



Work-in-Progress: Not for Quotation

**Title:** Special Evaluation Study on ADB Assistance to Public Private Partnerships in Infrastructure Development

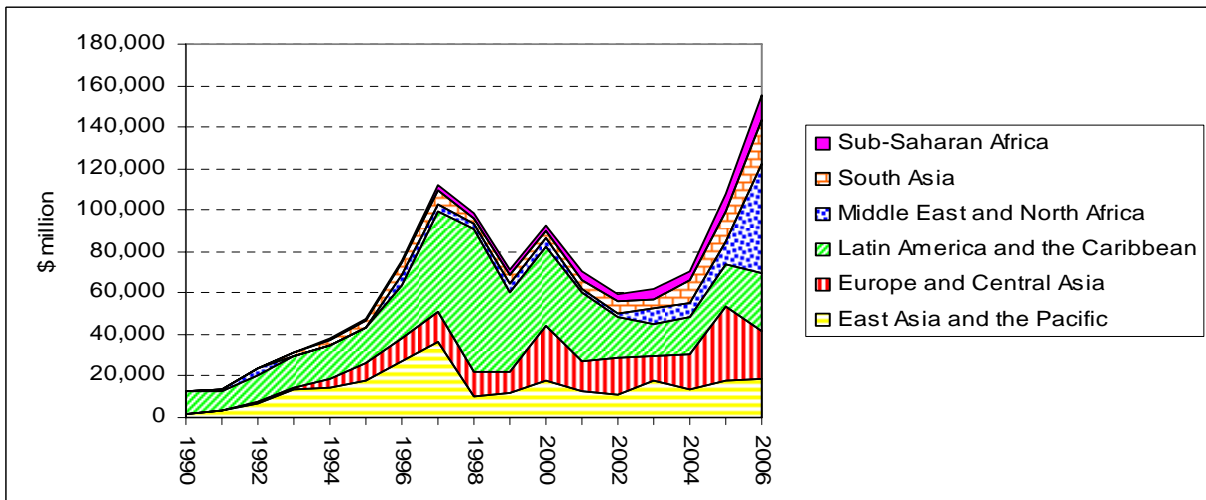
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### A. Background

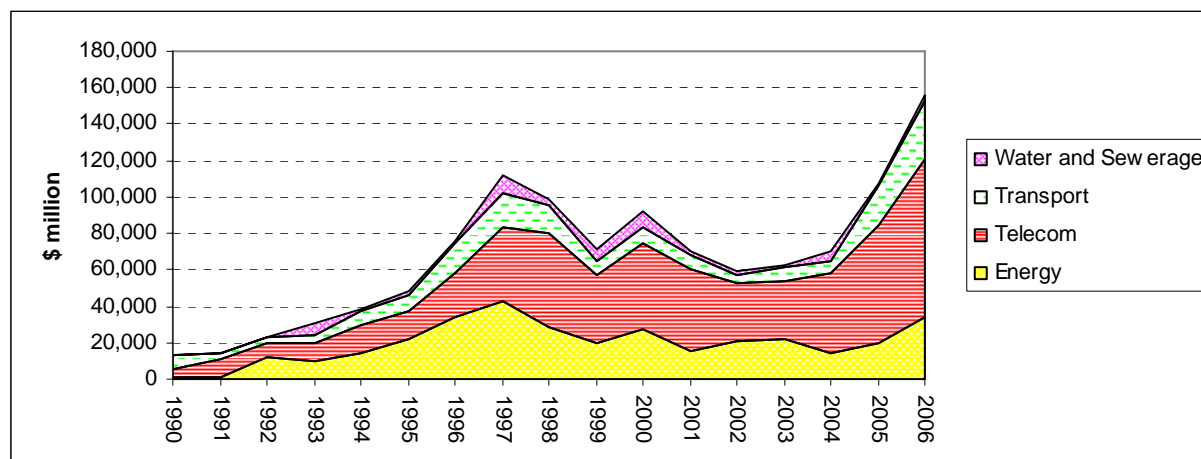
1. Energy, transport and water and sanitation infrastructure facilities are seen as playing a central role reducing poverty in developing member countries (DMCs) by providing direct access to critical services and stimulating economic growth. Public Private Partnerships (PPP) support the development of infrastructure by improving DMCs' ability to access resources to develop facilities at competitive costs. Increasingly the benefits of privately financed infrastructure are being recognized by developing economies, as illustrated in Figure 1. While growth in privately financed infrastructure in Asia has been slow to emerge following the Asian financial crisis in 1997, initiatives in countries such as India indicate the size of this market is set to grow rapidly:

**Figure 1: Private Financed Infrastructure in Emerging Economies, by Region, 1990-2006**



Source: World Bank, PPI database.

