



Technical Assistance Report

Project Number: 47141-002
Capacity Development Technical Assistance (CDTA)
December 2013

Kingdom of Thailand: Piloting Public–Private Partnerships in the Social Sectors

CURRENCY EQUIVALENTS

(as of 15 November 2013)

Currency unit	–	baht (B)
B1.00	=	\$.031693
\$1.00	=	B31.5520

ABBREVIATIONS

ADB	–	Asian Development Bank
DMC	–	developing member country
GCA	–	government contracting agency
MOF	–	Ministry of Finance
MOPH	–	Ministry of Public Health
PISU	–	Private Investments in State Undertakings
PPP	–	public–private partnership
PPP-TSU	–	PPP transaction support unit
SEPO	–	State Enterprise Policy Office
TA	–	technical assistance
TASF	–	Technical Assistance Special Fund

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Capacity development technical assistance (CDTA)
Targeting classification	–	General intervention
Sector (subsector)	–	Health and social protection (health systems)
Themes (subthemes)	–	Private sector development (promotion of private sector investments), capacity development (institutional development, organizational development)
Location (impact)	–	National (high), rural (medium), urban (medium)

NOTE

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

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I. INTRODUCTION

1. The Government of Thailand requested support from the Asian Development Bank (ADB) to identify, assess, and develop capacity regarding health sector public–private partnerships (PPPs). ADB has worked with the government on broader PPP issues, including development of a revised PPP legal framework. The Ministry of Public Health (MOPH) has demonstrated particular interest in using PPPs to deliver public services. The proposal was discussed in detail with the government during ADB missions in February and October 2013. The government concurred with the impact, outcome, outputs, implementation arrangements, cost, financing arrangements, and terms of reference. The design and monitoring framework is in Appendix 1.¹

II. ISSUES

2. Thailand is an upper middle-income country, and is aspiring to achieve high-income status. However, Thailand's unmet demand for social services has a serious impact on productivity and the achievement of sustainable economic growth and poverty reduction. The country's social indicators have improved steadily, but significant disparities remain, with unequal access to resources and social services. Available public sector funding is inadequate, and PPPs are seen as an important means of improving efficiency and the effectiveness of service delivery to citizens.² A new legal framework for PPPs was developed with ADB support, and is expected to help mobilize private investment in public economic and social infrastructure projects. Effective implementation of the new PPP framework will be vital to building the confidence of the private sector and other stakeholders.

3. Thailand's large, complex public and private health sector provides services to the population of 68 million, and additionally seeks to become a prominent regional center of excellence for medical and health care. The Thai healthcare system combines public and private sector financing and care provision. In 2008, total health expenditures represented some 4% of gross domestic product, about three-quarters of which was covered by the public sector. Government health spending finances the provision of public health services performed by the Ministry of Public Health (MOPH) and other government agencies, including the planning and administration of hospital and health service operations, the provision of healthcare information, and research and development. The private sector in Thailand plays a significant role in providing health care, particularly in Bangkok and provincial urban centers. The private sector accounts for about one-quarter of health care expenditure, about two-thirds of which is financed by out-of-pocket spending by patients.³ In 2009, less than one-third of Thailand's more than 320 private hospitals were in Bangkok.

4. Remarkable progress has been made in basic health care, with significant declines in infant and maternal mortality rates. Nevertheless, MOPH faces a number of challenges, including demographic change, with a rapidly aging population that poses challenges for social security and health expenditure management; increasing utilization of health services; increasing demand for high-cost technology and ageing facilities; inefficiencies in the large public hospital infrastructure; and lack of regional integration in health services. These

¹ The TA first appeared in the business opportunities section of ADB's website on 13 November 2013.

² ADB has supported PPP development in several developing member countries, including India, the Philippines, Thailand, and Viet Nam.

