefit directly from the program. No communes that formerly received VSTP may be included in the revised program. Communes will be selected based on data on the poorest communes as identified in the commune data information system of the National Institute of Statistics (2007 data).<sup>1</sup>

5. **Costing.** Each province will receive \$5,786 per commune for each of the 2 years in the VSTP cycle. Altogether 530 communes will receive support. Counting the original 210 communes that received support under the pilot program, a total of 740 out of 1,621 communes across the country will have received support by the end of the Project. The allocation of \$5,786 per commune was determined by an analysis of the costs of the pilot program and the effectiveness of training modalities employed under it. Community development specialists from the PTCs will help commune councils to conform to the requirements of the program.

6. **Schedule.** The schedule ensures that all PTCs will complete 2 years of VSTP during the Project. It provides for the continuation of the program in the seven pilot VSTP PTCs. Implementation in the two new PTCs is scheduled for late in the project. The target group for enterprise- and center-based training will be out-of-school youth between the ages of 15 and 24, at least half of whom will be female. There needs to be some flexibility in these targets. Usually, in the first round of training, agriculture is the priority because it affects virtually all of the villagers.

7. **Operational procedures.** In the first year of training, no more than 60% of the total training hours will be allocated to community-based training, 20% to enterprise-based informal

<sup>1</sup> National Institute of Statistics. 2007. *Commune Development Information System*. Phnom Penh.

apprenticeships, and the final 20% to center-based training (either in the PTC or another training center). In the second year, community-based training will be limited to 40% of the available hours with 30% allocated to each of the other categories.

8. A community development specialist will prepare a listing of all approved training available and the cost per training unit as well as an overview of local labor market opportunities and of microfinance availability. Villages and communes will be invited to add their own resources to the value of the voucher to enhance the training provided. Operational procedures will be further elaborated in the project administration memorandum.

## 2. Microenterprise Voucher Skills Training Program Provision

9. The Economic Institute of Cambodia estimates that 85% of the workforce was in the nonformal economy in 2003. Of these, about half worked in agriculture and about half in rural and urban services and other activities. There are two important implications of this (i) most graduates of the skills training will work in the informal economy and thus need training in microenterprise operations; and (ii) currently most small enterprise workers, street vendors, basic technical service providers, and microenterprise proprietors have little or no access to basic training in finance, microcredit, entrepreneurship, or management.

10. **Proposed training.** Nongovernment organizations (NGOs) often have direct links to the nonformal economy in ways that government would find difficult to copy. Usually, some sense of mission is associated with these smaller organizations and their links to local communities and microenterprises. VSTP will expand the competence of selected NGOs to deliver a range of microenterprise skills in urban areas to increase family income. The Project will support the Cambodia-India Entrepreneurship Development Center to develop, manage and supervise programs to upgrade the skills of NGOs to deliver specific training targeted at the needs of microenterprises.

11. The training will aim to develop the microbusiness skills of existing informal economy microenterprise proprietors to increase income. Initially, programs will be confined to enterprises in Phnom Penh: 10 in each of 10 selected communes. NGOs will be invited to apply for a training grant. The NGOs will also coordinate related applications for microcredit under the existing Self Employment Generation Fund.

**Table A5.1: Rural Voucher Skills Training Program and Microenterprise Funding**

Number of Provinces	Years of VSTP	Allowance per Commune/Trainee per Year (\$)	Total Cost of VSTP (\$)
Rural (23)	2	5,786	6,133,160
Phnom Penh, CIEDC	2	278	111,,200
<b>Total</b>			<b>6,238,016</b>

CIEDC = Cambodia-India Entrepreneurship Development Center, VSTP = Voucher Skills Training Program.

Source: Asian Development Bank estimates.

## B. Urban Areas

12. A pilot urban VSTP will be provided in Phnom Penh in mechanics managed through the Japan Vocational Center and Work Shop (JVC). This will target automotive, auto machine shop,

motor, small engines, diesel training, and placement jobs. Up to 400 young people will be trained in informal apprenticeships or training courses contracted from TVET providers who have agreed to use the new enterprise skills standards in mechanics that will be developed under the Project. At least 10 trainees should be young women. The new mechanism will lead to entry-level skills for which credit may be earned in the future for further and higher levels of training. The urban pilot will initially apply only in Phnom Penh, but it may be expanded to other urban settings or to other technologies. The urban pilot will begin in year 3 to ensure that the Ministry of Labor and Vocational Training supervises it and that the new skills standards are in place.

13. Advertisements will be placed to call for expressions of interest to provide training based on the new standards and curriculum. Training providers that respond will be required to register with the National TVET Trainers Network. Informal apprenticeship will be the preferred mode of delivery, but classroom or on-the-job training will also be eligible. Selected providers will receive a 20% mobilization allowance, 30% payment at the midpoint of training based on numbers of continuing students, and the remaining 50% on completion of training. A maximum allocation of 20 trainees per provider will ensure a wide range of providers for the pilot. JVC may take up to 20 trainees itself.

14. The costing is based the VSTP pilot of \$0.29 per trainee hour for a 6-month technical skills program, with a cost per trainee of \$278, made up of \$218 for completing the training course and a \$60 supplementary payment to the trainer for graduates who are fully employed 3 months after graduation. The target will be 200 trainees each year for 2 years. JVC will receive 10% of each training contract as a management fee on the completion of training plus 5% for monitoring of training, based on submission of quarterly reports. The total fee per student payable to the training provider will be of \$236.

15. The total financial provision for the urban VSTP program is summarized in Table A5.2. Standard VSTP mechanisms will apply, and the VSTP consultants will support implementation.

**Table A5.2: Pilot Urban Voucher Skills Training Program Funding**

<b>Number of Trainees per Year</b>	<b>Cost per Trainee (\$)</b>	<b>Number of Years</b>	<b>Cost per Year (\$)</b>	<b>Total Cost of Urban VSTP (\$)</b>
200	278	2	55,600	111,200

VSTP = Voucher Skills Training Program.

Source: Asian Development Bank estimates.

## **DEVELOPING AND IMPLEMENTING SKILLS STANDARDS**

1. The first stage in improving quality of delivery includes (i) developing and implementing a system of national skills standards, (ii) training of trainers to use the standards, (iii) ensuring the teaching equipment is available to meet the standards. The second stage is to strengthen the management capacity of technical and vocational education and training (TVET) institutions so they meet the required standards.

2. The National Training Board Policy 11 (2008) requires a quality control program for all TVET providers based on skills standards implementation. At present, TVET quality is uncertain and neither a national qualifications framework nor national competency standards are used. The Accreditation Council of Cambodia covers higher education but there is no council for TVET. The Ministry of Education, Youth and Sports and some municipal offices register providers but this is not related to quality assurance. The National Training Board (NTB) will now take responsibility for registering and maintaining a quality assurance system for all TVET providers.

### **A. Development, Validation, and Adaptation of Standards**

3. Skills standards will be developed and applied through the Project in three industry sectors (mechanics, construction, and business services and information and communication technologies) through the three nominated national centers of competence (NCC). The standards will act as models for other skills-standards-based training in other sectors. The three institutions will receive project support for the development of the standards and production of training materials.

4. In addition to its regular teaching role, each NCC will (i) bring together an industry advisory group in its assigned industry sector; (ii) translate international competency standards to Khmer, adapt them, and seek endorsement of the industry advisory groups; (iii) send the endorsed standard to the director of standards at MOLVT for posting on the NTB website; (iv) assist in the development of curricula and learning materials to support the standards; (v) support the training of assessors from industry to ensure graduates meet the agreed standards; (vi) provide skills strengthening to National Technical Training Institute (NTTI) students preparing to teach in the new curriculum in those subject areas; (vii) partner with NTTI on in-service training for current teachers in the technical area; and (viii) monitor the provision of training as required through visits to the provincial training centers (PTCs) and other institutions to ensure the new curriculum is being used.

5. Existing skills standards are available from Sri Lanka, and these can be adapted quickly and validated by the industry advisory groups.

6. The implementation model supports the development and adaptation of skills standards and curricula up to the technician level. It does not require new standards to be developed but rather the validation of existing skills standards from other countries in the region which have recently completed the work. These standards will be adapted to the agreed format and adjusted to meet enterprise requirements for validation.