2. As shown in Figure 2, most private investment in infrastructure in developing economies to date has occurred in telecoms, followed by energy and transport:

**Figure 2: Private Financed Infrastructure in Emerging Economies, by Sector, 1990-2006**

Source: World Bank, PPI database.

3. Over the period 2002-2007 there has been strong growth in Private Sector Operation's (PSOD) infrastructure related PPP commitments, with annual approval rates increasing by almost 400%. The rapid growth in demand for PPP finance in the Asian region, coupled with the growing importance of PPPs within ADB's operations indicates it is an opportune time to evaluate these activities. This position paper provides a preliminary description of the theoretical justifications for PPPs, followed by a brief review of ADB's public sector enabling environment activities for PPPs, PSOD's infrastructure portfolio, and developments within PSOD to manage the portfolio. The paper then sets out the proposed approach for an Operation Evaluation Department (OED) Special Evaluation Study (SES) to assess how PPPs impact on private sector development in DMCs and how ADB contributes to this process.

## B. Theoretical Justification for PPPs

4. PPPs came out of the commercialization and privatization process' initiated in the 1980s in countries such as the United Kingdom, where increased private sector participation was seen as beneficial for the following reasons:

- (i) It removed conflicts of interest between the Government's role of defining policies, regulating industries, and providing outputs;
- (ii) Allowed the private sector to provide outputs in competitive markets as it has strong incentives to perform due to the profit motive; and
- (iii) It reduced the Government's expenditure commitments which helped support macroeconomic stability, and allowed public expenditure to be reallocated towards high priority outputs in sectors such as health and education.

5. Governments pursued this program by separating policy, regulatory and service delivery functions that were present within vertically integrated monopolies administered by public sector agencies. Policy functions such as planning sector reforms and designing regulations were transferred to Ministries, and responsibility for administering regulations assigned to special purpose, and in many cases independent, regulators. Service delivery functions were transferred to commercialized state owned enterprises (SOEs) and where markets were competitive, these firms were privatized. In many cases, particularly in infrastructure sectors, it became apparent that competition was not always feasible due to problems with economies of

scale that offset the benefits of competition due to efficiency costs, and sunk costs that discouraged private investment. These issues led to the development of intermediate solutions such as PPPs that could be used to both regulate private sector providers and encourage them to commit capital for long term investment. PPPs provide a means of preserving economies of scale by allowing the private sector to compete for the market over time, rather than compete within the market. PPP contracts also provide a mechanism to ensure that risks are efficiently allocated between the public and private sectors, and there is a reasonable degree of certainty on the tariff mechanism and private sector return on investment.

6. PPPs differ in terms of what resources they provide and the way in which they manage risks over time. Sources of resources and allocation of risks under the various PPP options are as follows:

**Table 1: Sources of Resources and allocation of Risks under Various PPP Options**

PPP Option	Labor	Capital investment/ Financing	Contract Duration	Output Risk (quality, minimum unit costs & secure availability)	Investment Risk (competitive return on equity capital)
Service contract	Private	NA	1 – 2 years	Public	Public
Mgt. Contract	Private	Public	3 – 5 years	Public	Public
Operating Lease to Private Sector	Private	Public	5 – 15 years	Public	Public
Concession (DBFO)	Private	Private	15 – 25 years	Public	Private
Concession (BOOT)	Private	Private	15 – 25 years	Private	Private

Source: Operations Evaluation Department.

7. These options involve increasing levels of financial risk being assumed by the private sector service provider and increasing regulatory risk for the Government (mainly in terms of potential for monopoly). Service contracts are short term and in the context of infrastructure relates to services such as project design, or construction. Management contracts only provide private sector management expertise and no capital, and therefore they are primarily used where the Government wants to access private sector skills and technology to operate facilities. Operating leases provide private sector management expertise and no capital, and are used when the Government does not wish to sell an asset, but it is not concerned about the outputs produced by the asset. Design Build Finance Operate (DBFO) concessions are a primary form of PPP and they are used where the Government directly purchases the outputs, often through a stand-alone fund, using a fixed annuity payment plus a performance bonus, such as in the road sector. This type of PPP is relatively new in emerging economies, but it is becoming increasingly important in countries such as India. Build Own Operate Transfer (BOOT) concessions are the other main form of PPP and they are used where the Government does not directly purchase the outputs, but tariffs are typically set by a regulator, such as in the power sector. In some cases, quasi commercial SOEs may act as the offtaker for BOOT concessions. BOOTs are the most common form of PPP used in emerging economies to date.