³ ADB. 2010. *Technical Assistance for Mainstreaming Public–Private Partnerships in Thailand*. Manila (TA7540-THA).

challenges pressure the public sector to provide good quality health services with appropriately equipped health facilities of good standard.⁴

5. MOPH has demonstrated considerable interest in developing services and supporting facilities that use PPPs as a way to address these challenges. However, the current institutional setup and capacity of MOPH cannot effectively promote and implement PPP health projects. ADB provided MOPH with initial PPP-related technical assistance (TA) that reviewed PPP-related health policies and conducted a rapid sector diagnostics analysis and PPP project identification program (footnote 3). This initial ADB assistance provided a useful foundation for further work, but was limited by the lack of an effective PPP legal and regulatory framework in Thailand. The government developed, with ADB assistance, the Private Investments in State Undertakings (PISU) Act to help mobilize private funding; improve efficiency, access, and quality of infrastructure and public services; and define an institutional framework for PPPs.

6. The PISU Act was enacted in April 2013 and represents a fundamental change from the prior law (the Private Participation in State Undertaking Act of 1992). The key features of the PISU Act include (i) development of a PPP strategic plan to provide clear direction regarding the sectors and types of investments in which private participation is encouraged; (ii) establishment of a PPP policy committee, with the State Enterprise Policy Office (SEPO) acting as the policy committee's secretariat; (iii) streamlined procedures; (iv) standard contract terms and guidelines on post-contract project management; and (v) a project development fund. Although SEPO has a key oversight role under the PISU Act, MOPH has primary responsibility for identifying and transacting projects. Importantly, the PISU Act foresees both revenue-generating and availability-payment PPP projects. Efforts are underway to implement the framework set out under the PISU Act. Effective implementation will be essential in building the confidence of the private sector and other stakeholders in the new PPP framework.

7. In response to the opportunity created by the enactment of the PISU Act and the institutional framework, and the continuing challenges faced in the health sector, MOPH has requested further technical support from ADB to develop its capacity to use PPPs. The health-related PPP projects have yet to be selected, but the ADB PPP TA (footnote 3) identified a number of possible health PPPs that could be considered, including onsite laboratory management services, advanced imaging radiological services, development of new hospital facilities and infrastructure, cardiac and cancer medical center provision, geriatric medical services provision and "hot floor" (i.e., intensive care and operating theater) infrastructure refurbishment and provision, as well as noncore activities such as contracting out building services and car parks.

8. There is a strong rationale for the development and use of PPPs in the financing and delivery of health care services in Thailand. Importantly, PPPs provide a mechanism for channeling private sector resources towards the improving access to, and the quality of, the public health care system in Thailand. While the private health sector is large, its main beneficiaries are those who can afford to pay for services out-of-pocket or who benefit from health insurance coverage. In contrast, the bulk of the population is able to access only public health care services, where standards are generally lower because of excess demand for services, shortages of professional clinicians and a lack of funding for services and facilities.

⁴ See for example M. Lindelow et al. 2012. Government Spending and Central–Local Relations in Thailand's Health Sector. *HNP Discussion Paper*. Washington, D.C.: World Bank; R. Dauskardt and O. Kovindha. 2012. *Rapid Sector Diagnostic Report: Macro Consideration of Public–Private Partnerships in Thailand's Health Sector*. Manila: Asian Development Bank.

PPPs will allow the resources and expertise of the large and growing private health care sector to be extended to those who rely solely on the public sector for health care delivery in Thailand.

9. MOPH, in cooperation with SEPO, has conducted a bottom-up exercise and identified 14 potential types of PPP initiatives across four priority areas. The development of PPPs in Southeast Asia has been limited, particularly in the health sector. Private investment in health care in the region has tended to focus on private tertiary (i.e., specialist) care. For a variety of reasons (e.g., perceived risk; planning, licensing, and construction timeframes; and the short investment horizons of investors), the appetite for greenfield development in the health sector in Southeast Asia has been limited, with most of the focus given to enhancing or adding capacity to existing structures. Some PPPs in health are emerging in Southeast Asia, e.g., the development of a teaching hospital for the Islamic University Malaysia in Kuantan.⁵

10. While the focus of the TA will be on the health sector, experience and lessons will also be applied to the education sector by way of initial scoping work on the potential for PPPs in education. Despite relatively good resource allocation and success in increasing enrolment, Thailand's education outcomes need further improvement in order to maintain high economic growth. Issues include matching demand and supply, access to quality education, the efficient use of resources, and accountability and performance-based delivery. The TA will assess the potential for PPPs in the education sector in Thailand, highlight potential education PPP models that could be considered, and identify lessons from the health sector.