### **B. Upgrading of Teachers to Implement Standards-Based Training**

7. The implementation model ensures that teachers are taught how to deliver the curriculum. The demand in the PTCs is for basic hands-on skills training and this is not currently supported by the largely theoretical skills of the graduates of the national TVET trainers

program. This 1-year postgraduate program offered at NTTI will be revised so it has three distinct components: (i) pedagogy in TVET and for adults; (ii) microenterprise, community development, enterprise-based informal apprenticeship, and job matching career advice; and (iii) technical hands-on skills improvement. Each component will be delivered by specialists in the NCCs, who will have been upgraded with fellowships provided by the grant.

8. The three institutions designated as NCCs will provide hands-on training in their speciality areas. NTTI will provide a revised pedagogy curriculum with much more emphasis on skills that will make students more employable and on-the-job training. The Cambodia-India Entrepreneurship Development Center (CIEDC), a specialist small business development facility within the NTTI campus, will provide training for area (ii) in paragraph 7. The NCCs will provide technical skills improvement. A revised curriculum is being developed.

9. NTTI has a mandate to train TVET teachers and it graduates 300 trainees a year. Graduates have completed 10 months of pedagogy and teaching experience after graduating at the diploma or degree level in engineering or business, usually from a Directorate General of Technical and Vocational Education and Training (DGTJET) institution. The graduates of the NTTI program who are assigned to the PTCs and other TVET institutions have few hands-on skills, although 95% of the training done by these institutions is basic entry-level skills. Some NTTI graduates are assigned to PTCs as community development specialists. Their job is to (i) help commune members develop microenterprises and access microfinance, (ii) provide job matching and career guidance, (iii) provide community training needs analysis in support of voucher skills training program (VSTP), and (iv) develop small enterprise links for informal apprenticeship in support of VSTP. They receive no training for these tasks.

10. The new TVET trainer programs will be coordinated by NTTI, which will also provide 240 hours of pedagogy and adult learning techniques. Teacher trainees will also receive 240 hours of hands-on skills or applied training in their specialties: mechanics, construction and business and information and communication technology in the specialist NCCs. Trainees will then spend 240 hours with CIEDC to prepare for the service activities provided by the TVET institutions. As 90% of opportunities for graduates will be in self-employment or family-based employment, microenterprise management will be integrated into most skills training.

11. For the 400 NTTI graduates currently working in institutions, an in-service program is required. The five regional centers will form the network in which NTTI campus trainers will provide annual in-service to all trainers and community development specialists.

12. In preparation for the development of skills standards in the three industry sectors, the Project will upgrade the senior teaching staff in the NTTI and NCC institutions through regional fellowships and support from consultants in standards and technical curricula and TVET trainer training design. Training within Asia will be provided for two lead teachers in technical upgrading, skills standards development, TVET curriculum benchmarking and training organization and methodology. Two NTTI trainers will undertake similar programs, including work experience, in order to develop skills standards and curricula. Two other NTTI teacher trainers will undertake programs in pedagogy, work placement, and career guidance. One senior officer of DGTJET will undertake regional training in enterprise relations, social marketing, and TVET partnerships.

## DETAILED COST ESTIMATES AND FINANCING PLAN

**Table A7.1. Detailed Cost Estimates and Investment Plan**  
(\$ '000)

Item	Total		Total
	Foreign Exchange	Local Currency	
A. Investment Costs <sup>a</sup>			
1. Civil Works			
a. Land acquisition and preparation	0	390	390
b. Building and construction	396	2,246	2,642
2. Machinery and Equipment	3,967	63	4,030
3. Learning Materials	0	240	240
4. Training	832	962	1,794
5. Consultants	3,982	126	4,108
6. Voucher Skills Training Program	0	6,238	6,238
7. Surveys and Studies	0	360	360
8. Taxes and Duties	0	1,476	1,476
<b>Subtotal (A)</b>	<b>9,177</b>	<b>12,101</b>	<b>21,278</b>
B. Recurrent Costs			
1. Salaries of Locally Engaged Staff in PCU	0	44	44
2. Additional DGTVET Staff	0	346	346
3. PCU Office Accommodation	0	225	225
4. Equipment Operation and Maintenance	1,544	278	1,822
6. Procurement Support Costs	436	270	706
7. External Audit	0	25	25
8. Taxes and Duties	<b>0</b>	<b>584</b>	<b>584</b>
<b>Subtotal (B)</b>	<b>1,980</b>	<b>1,772</b>	<b>3,752</b>
<b>Total Base Cost</b>	<b>11,157</b>	<b>13,873</b>	<b>25,030</b>
C. Contingencies			
1. Physical <sup>b</sup>	552	686	1,238
2. Price <sup>c</sup>	558	694	1,252
<b>Subtotal (C)</b>	<b>1,110</b>	<b>1,380</b>	<b>2,490</b>
D. Financing Charges During Implementation <sup>d</sup>			
1. Interest During Implementation	0	0	0
2. Commitment Charges	0	0	0
3. Front-End Fees	0	0	0
<b>Subtotal (D)</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>12,267</b>	<b>15,253</b>	<b>27,520</b>

DGTVET = Directorate General of Technical and Vocational Education and Training, PCU = project coordination unit.

<sup>a</sup> In mid-2009 prices.

<sup>b</sup> Physical contingencies computed at 5% for civil works and 5% for field research and development, training, surveys, and studies.

<sup>c</sup> Price contingencies computed at 3% on foreign exchange costs and 3% on local currency costs.

<sup>d</sup> Asian Development Fund grant funding only is being provided.

Source: Asian Development Bank estimates.

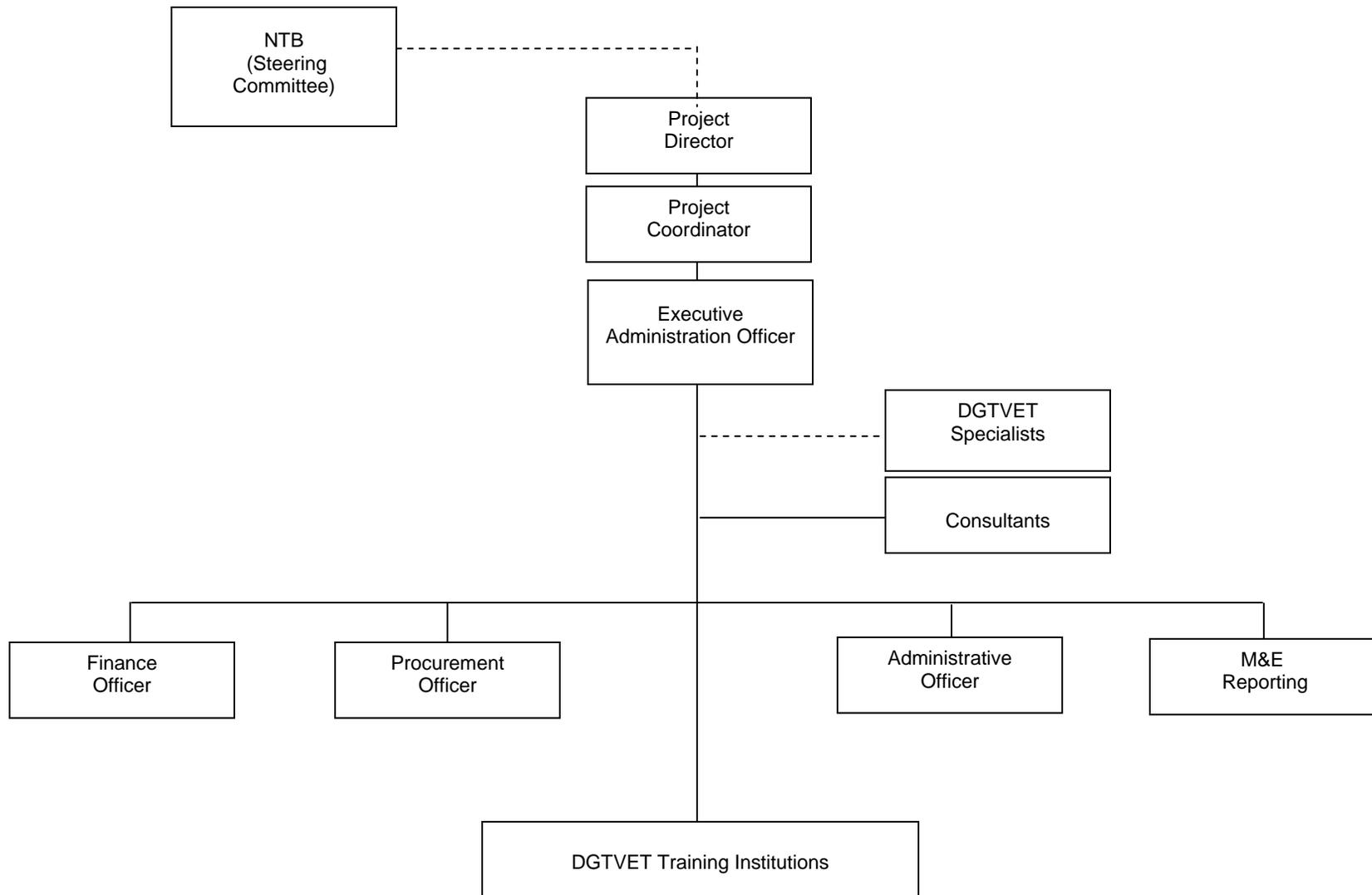
**Table A7.2: Detailed Finance Plan**  
(\$ '000)