8. DBFOs and BOOT concessions are largely synonymous with the term PPP, and are the focus of the SES. DBFOs are used where it is difficult to manage demand risks and directly charge revenue from the public, and the Government procures the outputs from the private sector concessionaire. DBFOs are common in: (i) transport, particularly for secondary roads, or urban transit systems where the Government does not wish to allow the concessionaire to charge users the full costs of service; and (ii) schools and hospitals, where the Government wishes to continue to provide services, but procures the infrastructure from the private sector. Increasingly, DBFOs are being used in countries such as the UK, Australia, and India. BOOT concession agreements have commonly been used in Asia to supplement capacity in: (i) the transport sector for air and seaports, and roads with high traffic volumes; (ii) electricity and gas sectors for generation, distribution, and transmission; and (iii) water in a small number of cases.

9. The benefits of using PPPs are potentially substantial. PPPs provide a means of mobilizing funds to develop the vast backlog of investment required in infrastructure, which Governments cannot finance due to fiscal constraints. Optimal levels of demand for infrastructure in DMCs are estimated to be very large, relative to current levels of investment. Multilateral organizations such as the United Nations, World Bank and ADB have attempted in recent years to quantify the optimal demand for infrastructure in developing economies. Demand projections vary from \$130 billion to \$600 billion annually. Using techniques applied in other regions, ADB has estimated the total requirements for infrastructure finance in Asia and the Pacific averages more than \$250 billion per annum. East and South Asia have the highest requirements for infrastructure investment finance at \$125 billion and \$76 billion, respectively. Southeast Asia, Central and West Asia, and the Pacific will require \$42 billion, \$12 billion and \$0.5 billion, respectively. The largest sub-sectors are energy (49%), transport (26%) and telecommunications (15%). These breakdowns are fairly consistent with historical figures. However, compared with past experience, urban infrastructure investment (such as for water) has accelerated and telecommunications has decreased slightly.<sup>1</sup>

10. In addition to mobilizing private capital, PPPs can generate significant time and cost savings. The UK Treasury reported that 70% of non PPP projects were delivered late, compared to 20% of PPP projects, and 73% of PPP projects were over budget compared to 20% of PPP projects.<sup>2</sup> In Australia, PPP projects generated project cost savings of 30.8% and were completed on average 3.4% ahead of time, whereas traditional public sector projects were completed 23.5% behind time.<sup>3</sup> A key factor underpinning the success of PPPs is appropriate risk allocation. Risks should be assigned to those parties best able to manage them with the Government retaining policy and regulatory risks and the private sector assuming commercial risks.

11. The negotiation of PPPs is complex as the allocation of risks will vary on a project by project basis, depending upon the particular circumstances. While Governments do not provide PPPs with comprehensive sovereign guarantees to repay the financing facility irrespective of the outcomes, it will typically need to provide partial guarantees and various other forms of project support, that can potentially include the following:

#### **Table 2: Potential Forms of Government Support Provided to PPPs**

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<sup>1</sup> ADB. 2007. *Survey of Market for Subnational Finance in Asia and the Pacific*. Manila.

<sup>2</sup> HM Treasury, 2006. *PFI Strengthening Long Term Partnerships*. London.

<sup>3</sup> The Allen Consulting Group and the University of Melbourne, 2007. *Performance of PPPs and Traditional Procurement in Australia*. Melbourne.

<b>Government Guarantee</b>	<b>Terms of Guarantee</b>
Exclusivity	The Government may agree to preclude competition within the concession for an agreed period of time that may extend up to the full life of the concession agreement
Construction Cost Guarantee	Government protects a private entity from potential cost overruns in the construction phase of a project.
Revenue Guarantee	Government sets a minimum variable income for the private operator; typically this income is derived from user fee payments by end-use customers. This form of guarantee is most common in roads with minimum traffic or revenue set by the Government and payment is defined through the tariff formula.
Cash subsidy	Government agrees to provide the private concessionaire a total lump sum or a fixed amount per new connection, and payments can be either in installments or paid all at once up front.
Payment Guarantee	Government agrees to fulfill the obligations of a purchaser (typically an SOE) with respect to the private concessionaire in the case of non-performance by the purchaser. The most common example of this type of guarantee is when a government guarantees the fixed payment of an off-take agreement (e.g. Power Purchase Agreement or Water Purchase Agreement) between the private concessionaire and the SOE.
Debt Guarantee	Government agrees to secure the debt of the private concessionaire by guaranteeing repayment to creditors in the case of a default
Exchange Rate Guarantee	Government protects the private concessionaire from fluctuations in the value of the local currency. For example, the Government may agree to reimburse the private entity for losses on debt services if the value of the local currency dips by, say, 20% or greater.

Source: Operations Evaluation Department and World Bank.