11. ADB's country partnership strategy, 2013–2016 for Thailand has a strong focus on developing the private sector and catalyzing private investment and finance.⁶ Under the country partnership strategy, ADB is committed to helping to strengthen the enabling environment for PPPs and Thailand's capacity to identify, develop, and finance suitable PPP projects. ADB is currently providing assistance to the Ministry of Finance (through SEPO) to help mainstream the new PPP framework. Specifically, the ongoing assistance to SEPO includes activities to strengthen PPP units and governance structures, prepare viable PPP project pipelines in priority sectors, structure and operate a project development fund, and design a government support and risk management framework.⁷ The proposed TA will complement the ongoing assistance with a particular focus on the health sector, with an extension to the education sector. The TA will be an integral part of the package to support the PPP agenda, and as such may lead to opportunities for ADB finance instruments, both sovereign and nonsovereign.⁸

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

12. The TA's impact will be increased private sector engagement in the health sector for the delivery of efficient and quality services. The target will be an increase from zero to three in the number of public health facilities providing services through PPPs. The TA outcome will be MOPH PPP project pipeline identified and PPP project development commenced. The targets

⁵ PwC. 2012. *Build and Beyond: Bridging the Gap—Meeting the Challenges of Healthcare Development in South East Asia*. Beijing.

⁶ ADB. 2013. *Country Partnership Strategy: Thailand, 2013–2016*. Manila.

⁷ ADB. 2012. *Technical Assistance for Developing Government Support and Risk Management Systems for Public–Private Partnerships in Southeast Asia*. Manila (approved in December 2012).

⁸ ADB's PPP strategy for Thailand is in line with ADB. 2012. *Public–Private Partnership Operational Plan, 2012–2020*. Manila.

will be that by the end of 2015, the MOPH PPP strategic plan is approved and one to two bankable PPP projects identified and developed to prefeasibility stage.

B. Methodology and Key Activities

13. The TA will develop PPP policy and institutional frameworks in the health sector under PISU, assist in the identification of potential PPP projects in the health sector, and build the capacity of MOPH to identify and develop PPP projects in the health sector. Expected TA outputs are as follows:

- (i) **Output 1: Enabling environment for public–private partnerships in health strengthened.** The TA will develop PPP policy and institutional frameworks in the health sector under PISU, including (a) assessing policies, regulations, and systems; (b) assisting in the development of the MOPH policy framework to feed into the PPP strategic plan being developed by SEPO; (c) establishing a monitoring and evaluation mechanism for PPP implementation; and (d) developing and recommending efficient mechanisms for PPP dispute resolution. A scoping study will also be carried out to examine the potential for PPPs in the education sector and the degree to which the lessons from health PPP arrangements can be applied to, and replicated in, the education sector.
- (ii) **Output 2: Capacity of the Ministry of Public Health to identify and develop public–private partnership projects enhanced.** The TA will assist in (a) establishing a PPP-TSU in MOPH, (b) developing a PPP strategic plan and a list of potential PPP projects in the health sector that would form part of the national PPP strategic plan of SEPO, and (c) conducting capacity building for the PPP-TSU to develop and support well-structured PPPs in the health sector.
- (iii) **Output 3: Public–private partnership project prefeasibility studies prepared.** The TA will support the identification and development of one to two bankable PPP health projects by (a) establishing mechanisms to support the PPP project development cycle, (b) identifying potential pilot PPP health projects, and (c) developing prefeasibility studies for the selected PPP pilot health projects.