Item	Total	ADB		Government			
		Total Amount	% of Cost Category	Net of Taxes and Duties	Taxes and Duties	Total Amount	% of Cost Category
A Investment Costs							
1. Civil Works							
a. Land	390	0	0.0	390	0	390	100.0
b. Building and construction	2,907	2,642	90.9	0	265	265	9.1
2. Machinery and Equipment	5,085	4,030	79.2	0	1,055	1,055	20.8
3. Learning Materials	264	240	90.9	0	24	24	9.1
4. Training	1,890	1,794	94.9	0	96	96	5.1
5. Consultants	4108	4,108	100.0	0	0	0	0
6. Voucher Skills Training Program	6,238	6,238	100.0	0	0	0	0.0
7. Surveys and studies	396	360	90.9	0	36	36	9.1
<b>Subtotal (A)</b>	<b>21,278</b>	<b>19,412</b>	<b>91.2</b>	<b>390</b>	<b>1,476</b>	<b>1,866</b>	<b>8.8</b>
B Recurrent Costs							
1. Incremental Administrative Costs	3,752	2,598	70.0	570	584	1,154	30.0
<b>Subtotal (B)</b>	<b>3,752</b>	<b>2,598</b>	<b>70.0</b>	<b>570</b>	<b>584</b>	<b>1,154</b>	<b>30.0</b>
<b>Total Base Costs</b>	<b>25,030</b>	<b>22,010</b>	<b>87.90</b>	<b>960</b>	<b>2,060</b>	<b>3,020</b>	<b>12.10</b>
C Contingencies							
1. Price Contingencies	1,238	1,238	100.0	0	0	0	0.0
2. Physical Contingencies	1,252	1,252	100.0	0	0	0	0.0
<b>Subtotal (C)</b>	<b>2,490</b>	<b>2,490</b>	<b>100.0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>
<b>Total Project Cost (A+B+C)</b>	<b>27,520</b>	<b>24,500</b>	<b>89.0</b>	<b>960</b>	<b>2,060</b>	<b>3,020</b>	<b>11.0</b>
Percentage of Project Cost		89.0				11.0	

ADB = Asian Development Bank.

Source: Asian Development Bank estimates.

## PROJECT MANAGEMENT STRUCTURE



M&E = monitoring and evaluation, NTB = National Training Board.  
Source: Directorate General of Technical and Vocational Education and Training.

## IMPLEMENTATION SCHEDULE

Sub-Comp No.	Components Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4																
<b>1</b>	<b>Improved Access to and Quality of Formal TVET Teaching and Learning</b>																				
1.1	Upgrade five PTCs to RTCs																				
1.2	Develop and introduce skills standards-based training modules in the three targeted training technologies at certificates 2, 3, and 4 levels in collaboration with industry advisory groups																				
1.3	Train trainers for standards-based training in each designated training area																				
1.4	Increase industry involvement in development and implementation of training programs																				
1.5	Strengthen the NTTI complex for system upgrading, including enterprise-endorsed skills standards, upgraded training programs and materials, trainer training, and instructional monitoring and development, and support national implementation																				
<b>2</b>	<b>Enhanced Access to and Improved Quality of Nonformal TVET</b>																				
2.1	Establish, construct and equip two remaining PTCs in currently unserved provinces																				
2.2	Extend the VSTP to all provinces, including an urban pilot in Phnom Penh, and monitor outcomes																				
2.3	Develop, deliver and coach PTC directors for implementation of VSTP																				
2.4	Upgrade skills standards-based training programs and materials, PTC trainer training, and institutional monitoring and development through NTTI complex																				
<b>3</b>	<b>Management Development</b>																				
3.1	Strengthen management capacity at training institutions, province and DGTVET																				
3.2	Improve TVET information systems including VETMIS and LMIS																				
3.3	Strengthen the capacity of DGTVET as the secretariat of NTB																				
3.4	Agree NVQF with NTB and register approved qualifications																				
3.5	Implement national systems for training provider registration and accreditation																				
3.5	Develop and implement systems for career information																				

Sub-Comp No.	Components Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4																
<b>4</b>	<b>Project Management</b>																				
4.1	Set up	■																			
4.2	Prepare inception report, including year 1 work plan	■																			
4.3	Develop a project administration manual, including financial and personnel management, and procurement procedures developed and disseminated with support training as required	■				■															
4.4	Commission studies on (i) policy directions, and (ii) financing alternatives				■																
4.5	Establish M&E unit and M&E work plans and develop procedures and M&E strategy that is validated against design targets and indicators	■	■																		
4.6	Undertake and disseminate monitoring studies and evaluations as per design and monitoring framework	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	<b>Consultants - International</b>																				
1.1	Curriculum implementation specialist, mechanics			■	■	■	■	■	■	■	■	■	■								
1.2	Curriculum implementation specialist, construction			■	■	■	■	■	■	■	■	■	■								
1.3	TVET teacher training specialist			■	■	■	■	■	■												
1.5	Social and gender specialist																				
3.1	Team leader and policy, management, and institutional development	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.2	Labor market information and statistics specialist				■	■	■	■	■												
3.3	Database specialist				■	■	■	■	■												
3.4	VETMIS IT systems analyst				■	■	■	■	■												
3.5	Labor market information specialist, development and training				■	■	■	■	■												
3.6	Labor market information web site specialist				■	■	■	■	■												
4	Project finance specialist	■	■			■															
4	Monitoring and evaluation specialist	■	■			■	■	■	■												
1.1	Social and gender specialist			■	■	■	■	■	■												
2.1	Deputy team leader and VSTP implementation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.2	Community development specialist, TNA, microenterprise, curriculum and training specialist	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.3	VSTP implementation specialist					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.4	VSTP implementation specialist		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.5	In-service teacher training specialist - PTCs					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.6	Curriculum development specialist - PTCs		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Sub-Comp No.	Components Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4																
3.1	Senior TVET management and institutional development specialist	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.2	ICT specialist	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4	Clerk of works/civil engineer project manager	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4	Monitoring and evaluation specialist	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Staffing - locally engaged	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4	General staff x 4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4	Clerical staff x 2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4	Casual staff for workshop and training assistance	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

DGTVET = Directorate General of Technical and Vocational Education; DMF = design and monitoring framework; ICT = information and communication technology; IT = information technology; LMIS = labor market information system; MOEYS = Ministry of Education, Youth and Sport ; MOLVT = Ministry of Labor and Vocational Training; M&E = monitoring and evaluation; NTB = National Training Board; NTTI = National Technical Training Institute; NVQF = national vocational qualifications framework; PMU = project management unit; PTC = provincial training center; RTC = regional training center; TNA = training needs analysis; TVET = technical and vocational education and training; VETMIS = vocational education and training management information system; VSTP = Voucher Skills Training Program.