12. The enabling requirements for PPPs are significant and multilateral development banks (MDBs) such as ADB can play a key role in this process. Ideally, in sectors such as power, the sector should be unbundled, and in telecoms mobile should be permitted to enter the market and access the fixed line network. There is a need for independent regulators for power, telecoms, water, and air and sea ports. In sectors such as roads and potentially water there is a need to establish standalone funds or strengthen Government owned SOEs that can act as credit worthy offtakers for concessions. The Government needs the capacity within legislation to enter into contracts and national and municipal authorities need the ability to borrow funds and account for expenditure on PPPs. Unnecessary restrictions on foreign direct investment (FDI) need to be removed, and tax systems aligned with competing jurisdictions. There is a need to establish independent dispute resolution mechanisms between the Government and private concessionaires, including the right to appeal to an international tribunal.

13. There is a need to establish a PPP unit that can: (i) develop standard contracts; (ii) bid evaluation frameworks based on value for money (VFM) principles; (iii) procedures for accepting solicited and unsolicited bids; (iv) create a project pipeline; (v) develop expertise and procedures for negotiating contracts; (vi) create an independent supervisory mechanism to ensure probity of transactions; (vii) procure land, and address resettlement and environmental impacts; (viii) create capacity in Government agencies to monitor and enforce PPP contract provisions; and (ix) over time identify ways to facilitate access to local currency finance from banks and capital markets.

14. ADB can also play a role in facilitating the use of PPPs by directly or indirectly participating in the financing of these contracts. Key areas where value can be added by PSOD include providing advice on structuring projects and mitigating financial risks. Examples of financial instruments available to facilitate direct private investment in infrastructure include:

**Table 3: Potential Forms of ADB Financial Support Provided to PPPs**

<b>Financial Instrument</b>	<b>Purpose</b>
Equity	Typically in the form of minority shareholding of not more than 25%
Quasi-equity	Encompasses instruments such as convertible debt, subordinated loans, and preferred stock
Loan	(i) Direct loan that maybe denominated in either local or foreign currency and various enhancements relative to commercial debt such as extended grace periods and longer tenors: (ii) Indirect loan to smaller private infrastructure projects through financial intermediary denominated in either local or foreign currency and various enhancements relative to commercial debt such as extended grace periods and longer tenors
Cofinancing	ADB arranges the financing and acts as the lender-of-record for third party banks participating in the syndicated loan facility
Guarantees	ADB has traditionally provided two forms of guarantees: (i) political risk coverage against currency inconvertibility, expropriation, war/civil disturbance and breach of contract; and (ii) partial credit guarantees, which are used to turn medium-term finance into a longer-term arrangement by guaranteeing longer maturity or offering liquidity guarantees in the form of put options and take-out financing.
Risk management	ADB can provide risk management products, or derivatives, that allow private concessionaires to hedge currency, interest rate, or commodity price exposures. These instruments can include currency and interest rate swap, options and forward contracts and derivatives.

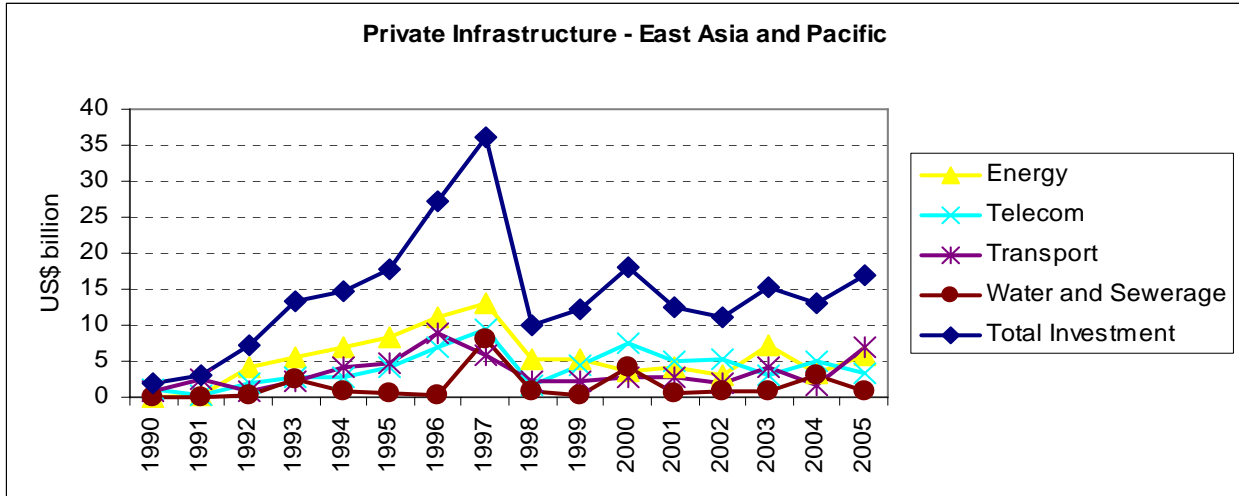
ADB = Asian Development Bank; PPP = partnership.