C. Cost and Financing

14. The TA is estimated to cost \$1,430,000, of which \$1,000,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources). The government will provide counterpart support in the form of office accommodation, transport, utilities, seminar room space, and remuneration of counterpart staff; as well as provision of data, reports, and other relevant documents and other in-kind contributions. The cost estimates and financing plan are in Appendix 2.

D. Implementation Arrangements

15. MOPH will be the executing agency. The TA will be implemented in close coordination with the PPP unit in SEPO. The overall work of the TA will be overseen by an MOPH executive committee, with implementation led by an MOPH deputy permanent secretary. Responsibility for day-to-day implementation will be with the head of the Health Affairs Administrative Section of the Bureau of Health Administration under the Office of the Permanent Secretary. The MOPH will be provided with secretariat staff under the TA to support implementation. A PPP-TSU will be established under the MOPH. The TA will closely coordinate with and build on ADB assistance being provided to the MOF to support implementation of PPP programs. The outputs

of the two TA projects will be fully integrated to develop a coherent policy and institutional framework, including an implementation process for PPPs.

16. The TA will be implemented over a period of 24 months from January 2014 to December 2015. ADB will recruit a team of international and national consultants to provide specialized services totaling 41 person-months (22 person-months of international and 19 person-months of national services) in the areas of PPPs, legal and regulatory issues, health economics, project finance, health technical advice, PPPs in education, and communications and knowledge management. Consultants will be recruited through a firm and will include (i) PPP specialist and team leader (international, 8 person-months); (ii) legal and regulatory specialist (international and national, 3 person-months each); (iii) health economist (international, 3 person-months); (iv) project finance specialist (international, 3 person-months); (v) health technical specialist (international, 3 person-months); (vi) education PPP specialist (international and national, 2 person-months each); (vii) health technical specialist and deputy team leader (national, 8 person-months); and (viii) communications and knowledge management specialist (national, 6 person-months). The outline terms of reference are in Appendix 3.

17. ADB will engage the consultants in accordance with its Guidelines on the Use of Consultants (2013, as amended from time to time), using quality- and cost-based selection (with a quality–cost ratio of 80:20). The education consultants will work closely with the various offices of the Ministry of Education, which will oversee this work. The TA will be managed by the consulting firm. Some ADB staff may be used as resource persons and some representation costs may be charged to the TA. Proceeds of the TA will be disbursed in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

18. Regular TA review missions will monitor TA progress and outputs, and provide an evaluation in the TA completion report. TA findings and outputs will be disseminated via existing ADB external relations communication channels, as well as through workshops and conferences, case studies, and articles prepared by the TA consultant team and through the health PPP website that will be created and operated under the TA.

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$1,000,000 on a grant basis to the Government of Thailand for Piloting Public–Private Partnerships in the Social Sectors, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact Increased private sector engagement in the health sector for the delivery of efficient and quality services</p>	<p>Number of public health facilities providing services under PPP arrangements increases from 0 in 2013 to 3 in 2020</p>	<p>MOPH reports</p>	<p>Assumption Government remains committed to private sector involvement in the financing and delivery of social services</p>
<p>Outcome MOPH PPP project pipeline identified and PPP project development commenced</p>	<p>By the end of 2015: MOPH PPP strategic plan approved One to two bankable PPP projects identified and developed to prefeasibility stage</p>	<p>Final TA evaluation report</p>	<p>Assumption Government remains committed to PPP policy development and implementation</p>
<p>Outputs 1. Enabling environment for PPPs in health strengthened 2. Capacity of MOPH to identify and develop PPP projects enhanced 3. PPP project prefeasibility studies prepared</p>	<p>PPP policy framework for the health sector formulated by Q2 2015 Experience and lessons from the health sector applied through preparation of scoping study on education PPPs by Q2 2015 PPP-TSU established in MOPH by Q2 2015 Capacity development plans developed and implemented by Q4 2015 Prefeasibility studies prepared for one to two identified potential PPP projects by Q4 2015</p>	<p>Government reports TA reports</p>	<p>Assumptions Government provides timely inputs Government agencies are actively involved in the development of PPP pipeline Risks Difficulty in obtaining appropriate data Inadequate cooperation from some stakeholders</p>