Source: Asian Development Bank.

## PROCUREMENT PLAN

Project Information	
Country	Kingdom of Cambodia
Name of Borrower	Government of Cambodia
Project Name	Strengthening Technical and Vocational Education and Training
Grant Reference	TA 7116-CAM: Strengthening Technical and Vocational Education and Training
Date of Effectiveness	(TBD)
Amount	\$24.5 million
Executing Agencies	Directorate General of Technical and Vocational Education and Training (DGTVET), Ministry of Labor and Vocational Training (MOLVT)
Approval Date of Original Procurement Plan	not applicable
Approval of Most Recent Procurement Plan	6 October 2009
Publication for Local Advertisement	(TBD)
Period Covered by this Plan	1 May 2010–30 November 2011

### A. Section 1: Process Thresholds, Review, and 18-Month Procurement Plan

#### 1. Project Procurement Thresholds

1. Except as the Asian Development Bank (ADB) may otherwise agree, the following process thresholds will apply to procurement of goods and works.

Procurement of Goods and Works	
Procurement Methods	To be used above/below (\$)
International Competitive Bidding (ICB) for Works	Above \$1,000,000
International Competitive Bidding (ICB) for Goods	Above \$500,000
Limited International Bidding for Works	Below \$1,000,000
Limited International Bidding for Goods	Below \$500,000
National Competitive Bidding (NCB) for Works	Above \$50,000 up to \$1,000,000
National Competitive Bidding (NCB) for Goods	Above \$50,000 up to \$500,000
Shopping (SHP) for Works	Below \$50,000
Shopping (SHP) for Goods	Below \$50,000

#### 2. ADB Prior or Post Review

2. The following prior or post review requirements apply to the various procurement and consultant recruitment methods used for the Project.

Procurement Method	Prior or Post	Comments
<b>Procurement of Goods and Works</b>		
ICB Works	Prior	Prior review of all bidding documents
ICB Goods	Prior	
NCB Goods	Prior/Post	Prior review for first two English language version of bidding documents. ADB-approved procurement documents will be used as a model for subsequent procurement.
NCB Works	Prior/Post	
Shopping for Works	Prior/Post	Prior review of the first draft English language version.
Shopping for Goods	Prior/Post	
Limited International Bidding	Prior	Usage subject to <i>Procurement Guidelines</i> , para 3.2 and PAI 3.03 H
<b>Recruitment of Individual Consultants</b>		
Individual Consultant Recruitment	Prior	DGTVET/MOLVT selects, contracts, and manages contract. One DGTVET/MOLVT submission is required: candidate ranking and draft contract.
<b>Recruitment of Consulting Firms</b>		
QCBS (80:20)	Prior	DGTVET/MOLVT selects, negotiates, and manages the contract. Three DGTVET/MOLVT submissions are required: (i) shortlist, (ii) technical evaluation, and (iii) financial ranking and minutes of negotiations and draft contract.

Procurement Method	Prior or Post	Comments
CQS	Prior	DGTVET/MOLVT selects, negotiates, and manages the contract. A minimum of three firms should submit simplified EOIs.

### 3. Goods and Works Contracts Estimated to Cost More than \$100,000

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

General Description	Contract Value (\$)	Number of Contracts	Pre-Qualification of Bidders	Procurement Method	Advertisement Date
<b>Works</b>					
Construction of five RTCs:					
(i) Kampot	435,000	1	No	NCB	First 18 months
(ii) Svay Rieng	254,000	1		NCB	
(iii) Battambang	263,300	1		NCB	
(iv) Takeo	274,300	1		NCB	
(v) Siem Reap	435,000	1		NCB	
Construction of two new PTCs:					
(i) Monduliri	144,000	1	No	NCB	First 18 months
(ii) Preah Vihear	141,000	1	No	NCB	First 18 months
(iii) Takeo	124,000	1	No	NCB	First 18 months
Rehabilitation existing PTCs	572,500	Multiple	No	NCB/SHP	First 18 months
Basic workshop equipment 21 PTCs	306,000	1	No	NCB	First 18 months
Basic workshop equipment 3 new PTCs	300,000	1	No	NCB	First 18 months
Automotive equipment upgrade 21 PTCs	378,000	1	No	NCB	First 18 months
Automotive equipment 3 new PTCs	300,000	1	No	NCB	First 18 months
Construction equipment NTTI complex and RTCs	900,000	1	No	ICB	First 18 months
Automotive workshop equipment NTTI complex and RTCs	900,000	1	No	ICB	First 18 months
Computer labs NIB, RTCs	180,700	1	No	NCB	First 18 months
Computers PTCs and DGTVET	232,400	1	No	NCB	First 18 months
Vehicles	192,000	1	No	NCB	First 18 months

ICB = international competitive bidding, NCB = national competitive bidding, SHP = shopping.

### 4. Consulting Services Contracts Estimated to Cost More than \$100,000

4. The following table lists consulting services contracts for which procurement activity is expected to commence within the next 18 months.

General Description	Contract Value (\$)	Recruitment Method	Advertisement Date	International or National Assignment
Consulting Services for Project Implementation	4,108,000	QCBS 80:20	First 3 months	International
Policy Study: Future Directions for TVET	120,000	CQS	First 12 months	International
Midterm and Final Project Impact Evaluations (M&E)	160,000	CQS	First 24 months	National/ International
Regional Training 2 contracts	380,250	CQS	First 18 months	National/ International
Regional Study Tours 2 contracts	325,000	CQS	First 18 months	National/ International
International Study Tour	126,800	CQS	First 18 months	International

QCBS = quality- and cost-based selection, CQS = consultant's qualification selection.

**B. Section 2: Project Procurement Plan****1. Indicative List of Packages Required Under the Project**

General Description	Estimated Value (\$)	Number of Contracts	Procurement Method	Domestic Preference Applicable
<b>Works</b>				
Civil works contracts for the construction of classrooms, workshops, dormitory and canteen facilities for new RTCs:				
(i) Kampot Institute of Polytechnic	435,000	1	NCB	No
(ii) Svay Rieng PTC	254,000	1	NCB	No
(iii) Polytechnic Institute of Battambang or Technological Institute of Battambang	263,300	1	NCB	No
(iv) Takeo PTC	274,300	1	NCB	No
(v) Siem Reap PTC.	435,000	1	NCB	No
Civil works contracts for the construction of new PTCs for:				
(i) Mondulhiri Province	144,000	1	NCB	No
(ii) Preah Vihear Province	141,000	1	NCB	No
(iii) Takeo Province	124,000	1	NCB	No
Civil works contracts for rehabilitation of existing PTCs	572,500	Multiple	NCB/SHP	No
Civil works contract for rehabilitation of other facilities (NTTI complex, MOLVT for VETMIS facility)	2,800	1	SHP	No
<b>Equipment and Furniture</b>				
Classroom furniture for three new PTCs (including Takeo)	6,000	1	SHP	No
Dormitory, canteen equipment and furniture for five RTCs	74,800	1	NCB	No
Basic workshop equipment for 21 existing PTCs	306,000	1	NCB	No
Basic workshop equipment for two new PTCs and Takeo	300,000	1	NCB	No
Automotive equipment upgrade for 21 existing PTCs	378,000	1	NCB	No
Automotive equipment for 2 new PTCs and Takeo	300,000	1	NCB	No
Certificate level construction workshop equipment for NTTI complex and five RTCs	900,000	1	ICB	No
Certificate level automotive workshop equipment for NTTI complex and five RTCs	900,000	1	ICB	No
Certificate level computer laboratories for NIB and five RTCs	180,700	1	NCB	No
Office equipment for NTTI, two new PTCs and PCU	49,000	1	NCB	No
Computers, financial management software and internet connections for PTCs and DGTVET	232,400	1	NCB	No
Audio-visual equipment for NTTI and PCU	8,000	1	SHP	No
Vehicles	192,000	1	NCB	No
Motorcycles	83,000	1	NCB	No
<b>Consulting Services</b>				
Project Implementation Consultants	4,108,000	1	QCBS 80:20	No
Policy Study: Future Directions for TVET	120,000	1	CQS	No
Policy Study: TVET Financing	50,000	1	CQS	No
Baseline Study	80,000	1	CQS	No
Midterm and Final Project Impact Evaluations	150,000	1	CQS	No
<b>Training Programs</b>				
Regional Training	380,250	2	CQS	No
Regional Study Tours	325,000	2	CQS	No
International Study Tour	126,800	1	CQS	No
In-country Training	35,000	5	CQS	No
Individual consultants		Multiple		No

CQS = consultant's qualification selection, DGTVET = Directorate General of Technical and Vocational Education and Training, ICB = international competitive bidding, MOLVT = Ministry of Labor and Vocational Training, NIB = National Institute of Business, NTTI = National Technical Training Institute, PCU = project coordination unit, PTC = provincial training center, QCBS = quality and cost-based selection, RTC = regional training center, SHP = shopping, VETMIS = vocational education and training management information system.