Source: Operations Evaluation Department.

### **C. Trends in the Use of PPPs in DMCs**

15. In East Asia and the Pacific PPP investment is starting to increase, although from a low base following the Asian financial crisis. Transport is starting to take over from telecoms and energy as the primary recipient of PPP investments:

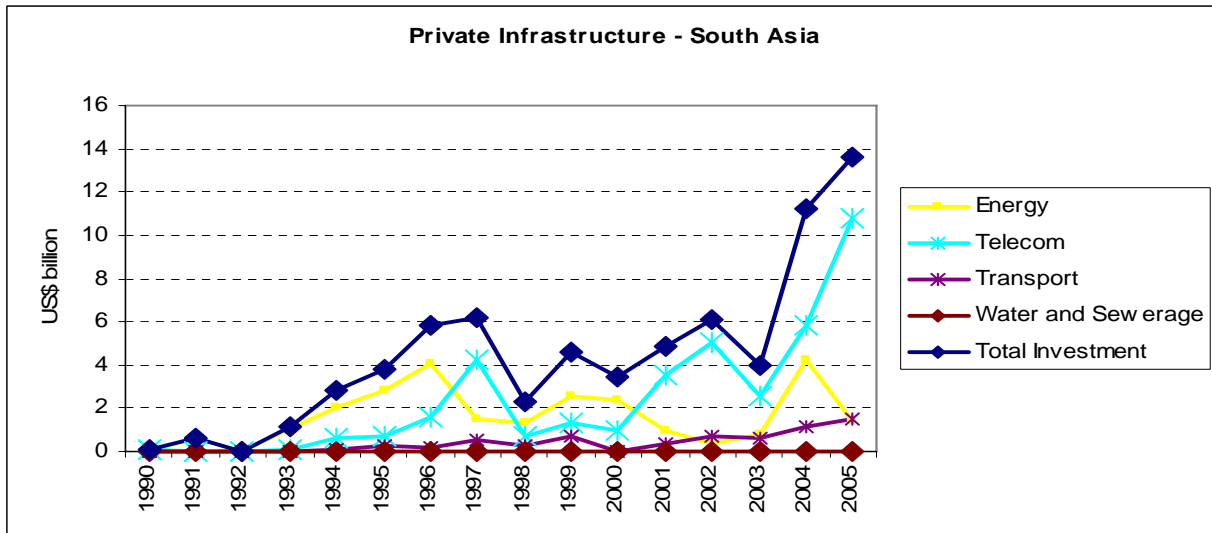
Figure 3: East Asia and the Pacific: PPP investment in Infrastructure, 1990-2005



PPP = public private partnership.  
Source: World Bank, PPI database.

16. India is the other dominant DMC for PPPs, and similar to East Asia, energy has been declining and transport is becoming increasingly important, although both sectors continue to substantially lag telecoms investments:

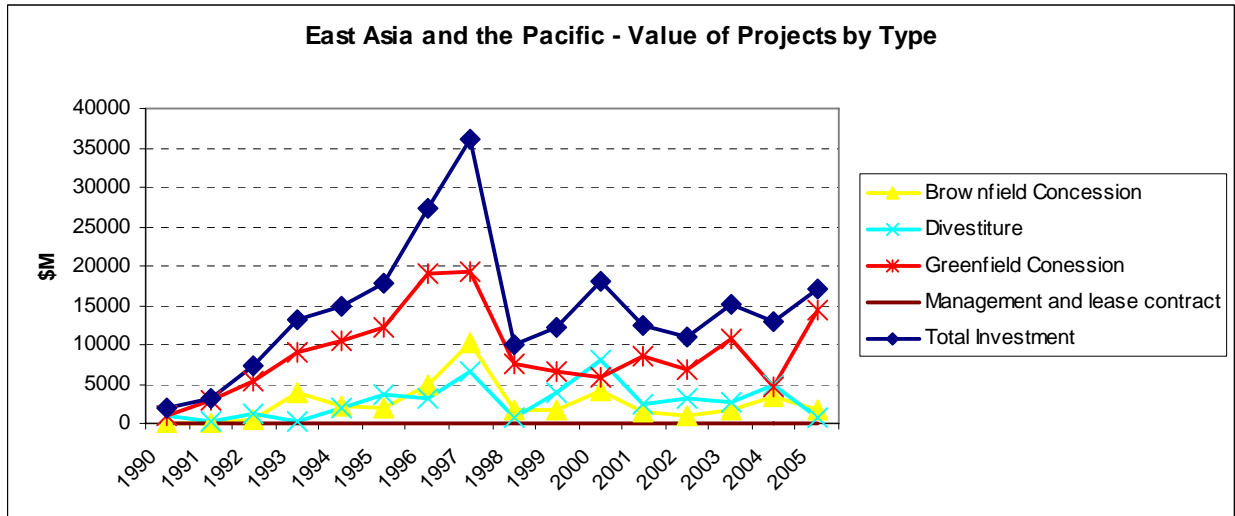
Figure 4: South Asia: PPP investment in Infrastructure, 1990-2005



PPP = public private partnership.  
Source: World Bank, PPI database.