Activities with Milestones	Inputs																		
<p>1. Enabling environment for PPPs in health strengthened</p> <p>1.1 Conduct an assessment of policies; regulations; systems such as procurement, budgets, and human resources; and readiness of the general public for PPPs in the health sector by Q2 2015</p> <p>1.2 Establish a monitoring and evaluation mechanism for PPP implementation, including developing benchmarks and measurable indicators for PPP health projects in terms of efficiency and quality of services by Q2 2015</p> <p>1.3 Develop and recommend efficient mechanisms and capacities for rapid PPP dispute resolution processes by Q2 2015</p> <p>1.4 Complete scoping study on PPPs in education by Q2 2015</p> <p>2. Capacity of MOPH to develop and implement PPP projects enhanced</p> <p>2.1 Establish PPP-TSU within MOPH that will liaise with SEPO by Q2 2015</p> <p>2.2 Develop a strategic plan for PPP policy framework and a list of PPP projects in the health sector that would form part of a national PPP strategic plan and PPP master plan of SEPO by Q2 2015</p> <p>2.3 Conduct capacity building for the PPP-TSU to promote and support well-structured PPPs in the health sector implemented by Q4 2015</p> <p>3. PPP project prefeasibility studies prepared</p> <p>3.1 Establish mechanisms to support PPP identification and development (e.g., prefeasibility studies) of PPP projects in the health sector by Q1 2015</p> <p>3.2 Identify potential pilot PPP projects, assess PPP options, and develop prefeasibility studies for selected pilot projects by Q4 2015</p>	<p>Asian Development Bank: \$1,000,000 (TASF-other sources)</p> <table border="1" data-bbox="976 373 1421 804"> <thead> <tr> <th data-bbox="976 405 1052 436">Item</th> <th data-bbox="1300 373 1421 436">Amount (\$'000)</th> </tr> </thead> <tbody> <tr> <td data-bbox="976 436 1133 468">Consultants</td> <td data-bbox="1325 436 1421 468">814.2</td> </tr> <tr> <td data-bbox="976 468 1122 499">Equipment</td> <td data-bbox="1333 468 1421 499">15.0</td> </tr> <tr> <td data-bbox="976 499 1255 562">Workshops, seminars, and conferences</td> <td data-bbox="1333 531 1421 562">20.0</td> </tr> <tr> <td data-bbox="976 562 1227 594">Local transportation</td> <td data-bbox="1333 562 1421 594">5.0</td> </tr> <tr> <td data-bbox="976 594 1198 657">Surveys and data collection</td> <td data-bbox="1333 625 1421 657">15.0</td> </tr> <tr> <td data-bbox="976 657 1239 741">Miscellaneous administration and support costs</td> <td data-bbox="1333 709 1421 741">10.0</td> </tr> <tr> <td data-bbox="976 741 1157 772">Contingencies</td> <td data-bbox="1325 741 1421 772">120.8</td> </tr> <tr> <td data-bbox="1084 772 1157 804">Total</td> <td data-bbox="1300 772 1421 804">1,000.0</td> </tr> </tbody> </table> <p>Note: The government will provide counterpart support to cover office accommodation, equipment, furniture and transport, surveys and data collection, workshops, website and information dissemination and other costs.</p>	Item	Amount (\$'000)	Consultants	814.2	Equipment	15.0	Workshops, seminars, and conferences	20.0	Local transportation	5.0	Surveys and data collection	15.0	Miscellaneous administration and support costs	10.0	Contingencies	120.8	Total	1,000.0
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ADB = Asian Development Bank, MOPH = Ministry of Public Health, PISU = Private Investments in Public Undertakings, PPP = public-private partnership, PPP-TSU = PPP Transaction Support Unit, Q = quarter, SEPO = State Enterprise Policy Office, TA = technical assistance.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	585.60
ii. National consultants	147.80
b. International and local travel	69.75
c. Reports and communications	11.00
2. Equipment ^b	15.00
3. Workshops, seminars, and conferences ^c	20.00
4. Local transportation	5.00
5. Surveys and data collection	15.00
6. Miscellaneous administration and support costs	10.00
7. Contingencies	120.85
Total	1,000.00