## **C. National Competitive Bidding Annex**

### **1. General**

6. The procedures to be followed for national competitive bidding shall be for tendering with unlimited participation and the single-stage, one-envelope system, with post qualification tendering set forth in ADB's *Procurement Guidelines* (2007, as amended from time to time) shall be followed.

### **2. Eligibility**

7. The eligibility of bidders shall be as defined under Section I of ADB's *Procurement Guidelines*, published by ADB in February 2007. Accordingly, no bidder or potential bidder should be declared ineligible for ADB-financed contracts for reasons other than those provided by Section I of ADB's *Procurement Guidelines* (2007, as amended from time to time). Bidders must be nationals of member countries of ADB; and offered goods, works, and services must be produced in and supplied from member countries of ADB.

### **3. Prequalification**

8. Normally, post-qualification shall be used unless explicitly provided for in the grant agreement and procurement plan. Irrespective of whether post qualification or prequalification is used, eligible bidders (both national and foreign) shall be allowed to participate.

### **4. Registration and Licensing**

- (i) Bidding shall not be restricted to pre-registered or licensed firms.
- (ii) Where registration or licensing is required, bidders (a) shall be allowed a reasonable time to complete the registration or licensing process; and (b) shall not be denied registration or licensing for reasons unrelated to their capability and resources to perform the contract successfully, which shall be verified through post-qualification.
- (iii) International bidders shall not be precluded from bidding. If a registration or licensing process is required, an International bidder declared the lowest evaluated bidder shall be given a reasonable opportunity to register or to obtain a license.

### **5. Bidding Period**

9. The minimum bidding period is 28 days prior to the deadline for submission of bids.

### **6. Bidding Documents**

10. Procuring entities should use standard bidding documents for the procurement of goods, works, and services acceptable to ADB.

### **7. Preferences**

11. No preference shall be given to national bidders and to nationally manufactured goods.

### **8. Advertising**

12. Invitations to bid shall be advertised in at least one widely circulated national English daily newspaper and one widely circulated national daily newspaper in Khmer language or freely accessible, national known website, allowing a minimum of 28 days for the preparation and submission of bids.

13. Bidding of international competitive bidding contracts estimated at \$500,000 equivalent or more for goods and related services or \$1,000,000 equivalent or more for civil works shall be advertised on ADB's website via the posting of the procurement plan.

### **9. Bid Security**

14. Where required, bid security shall be in the form of a bank guarantee from a reputable bank.

### **10. Bid Opening and Bid Evaluation**

- (i) Bids shall be opened in public.

- (ii) Evaluation of bids shall be made in strict adherence to the criteria declared in the bidding documents, and contracts shall be awarded to the lowest evaluated and substantially responsive bidder.
- (iii) Bidders shall not be eliminated from detailed evaluation on the basis of minor, non-substantial deviations.
- (iv) No bidder shall be rejected on the basis of a comparison with the employer's estimate and budget ceiling without ADB's prior concurrence.
- (v) A contract shall be awarded to the technically responsive bidder that offers the lowest evaluated price proposal and who meets the qualifying requirements set out in the bidding documents.
- (vi) No negotiations shall be permitted.
- (vii) Price verification shall not be applied.

**11. Rejection of All Bids and Rebidding**

15. Bids shall not be rejected and new bids solicited without ADB's prior concurrence.

**12. Participation by Government-Owned Enterprises**

16. Government-owned enterprises in the Kingdom of Cambodia shall be eligible to participate as bidders only if they can establish that they are legally and financially autonomous, operate under commercial law, and are not a dependent agency of the contracting authority. Furthermore, they will be subject to the same bid and performance security requirements as other bidders.

**13. Right to Inspect/Audit**

17. A provision shall be included in all national competitive bidding for works and goods contracts financed by ADB requiring suppliers and contractors to permit ADB to inspect their accounts and records and other documents relating to the bid submission and the performance of the contract, to have them audited by auditors appointed by ADB.

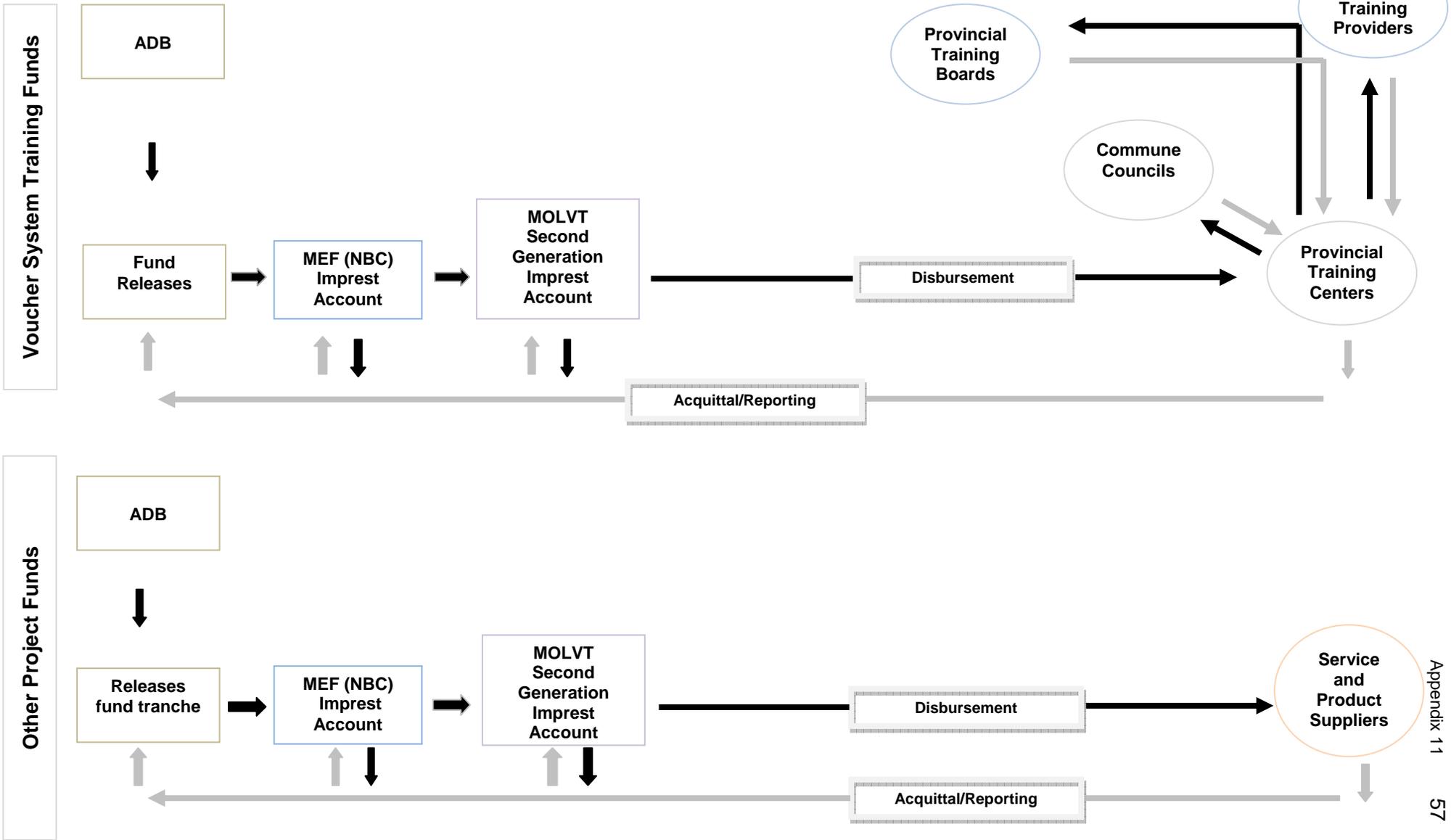
**14. Fraud and Corruption**

- (i) The Beneficiary shall reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract in question.
- (ii) ADB will declare a firm or individual ineligible, either indefinitely or for a stated period, to be awarded a contract financed by ADB, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for, or in executing, an ADB-financed contract.