17. When looking at the types of PPPs being put in place, it can be seen that “greenfield” (new) concessions dominate, relative to “brownfield” (rehabilitation/expansion) concessions and divestiture (privatization):

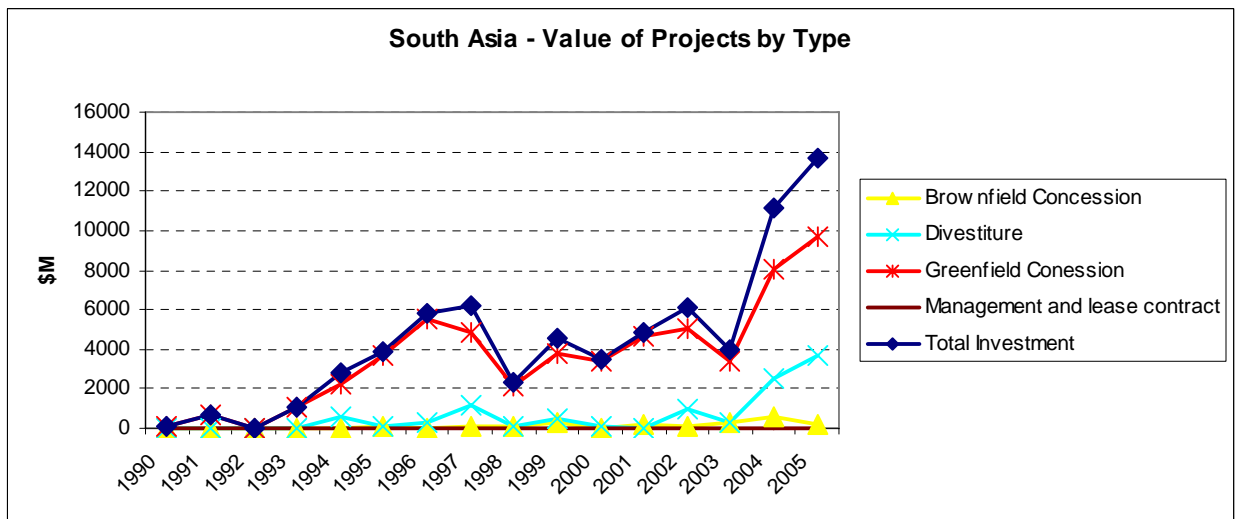
Figure 5: East Asia and the Pacific: Type of PPP Investment, 1990-2005



PPP = public private partnership.  
Source: World Bank, PPI database

18. In South Asia, PPPs have consisted almost exclusively of greenfield concessions:

Figure 6: East Asia and the Pacific: Type of PPP Investment, 1990-2005



PPP = public private partnership.  
Source: World Bank, PPI database

#### D. ADB's Infrastructure Operations and PPP Portfolio

19. ADB is seen as having a strong comparative advantage in financing infrastructure projects through both its public and private sector operations. Infrastructure financing is at the core of ADB's Private Sector Development Strategy (PSDS) approved in 2000. Under that strategy, ADB's public sector operations (i.e. carried out by regional departments (RDs)) were required to increase their orientation toward private sector development, and private sector operations would increase its focus on projects that had a development impact. The PSDS

defined 3 strategic thrusts for ADB to help support the private sector: (i) creating enabling conditions for the private sector and improving the investment climate by providing technical assistance (TA) and sovereign guaranteed loans; (ii) generating business by considering opportunities to facilitate third party private sector participation in ADB projects by providing non sovereign guaranteed cofinanced loans and guarantees; and (iii) catalyzing private investment through direct ADB financial participation using non sovereign guaranteed equity and debt.