Note: The technical assistance (TA) is estimated to cost \$1,430,000, of which contributions from the Asian Development Bank are presented in the table above. The government will provide counterpart support in the form of office accommodation; transport; utilities; seminar room space; website development; remuneration of counterpart staff; as well as provision of data, reports, and other relevant documents. The value of government contribution is estimated to account for 30.1% of the total TA cost.

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-other sources).

^b Equipment includes computers, printer, projector, white board, office furniture, and photocopier. All equipment will be turned over to the executing agency upon conclusion of the TA.

^c Workshops will be required to engage with government officials and stakeholders in the identification and development of the public-private partnership strategy.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. International Consultants

1. **Public–Private Partnership Specialist and Team Leader** (international, 8 person-months)

1. The consultant should have at least 10 years of international experience in undertaking public–private partnerships (PPPs); development finance; project management; developing and reviewing project proposals; and understanding institutional structures, operating mechanisms, and funding requirements. Ideally, the consultant should have worked on projects in the health sector in a variety of regions, developed a knowledge base and expertise in working with key government agencies at the national and subnational levels, and be experienced in addressing PPP project implementation issues. Tasks include:

- (i) work with the Ministry of Public Health (MOPH) to identify and develop potential health PPP projects, review subprojects, help prepare a PPP strategy for the health sector, and provide recommendations to MOPH to develop a project pipeline;
- (ii) develop guidelines on the preparation of prefeasibility and feasibility studies supported by processes, templates for terms of reference and documents, case studies, and financial models for PPP development;
- (iii) review, identify, and prepare prefeasibility studies for one to two pilot projects;
- (iv) develop the institutional requirements for establishing a PPP Transaction Support Unit (PPP-TSU) in MOPH, and develop a capacity building program to address identified capacity and resource constraints;
- (v) assist the State Enterprise Policy Office (SEPO) in its operational activities and provide training and technical, financial, and project management-related advice;
- (vi) supervise international and national consultants in preparing terms of reference, procurement reports, processing, quality control, and financial disbursement;
- (vii) develop a monitoring system to track subproject applications, ensure submission quality, and maintain documentation and transaction records;
- (viii) identify audit mechanisms and audit-related tracking documentation;
- (ix) organize and administer workshops, training activities, conferences, and surveys; and prepare all project reports; and
- (x) provide training, including on issues relating to PPP project structures.

2. **Public–Private Partnership Legal and Regulatory Specialist** (international, 3 person-months)

2. The consultant should have a legal qualification from a recognized university and at least 10 years of experience in legal and regulatory issues related to PPPs, preferably with some social sector experience. Tasks include:

- (i) review legal and regulatory institutional requirements for implementing health PPPs;
- (ii) assess capacity requirements for PPP-TSU in MOPH and prospective health government contracting agencies (GCAs);
- (iii) help the PPP-TSU and GCAs to identify staff for PPP contract design, procurement, and management; and examine capacity gaps and resource constraints;
- (iv) review, identify, design, and provide training to the PPP-TSU and GCAs on all aspects of the PPP bidding process, including procurement, invitation to tender, marketing, due diligence, contract negotiations, and contract management; and
- (v) provide training and project development support to MOPH and ADB.