**15. National Sanctions List**

18. National sanctions lists may be applied only with prior approval of ADB.

## FUNDS FLOW WITH ACCOUNTING AND REPORTING ARRANGEMENTS



ADB = Asian Development Bank, MOLVT = Ministry of Labor and Vocational Training, NBC = National Bank of Cambodia.

➡ = Funds Flow from ADB    ⬅ = Reporting

Source: Asian Development Bank.

## SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

Country/Project Title: Cambodia: Strengthening Technical and Vocational Education and Training Project			
Lending/Financing Modality:	Sector Grant	Department/Division:	Southeast Asia Department/ Social Sectors Division
<b>I. POVERTY ANALYSIS AND STRATEGY</b>			
<b>A. Link to the National Poverty Reduction Strategy and Country Partnership Strategy</b>			
<p>Cambodia's socioeconomic planning framework is the Rectangular Strategy for Growth, Phase II, launched in September 2008. Its strategies include improvement of productivity and diversification of agriculture, private sector development, employment generation, and human resource development. The National Strategic Development Plan (NSDP), 2006–2010, based on the Rectangular Strategy, reiterates the importance of capacity building and human resource development, particularly (i) promotion of vocational and skills training, (ii) creation of jobs in both formal and informal sectors; (iii) increase in agricultural productivity to increase rural employment; and (iv) establishment of technical and vocational education and training (TVET) and training networks to assist both men and women, especially the poor, disabled and vulnerable, to respond to labor market needs. The NSDP is carried out through detailed plans from each ministry. The strategic plan of the Ministry of Labor and Vocational Training, 2006-2010 identifies strategies designed to develop the economy and reduce poverty, including development of technical and vocational skills. The Ministry of Labor and Vocational Training (MOLVT) Plan aims to: (i) establish TVET links with enterprises; (ii) establish mechanisms for labor market information; (iii) service both formal and informal sectors; (iv) upgrade TVET through a national vocational qualifications framework (NVQF), competency standards and testing, training of trainers, and accreditation of TVET programs and institutions; (v) modernize training facilities and equipment; (vi) strengthen local planning for local training needs; (vii) establish new centers in unserved provinces; (viii) expand TVET provision through the National Training Fund to reduce poverty more widely; (ix) encourage certificate-based TVET programs in all provinces and municipalities; and (x) encourage TVET institutions to generate their own income.</p>			
<b>B. Poverty Analysis</b>		<b>Targeting Classification:</b> General intervention	
<b>1. Key Issues</b>			
<p>Poverty in Cambodia is characterized by low income and consumption; poor nutritional status; low educational attainment; poor access to public services, including school and health services; poor access to economic opportunities; and vulnerability to external shocks. Poor access to quality education has led to a low adult literacy rate of 69.4% (80.5% for males and 58.2% for females). The highest poverty rates are found among farmers and those households whose heads have little or no formal education. The poorest households are asset-less. Agricultural productivity is extremely low and food insecurity is still a serious problem for people who are poor. Agriculture remains the backbone of the Cambodian economy, with 68% of the labor force earning their livelihood from agriculture. Cambodian women play an active role in the country's economy and civil society. They represent 53% of the active labor force, compared with 32% for economically active men, and are usually classified as "unpaid family labor," primarily in agriculture. Apart from agriculture, women work in the informal sector, particular commercial activities. The garment industry provides the principal source of formal sector employment for women, but young women are employed there only as semi-skilled workers with almost no opportunities to move into supervisory or management positions. Women outnumber men in the labor force from age 15 to 54, with the exception of the 25 to 29 age group. The shortage of skilled labor and the lack of adequate investment in formal vocational skill formation represent key development constraints for Cambodia and have been a persistent theme in recent assessments by the ADB and the World Bank.</p>			
<b>2. Design Features</b>			
<p>The Project proposes a number of interventions to assist in addressing poverty issues. First, it will help to strengthen the informal TVET sector through the creation of two new provincial training centers (PTCs) in provinces that are among the poorest and least developed and have high proportions of ethnic minorities. All other PTCs will have equipment and program upgrades, along with professional development of their teachers, to enable them to deliver better quality, more relevant training for the most deprived. Special attention will be given to the delivery of training programs attractive to women. Under the Vocational Skills Training Program (VSTP), 60% of those trained have been women. The VSTP will be expanded to all 24 provinces. It is anticipated that the majority of these trainees will be women. The training they receive will provide them with mostly non-paddy agriculture and service-related skills that will contribute to their livelihood as self-employed or unpaid family workers. The other major initiative that will help alleviate poverty in regional areas is the planned upgrade of five PTCs to regional training centers (RTCs). This will increase access to long-course programs in areas of the country outside Phnom Penh. When fully operational, these centers will be able to enroll an additional 1,500 students per year at these two vital levels of training. It is expected that improved course offerings in relevant areas, as well as well-equipped dormitories, canteens and kitchen facilities dedicated to female students, will help attract more women into this stream of post-school education and training.</p>			

## II. SOCIAL ANALYSIS AND STRATEGY

### A. Findings of Social Analysis

There is a direct link between a lack of education and poverty. Poverty rates are similar for the household head with no schooling and one with primary schooling only, but are significantly lower when the household head has secondary, technical, or higher education. Many adults have no education at all, and there are wide rural–urban and gender disparities in access to education. Nearly 60% of women and 40% of men in the provinces of Mondolkiri and Rattanakiri have no education, compared with fewer than 15% of women and 5% of men in Phnom Penh. In the province of Svay Rieng, girls are almost three times less likely to attend school than boys. This reflects wide gender and rural–urban disparities in access to education in Cambodia. In 2007, fully 61% of the literate population in Cambodia 25 years of age and over had not completed primary school, while only 23% had completed primary level. Those who had completed lower secondary level of education comprised only 9% of the age cohort, while those who had a secondary level qualification constituted 3%. Fewer than 1% had qualifications higher than secondary level. Through its strengthening of the nonformal TVET system, the project will assist those with lower qualifications.

### B. Consultation and Participation

1. Summary of the consultation and participation process during the project preparation.

Project preparation involved two stakeholder workshops with over 100 participants, two surveys of TVET graduates, a questionnaire survey and interviews with seven provincial training center directors and 30 community development specialists on recommended adjustments to VSTP, interviews with the teachers, managers and graduates of the seven Phnom Penh post-secondary institutes; and a survey of the graduates of the national Technical Training Institute (NTTI) on the effectiveness of NTTI teacher training. A sample of 40 private sector TVET trainers was identified and interviewed about non-government provision.

The project team also consulted stakeholders, including Agence Française de Développement, Cambodian Chamber of Commerce and Industry, Cambodian Federation of Employers and Business Associations, Cambodian Institute of Development Studies, Chamber of Commerce and Industry, Chamber of Professional and Micro Enterprises, the Federation of Employers, Garment Association in Cambodia, Garment Industry Productivity Centre and the Travel and Hospitality Institute. The Ministry of Women's Affairs was also consulted. Donor agencies consulted were European Commission, International Labour Organization and the World Bank.