20. RDs have sought to strengthen the enabling environment for PPPs not only directly through assistance for the development of PPP policies, laws, processes, and projects, financial intermediation loans targeted at private infrastructure projects, and TA to develop the capacity of public sector institutions for PPP, but also indirectly through assistance for relevant infrastructure, public sector management, and financial sector reforms. A good example in this regard is ADB's support for energy sector reforms. ADB provided 11 policy-based loans and 21 TA projects to support power sector restructuring including unbundling, tariff reform, and the establishment of independent regulators, which are pre-conditions for any private sector investment. In the gas sector, one policy-based loan and 6 TA projects supported gas sector reforms that enhanced the scope for private sector investment. In the transport and urban utilities sectors, assistance was extended for institutional and tariff reforms, and the identification of opportunities for private sector participation in the operation and maintenance of public sector infrastructure. With regard to assistance for PPP modalities as defined in para. 8, 25 of ADB's loan projects had related components involving policy dialogue on the establishment of a legal, policy, and institutional framework for PPP, funding public sector contributions under PPP arrangements or providing long-term financing for private BOT projects. ADB also financed 59 TA projects, which have supported policy dialogue on PPP, related capacity building, and the identification and preparation of pilot projects in 12 DMCs<sup>4</sup> (see Table 4).

**Table 4: ADB Support for PPP under Public Sector Window**

Type of Assistance \ Subsector	Power	Gas	Roads	Ports	Railways	Urban Utilities	Non-sector-specific
General Assessment/ Assistance for PPP Policy Framework	4 TA projects	3 TA projects	1 loan/ 13 TA projects	2 TA projects	3 TA projects	5 TA projects	8 loans/11 TA projects
Project-specific Assistance	3 loan/ 6 TA projects	1 TA project	1 loan/ 4 TA projects	3 loans/2 TA projects	-	2 loans/3 TA projects	7 loans/2 TA projects

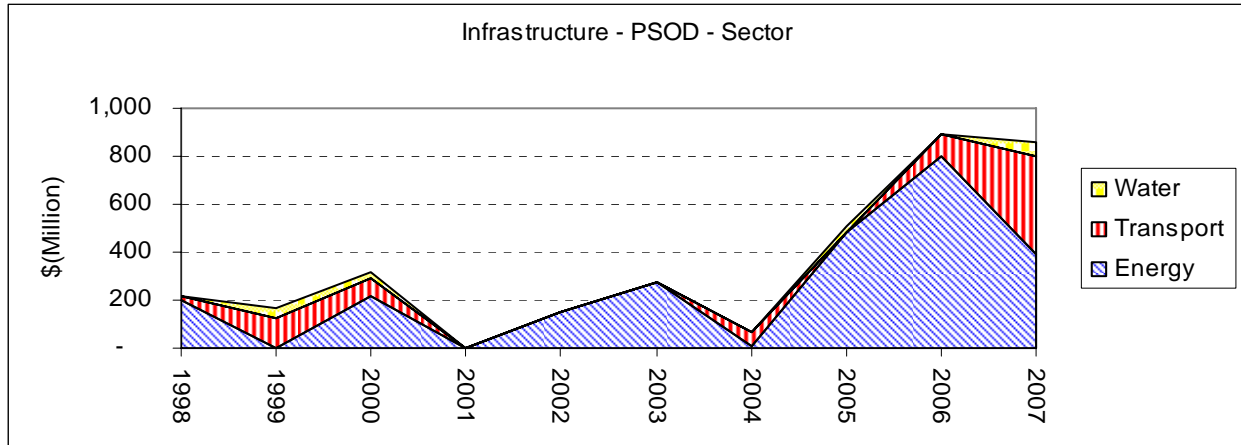
ADB = Asian Development Bank; PPP = public private partnership; TA = Technical assistance  
Source: Compiled by OED staff.

21. A core activity for PSOD is catalyzing private financing of infrastructure through direct participation in PPPs. PSOD has sought to leverage the RD's country and sector specific

<sup>4</sup> DMCs include Bangladesh, Cambodia, India, Indonesia, Lao PDR, Nepal, Pakistan, Philippines, People's Republic of China, Sri Lanka, Thailand, and Viet Nam.

expertise and enabling environment activities by taking the lead catalyzing private investment in sectors such as energy and transport. PSOD has targeted medium to large infrastructure projects, encompassing both greenfield and brownfield projects. These projects have been implemented through the full range of PPP modalities, including service contracts, management contracts, leases, concessions, and in some cases privatization.