3. **Health Economist** (international, 3 person-months)

3. The consultant should have an advanced degree in economics or related field with at least 10 years of related work experience. Tasks include:

- (i) assess the readiness of the health sector for PPPs and the current and expected level of demand for various health services;
- (ii) help identify, develop, and prepare prefeasibility studies for potential PPP projects;
- (iii) conduct market studies, and market soundings; and develop market strategies;
- (iv) develop PPP output specifications;
- (v) identify staff in the PPP-TSU and GCAs to prepare or review PPP economic and financial analyses, and identify capacity gaps and resource constraints;
- (vi) review, identify, design, and provide training to the PPP-TSU and GCAs on methods of determining the rationale for PPP projects and financial aspects of project design;
- (vii) support and provide inputs on all aspects of PPP project development;
- (viii) prepare financial and economic analyses, and develop processes and knowledge products to support PPP development;
- (ix) participate in information dissemination forums on project economic analyses; and
- (x) provide training and project development support to MOPH and ADB.

4. **Project Finance Specialist** (international, 3 person-months)

4. The consultant should have a degree in business administration or related field from a recognized university, with at least 10 years of related work experience. Tasks include:

- (i) review the economic and financial regulatory framework at the health sector to identify requirements for PPPs and potential constraints on private investment;
- (ii) identify the roles and responsibilities of stakeholders in providing funding and risk mitigation instruments to develop potential projects;
- (iii) review existing plans and studies detailing the economic and financial potential of the project facility, and prepare a financial analysis of GCAs' revenues and expenditures, financial performance, and ability to attract funding from various sources;
- (iv) support the health economist to design the market assessment; identify user availability and quality requirements, willingness to pay, and expected demand growth; and assess the potential to generate noncore revenues;
- (v) review financial statements and all aspects of financial operation and performance; and identify challenges and opportunities for potential pilot projects;
- (vi) support the health economist to: (a) prepare preliminary investment, revenue, and operations and maintenance cost estimates for potential pilot projects; and (b) prepare a preliminary economic and financial analysis;
- (vii) develop a model to assess financial impacts, and perform sensitivity analyses to quantify the impacts of structuring options under different risk allocation structures;
- (viii) develop a risk allocation matrix, and potential risk allocation and mitigation strategies;
- (ix) identify public and private financing, and user and supplier payment mechanisms; and evaluate technical, financing, and government support options;
- (x) conduct a market assessment of the interest of potential private investors; recommend a project financing structure, and identify possible finance providers; and
- (xi) support the work of the PPP legal and regulatory specialist.

5. **Health Technical Specialist** (international, 3 person-months)

5. The consultant should have an advanced degree in health administration or management, health economics, or a related discipline from a recognized university.

The consultant will help prepare guidelines to identify health PPP projects and technical assessments for preparation of prefeasibility studies, and support capacity development in MOPH and prospective GCAs. Tasks include:

- (i) help the PPP specialist and team leader identify PPP-TSU and GCA PPP technical staff, and identify capacity gaps and resource constraints;
- (ii) help review, identify, design, and prepare prefeasibility studies;
- (iii) support PPP project development and evaluation by providing inputs and quality control on all aspects related to project costs;
- (iv) support project technical analysis by developing relevant processes, procedures, templates, case studies, and financial models to support PPP development;
- (v) participate in information forums on all aspects of project technical reviews; and confirm the project design on a least-cost and whole-of-life cost basis;
- (vi) provide advice on all aspects of civil works, equipment, and construction;
- (vii) provide training on issues affecting proposed PPP project structures; and
- (viii) provide project development support.

6. Education Public–Private Partnership Specialist (international, 2 person-months)

6. The consultant should have at least 10 years of international experience in undertaking social sector PPPs, development finance, project management, and developing and reviewing project proposals; and an understanding of institutional structures, operating mechanisms, and funding requirements. The expert should have worked in a variety of regions and developed a knowledge base and expertise in working with key government agencies at the national and subnational levels. Tasks include:

- (i) undertake a scoping study to examine the PPP potential in Thailand's education sector, lessons from PPP development in the health sector, and whether and how health PPP arrangements can be replicated in the education sector;
- (ii) review international PPP experience in the education sector and identify relevant models to consider in the Thai context;
- (iii) identify and document existing education sector PPPs in Thailand;
- (iv) organize, administer, and deliver consultation and dissemination workshops;
- (v) contribute to project reports, including monthly and quarterly reports on all consultant activities and related disbursements; and
- (vi) prepare a report on education sector PPPs that includes identification of existing and potential education PPP models in or suitable for Thailand.