2. What level of consultation and participation (C&P) is envisaged during the project implementation and monitoring?

Information sharing     Consultation     Collaborative decision making     Empowerment<sup>i</sup>

3. Was a C&P plan prepared?  Yes     No

### C. Gender and Development

#### 1. Key Issues

Several characteristics of the labor market and the education system are directly relevant to addressing issues related to poverty among women in Cambodia. First, a large proportion of female employment is in the informal sector – only 17% of economically active women are employed in the formal sector (versus 23% of men). Informal employment is largely in the agricultural sector. Second, occupational groups within the formal labor market in Cambodia are highly stratified by gender, with men dominating higher level occupations (including technicians). Even where there is gender parity in occupational groups, there is considerable industry stratification. For example, although there is gender parity among plant and machine operators, women are employed primarily in the garment industry and men in the transport sector. Men, more so than women, are moving into a wider range of better-paid positions outside agriculture. For women, the options are largely limited to the garment industry or the informal sector. There are signs that women are beginning to enter formal employment at a faster rate than men, due mainly to growth in the garment sector and because more women are becoming paid labor in the agriculture sector. Third, the education enrollment gap between boys and girls increases markedly as they progress to higher levels of education. While almost equal numbers of boys and girls are enrolled in preschool and primary school, only 63 girls are enrolled for every 100 boys in lower secondary school and fewer than 50 girls are enrolled for every 100 boys at the upper and tertiary education levels.

#### 2. Key Actions

The project design includes an expansion of the VSTP, as discussed above. The expansion of VSTP to all 24 provinces will provide considerable additional training to women. The VSTP has been successful in redressing some of the imbalance in training opportunities for women. The training they receive will provide them with mostly non-paddy agriculture and service-

related skills that will contribute to their livelihood as self-employed or unpaid family workers.

The Gender and Ethnic Minorities Action Plan includes a number of measures aimed at promoting opportunities for women and women's empowerment. These include ensuring that (i) dormitories for female students are secure, well equipped and have adequate kitchen and bathroom facilities, (ii) there is gender balance in both teaching and administrative staff at the newly upgraded RTCs, (iii) training modules are developed for both male and female dominated skill areas and are gender-sensitive and free of gender bias, (iv) males and females have equal access to management training and other capacity-building initiatives, (v) gender balance in the make-up of teams delivering training, (vi) industries that employ large numbers of women are involved in the development and implementation of training programs, (vii) gender-disaggregated indicators, including those related to TVET outcomes, efficiency and effectiveness, are incorporated in the VETMIS and LMIS, and (viii) gender-based factors are included in newly developed TVET provider registration and accreditation system.

Gender plan     Other actions/measures     No action/measure

### III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS

Issue	Significant/Limited/ No Impact	Strategy to Address Issue	Plan or Other Measures Included in Design
<b>Involuntary Resettlement</b>	No impact. The two new facilities will be built on unencumbered government land.	A specific assurance has been included to ensure that facilities may only be built on unencumbered government land.	<input type="checkbox"/> Full Plan <input type="checkbox"/> Short Plan <input type="checkbox"/> Resettlement Framework <input checked="" type="checkbox"/> No Action
<b>Indigenous Peoples</b>	Limited impact (positive). The project impact on ethnic minorities will be beneficial as disadvantaged groups gain access to TVET opportunities.	Specific actions have been included in the Project's Gender and Ethnic Minorities Action Plan.	<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> Indigenous Peoples Framework <input type="checkbox"/> No Action
<b>Labor</b> <input checked="" type="checkbox"/> Employment opportunities <input type="checkbox"/> Labor retrenchment <input type="checkbox"/> Core labor standards	The Project is expected to expand the employment-ready, mid-level work force in Cambodia in both rural and urban areas.	The Project will improve access for young Cambodians to formal TVET linked to industry demand, and with industry-endorsed skills competency standards as the basis for training curriculum, trainer training, training equipment, and assessment of trainee performance.	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> No Action
<b>Affordability</b>	No impact.	None.	<input type="checkbox"/> Action <input checked="" type="checkbox"/> No Action
<b>Other Risks and/or Vulnerabilities</b> <input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Human trafficking <input type="checkbox"/> Others (conflict, political instability, etc), please specify	No impact.	None.	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> No Action

### IV. MONITORING AND EVALUATION

Are social indicators included in the design and monitoring framework to facilitate monitoring of social development activities and/or social impacts during project implementation?     Yes     No

## **GENDER AND ETHNIC MINORITIES ANALYSIS AND ACTION PLAN**

1. This gender and ethnic minorities analysis and action plan (GEMAP) is based on social analysis and stakeholder consultations and highlights specific actions that will be implemented and monitored during implementation. The elements have been integrated into the project design, and indicators are included in the design and monitoring framework. The GEMAP was prepared in accordance with the *Policy on Gender and Development* (1998) and *Policy on Indigenous Peoples* (1998) of the Asian Development Bank's (ADB).

### **A. Background**

2. Cambodia has made progress in improving gender equity and equality. The importance of gender equity is reflected in National Strategic Development Plan (NSDP), 2006–2010. In 1999 the Ministry of Women's Affairs launched its first 5-year strategy, *Neary Rattanak* (Women are Precious Gems). This was followed by *Neary Rattanak II* (2004-2008), and *Neary Rattanak III* which will be finalized in 2009. Gender mainstreaming action groups have been established in most technical ministries since 2004, including the Ministry of Education, Youth and Sport (MOEYS), chaired by a secretary or undersecretary of state. The gender mainstreaming strategic plan in education was updated in 2007 for the period 2006–2010 to increase women's participation in the management and delivery of educational services at all levels, and to create positive social attitudes toward girls' education and gender equality. MOEYS is currently preparing a gender mainstreaming policy for education. The gender mainstreaming action plan for the labor and vocational training sectors 2008–2010 was developed in January 2008 and is currently being implemented.

### **B. Gender and Ethnic Issues in Technical Vocational Education and Training (TVET)**

3. Because of the growing mandate for an educated and skilled workforce, vocational and technical training, workforce training outside the classroom, and nonformal basic education are increasing in importance. In the past, girls have been minority participants in these programs. Despite improvements in education outcomes in recent years, there continue to be significant sociocultural and economic obstacles to girls' education in Cambodia. Although enrollment rates for girls and boys are similar at the primary school level, significant disparities exist at the secondary level and girls' enrollments are lower across all income and school levels. There is also significant gender stereotyping at the TVET level. Female TVET enrollments are low compared with those of men and trainees are concentrated in traditionally female-dominated occupational areas. This is due to a number of factors, including the concentration of women in traditional female occupations and the lack of TVET training opportunities beyond traditional female skill areas. The global economic crisis is likely to exacerbate these problems given its significant impact on sectors which employ disproportionate numbers of women in Cambodia.

4. Most of the indigenous ethnic minorities in Cambodia live in the four northeastern provinces of Ratanakiri (where they represent 66% of the population), Mondulkiri (71%), Stung Treng (7%), and Kratie (8%). Overall, ethnic minorities represent 1% of the country's population. One of the new PTCs will be built in Mondulkiri.

### **C. Legal Framework and Regulations**

5. Promotion of gender equality is one of the nine Cambodian Millennium Development Goals to be achieved by 2015. This goal focuses on the elimination of gender disparities in basic education, elimination of gender disparities in wage employment in all sectors, increased

representation of women in decision making and public administration, and elimination of all forms of violence against women. The Government's Rectangular Strategy for Growth states that the Government will implement a systematic policy aimed at establishing skills training networks for the poor, linked to employment assistance, especially for young people and new graduates in response to labor market needs. Government and MOEYS policy is to enable and facilitate a strongly demand-side approach to TVET and youth skills training through strong public-private partnership. MOEYS will effectively coordinate with the Ministry of Labor and Vocational Training (MOLVT) in the implementation of policies and programs. Strategies for TVET were developed in 1999, which encouraged private sector participation in providing a large range of programs and activities.

6. The NSDP includes the creation of decent work in both formal and informal sectors, the creation of vocational training networks for both men and women in the workforce, the establishment of a labor force database system with data disaggregated by sex, a guarantee of better working conditions for the labor force, especially women workers inside and outside the country, addressing wage differentials between men and women and the enforcement of the Labor Law and Social Security Law. The MOLVT 5-year strategic plan, 2006–2010 focuses on four areas: (i) job creation, (ii) guarantee of better working conditions, (iii) promoting the enforcement of the law on social security, and (iv) capacity development of TVET skills for Cambodians.

**Table A13: Gender and Ethnic Action Plan**

Project Output	Actions Proposed
<b>Output 1: Formal Programs are More Industry Relevant</b>	
1.1. Upgrade five PTCs to RTCs	<p>Ensure that women comprise at least 30% of newly hired teaching and administrative staff at each upgraded RTC</p> <p>Ensure that women comprise at least 50% of enrollments in business and ICT at each newly upgraded RTC</p> <p>Construct separate hostels for women as well as boundary walls in the five RTCs to encourage greater female participation and retention</p> <p>Construction of separate latrine, washing and changing facilities for women – in separate locations from those for men.</p> <p>MOLVT to ensure that at least 50 scholarships per year (out of 300 Government scholarships per year) are provided for women to undertake training in mechanics, construction and business and ICT. Make efforts to encourage more female applicants in mechanics and construction, where women are not currently enrolled. Applicants from ethnic minority groups will be encouraged.</p> <p>Ensure that newly upgraded RTCs' planning processes include provisions for ethnic and gender equity and development</p> <p>Review training programs to identify key reasons for why female enrollment and retention is low and recommend ways to increase the number of female applicants.</p> <p>Develop strategies to increase female and ethnic minority enrollments in the upgraded RTCs, specifically in mechanics and construction where current enrollments are zero.</p>

Project Output	Actions Proposed
1.2. Develop skills-standards-based training modules and train teachers	<p>MOLVT will try to get at least 30% of assessors for each industry to be female.</p> <p>Review of existing PTC and RTC curriculum will consider access and quality issues from a gender and ethnic minority perspective.</p> <p>New PTC and RTC curriculum and learning materials will be developed free of gender and ethnic bias (i.e., promote females and ethnic minorities in positive roles, especially in sectors where they are under-represented).</p> <p>If necessary, specific modules will be developed to help teachers interact with female and ethnic minority students (i.e., sensitivity training)</p> <p>At least one of the two lead teachers in business and ICT sent for technical training at a regional training institute will be women</p> <p>At least one of the two NTTI teacher trainers sent for training at a regional training institute will be women</p> <p>At least 12.5% of NTTI subject specialists trained will be women (industry-specific).</p> <p>At least 30% of PTC and RTC teaching staff in business and ICT who receive training will be women.</p> <p>MOLVT will provide opportunities to female teachers in the other two industries, if qualified women express interest during implementation.</p> <p>Existing female teachers will have access to training programs for the new standards</p>
1.3. Increase industry involvement in development and implementation of training programs	<p>At least 25% of the members in each industry advisory group will be women.</p> <p>Review standards, curriculum and training development from a gender and ethnic minority perspective. Include gender- and ethnic-minority-specific recommendations in all reviews and assessments.</p>
1.4 Strengthen NTTI for system upgrading	<p>At least 25% of industry advisory group members will be women.</p> <p>Review standards, curriculum and training development from a gender and ethnic minority perspective. Include gender- and ethnic-minority-specific recommendations in all reviews and assessments.</p>
<b>Output 2: Expanded and Better Quality Non-Formal Training</b>	
2.1. Establish, construct and equip new PTCs in Preah Vihear and Mondulkiri	<p>Ensure that women comprise at least 30% of teaching and administrative staff at each of the newly constructed PTCs in Mondulkiri and Preah Vihear</p> <p>Ensure that ethnic minorities comprise at least 20% of teaching and administrative staff at the newly constructed PTC in Mondulkiri</p> <p>Develop strategies to increase female and ethnic minority enrollments in the newly constructed PTCs.</p> <p>Ensure that ethnic minorities comprise at least 40% of enrollments at the newly constructed PTC in Mondulkiri</p> <p>Ensure that women make up at least 50% of enrollments in each PTC</p> <p>Ensure that latrine and washing facilities are in separate locations for men and women</p>

Project Output	Actions Proposed
2.2 Extend VSTP to all provinces	Ensure that at least 50% of the recipients of training under the expanded VSTP are women (total is 210,000)
2.3. Develop PTC directors	<p>Females and ethnic minorities will be encouraged to participate in the management of VSTP (e.g., apprenticeships, community outreach, career guidance).</p> <p>Female PTC directors will play a key role in the training and mentoring strategy for other PTC directors. A strategy will be developed during implementation in coordination with the PCU and the gender working group in MOLVT.</p>
2.4. Upgrade skills-standards-based training in PTCs	<p>Ensure that skill standards, instructional materials and training programs are sensitive to gender and ethnicity and free of gender and ethnic minority bias</p> <p>Mentoring and compliance visits by NTTI technical staff and DGTVET will include a review of the number of female PTC instructors trained</p>
2.5. Increase accessibility to structured skills training	<p>New courses (including curricula and standards) will include mechanisms to attract greater numbers of female and ethnic minority students.</p> <p>Workable strategies to allow standards to progress from nonformal to mid-level formal programs will incorporate the obstacles faced by female and ethnic minority students in accessing formal programs.</p>
<b>Output 3: Strengthened Institutional Capacity to Plan and Manage TVET</b>	
3.1. Strengthen management capacity at training institutions, provincial training boards and DGTVET	<p>Ensure that all female mid-level DGTVET officers are selected for regional training</p> <p>Ensure 30% of provincial MOLVT staff selected for regional training are women</p> <p>Ensure that 50% of senior DGTVET and polytechnic participants in regional study tours are women</p>
3.2. Improve TVET information systems including VETMIS and LMIS	<p>Develop and incorporate gender and, where relevant, ethnicity-disaggregated indicators, including those related to TVET outcomes, efficiency and effectiveness, in the VETMIS and LMIS</p> <p>Ensure women will have access to VETMIS training</p>
3.3 Strengthen capacity of DGTVET as Secretariat of NTB	Ensure that at least 25% of NTB, PTB and senior officials selected as regional study tour participants are women
3.4 Develop NVQF and skills standards	Ensure that the NVQF is gender-sensitive and free of gender bias
3.5. Develop and implement career information systems	<p>Develop career guidance materials targeted to females</p> <p>Conduct outreach activities to encourage females to take up training in non-traditional areas</p> <p>Provide gender and ethnic minority sensitivity training to selected staff for career advice</p>

DGTVET = Directorate General of Technical and Vocational Education and Training; LMIS = labor management market information system; MOEYS = Ministry of Education, Youth and Sport; NQF = national qualifications framework; NTB = National Training Board; NTTI = National Technical Training Institute; NVQF = national vocational qualifications framework; PTB = provincial training board; PTC = provincial training center; RTC = regional training center; TVET = technical and vocational education and training; VETMIS = vocational education and training management information system; VSTP = Voucher Skills Training Program.

Source: Asian Development Bank.

## **D. Implementation arrangements**

7. Implementation arrangements and estimated costs of the GEMAP have been integrated into the overall arrangements and total project budget. The project coordination unit (PCU) will include a staff member with responsibility for overseeing gender activities and monitoring the GEMAP. The national gender and social development specialist consultant will conduct gender and ethnicity awareness training as required, will support the establishment of gender- and, where relevant, ethnicity-disaggregated indicators for project performance monitoring and evaluation, and will coordinate with other specialists during project preparation and implementation. The national gender and social development specialist will also prepare a study highlighting efforts to promote gender balance and ethnic balance within the project, including highlighting successful programs and their impact on gender and ethnic balance within TVET.

8. The PCU will incorporate GEMAP monitoring in its quarterly progress reports to ADB. The PCU will invite the Ministry of Women's Affairs to send representatives to attend meetings. The monitoring and evaluation consultants will mainstream gender actions into their activities (e.g., disaggregate performance indicators and progress information by sex in reports, develop an monitoring and evaluation system that can accommodate gender and ethnicity-disaggregated data, conduct baseline surveys with male and female recipients and ethnic minorities, and train male and female staff and members of ethnic minorities).

9. This GEMAP is based on social analysis and stakeholder consultations and highlights specific actions that will be implemented and monitored during implementation. Its elements have been integrated into the project design, and indicators on gender and ethnic minorities are included in the design and monitoring framework. The GEMAP was prepared in accordance with ADB's *Policy on Gender and Development*.