B. National Consultants

1. Health Technical Specialist and Deputy Team Leader (national, 8 person-months)

7. The consultant should have an advanced degree in health administration or management, health economics, or a related discipline from a recognized university. The consultant should have strong English language skills. The consultant will assist in the preparation of guidelines to identify health PPP projects and technical assessments required for preparation of the prefeasibility studies, and support capacity development in MOPH and prospective GCAs. Tasks include:

- (i) help the PPP specialist and team leader identify PPP-TSU and GCA PPP technical staff, and identify capacity gaps and resource constraints;
- (ii) help review, identify, design, and prepare prefeasibility studies;

- (iii) support PPP project development and evaluation by providing inputs and quality control on all aspects related to project costs;
- (iv) support project technical analysis by developing relevant processes, procedures, templates, case studies, and financial models to support PPP development;
- (v) participate in information forums on all aspects of project technical reviews;
- (vi) confirm the project design on a least-cost and whole-of-life cost basis;
- (vii) provide advice on all aspects of civil works, equipment, and construction;
- (viii) provide training on issues affecting proposed PPP project structures; and
- (ix) provide project development support.

2. Public–Private Partnership Legal and Regulatory Specialist (national, 3 person-months)

8. The consultant should have a legal qualification from a recognized university and 10 years of experience in the legal profession, focusing on commercial transactions. Tasks include:

- (i) review legal and regulatory institutional requirements for implementing health PPPs;
- (ii) assess capacity requirements for PPP-TSU in MOPH and prospective health GCAs;
- (iii) help the PPP-TSU and GCAs to identify staff for PPP contract design, procurement, and management; and examine capacity gaps and resource constraints;
- (iv) review, identify, design, and provide training to the PPP-TSU and GCAs on all aspects of the PPP bidding process, including procurement, invitation to tender, marketing, due diligence, contract negotiations, and contract management; and
- (v) provide training and project development support to MOPH and ADB.

3. Education Public–Private Partnership Specialist (national, 2 person-months)

9. The consultant should have at least 15 years of experience, including in a senior position in the Thai education sector, and an excellent understanding of the education system, policy frameworks, institutional structures, and financing. The consultant should have knowledge of the different education subsectors and expertise in working with key government agencies at the national and subnational levels. The consultant will assist the international education PPP specialist to undertake a scoping study to examine the potential for PPPs in the education sector in Thailand, lessons from the health sector, and the degree to which health PPP arrangements can be replicated in the education sector. Tasks include:

- (i) assist in preparing a scoping study to examine the potential for PPPs in the education sector in Thailand, lessons from developing health sector PPPs, and whether health PPP arrangements can be replicated in the education sector;
- (ii) identify and document existing PPPs in the education sector in Thailand;
- (iii) organize, administer, and deliver, as required, consultation and dissemination workshops and seminars;
- (iv) contribute to project reports, including monthly and quarterly reports on all consultant activities and related disbursements; and
- (v) assist in preparing a report on education sector PPPs.

4. Communications and Knowledge Management Specialist (national, 6 person-months)

10. The consultant should have at least 5 years of experience in communications and knowledge management in a health or public policy environment, and a strong command of the English language. Tasks include:

- (i) assist in the preparation of workshops, background papers, case studies, and consultative meetings;
- (ii) oversee the development and maintenance of MOPH and SEPO websites dedicated to PPPs in the health sector;
- (iii) develop internal and external communications strategies for various stakeholder groups; and
- (iv) assist the PPP specialist and team leader and MOPH in the dissemination and communication of TA outputs.