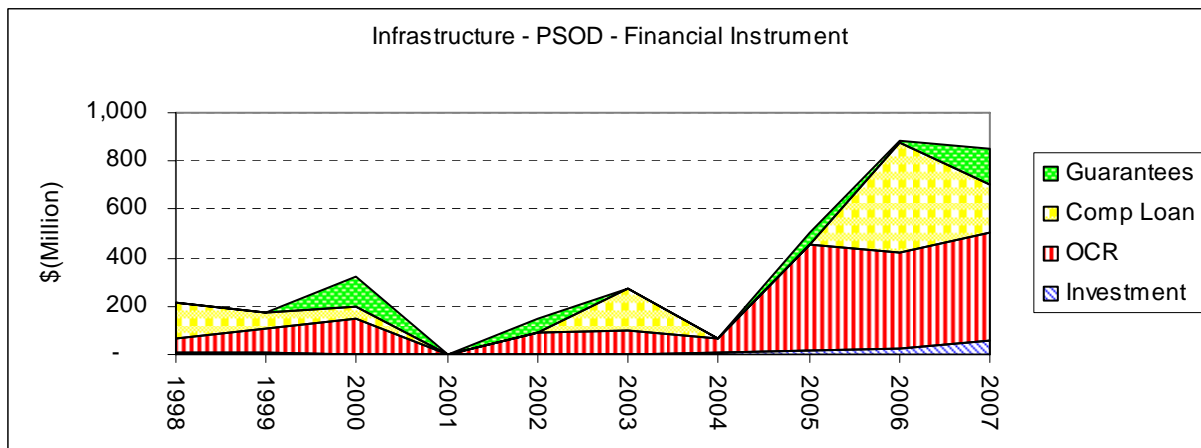
**Figure 9: ADB's Private Finance Transactions by Sector, 1998-2007**



ADB = Asian Development Bank; PSOD = Private Sector Operations Department .  
Source: ADB Approvals Database.

22. PSOD seeks to catalyze investment in privately financed infrastructure projects in DMCs by providing long term equity and debt finance that is difficult to source in the market, and mitigating project risks by providing advice on structuring following comprehensive due diligence, and use of co-financing instruments (lender of record) and credit and political risk guarantees.

**Figure 10: ADB's Private Finance Transactions by Financing Instrument, 1998-2007**



ADB = Asian Development Bank; OCR = ordinary capital resources; PSOD = Private Sector Operations Department.  
Source: ADB Approvals Database.

23. At 30 September 2007, 44% of PSOD's outstanding approved infrastructure portfolio (encompassing equity, loans and guarantees), had a total value of \$1.3 billion, and it was allocated as follows:

**Table 4: PSOD Infrastructure Investments, Total Approved Amount by Sector**

PSOD classification	Sector	Approved Amount At 30 September 2007 (\$ million)	% Total Outstanding PSOD Infrastructure Portfolio
Energy Generation	Energy	924.7	71%
Transmission and Distribution	Energy	184.3	14%
Telecommunication	Telecoms	85.1	7%
Renewable Energy	Energy	51.5	4%
Roads and Ports	Transport	19.6	2%
Water Supply and Sanitation	Water	17.6	1%
Other	Other	14.6	1%
<b>Total</b>		<b>1,297.4</b>	<b>100%</b>

PSOD = Private Sector Operations Department.

Source: Quarterly Report on Private Sector Operations, September 2007.

24. PSOD made its first PPP investment in 1988, and since that time there have been a total of 52 projects approved, of which 5 have been cancelled.<sup>5</sup> There are presently 39 projects in PSOD's portfolio, of which 27 are operational, and 12 are still at a pre-operational stage. Almost 50% of PSOD's PPP projects have been approved by ADB's Board since 2003. Of the 27 projects that have reached the operational stage, 20 have a risk rating of "satisfactory", and 7 have a rating of "good".<sup>6</sup>

#### **E. ADB Management of PPPs under its Private Sector Operations**

25. PSOD is responsible for originating and managing PPP investments under its 2 Private Sector Infrastructure Finance Divisions (together referred to as PSIF), which are separated on a geographic basis. PSOD gained limited access to TA funds from 2005 which is being used to help support project development. PSOD participates in the country programming process to a limited extent. PSOD uses a similar design and monitoring framework (DMF) to RDs when preparing Reports and Recommendations of the President (RRPs) for Board approval. In addition to strategic importance within a country, project loans are evaluated using financial and internal rate of return (FIRR) and economic internal rate of return (EIRR) criteria, and compliance with social and environmental safeguard policies and project preparation procedures.

<sup>5</sup> A complete list of PSOD's PPP projects in the selected countries over the period 1983-2006 is presented in Appendix 1.

<sup>6</sup> ADB. 2007. *Quarterly Report on Private Sector Operations*. Manila

26. PSIF receives progress reports from project sponsors during construction (typically quarterly), and during operations it receives quarterly or semi annual financial (and in some cases operational) reports, and annual audited financial reports from all PPP sponsors. PSIF receives quarterly and semi-annual reports on compliance with ADB's environmental, and if required, social safeguards. Private Sector Information Management (PSIM) Notes is the primary management information system used to record data on infrastructure projects, and the main report prepared for the Board and Management is the Quarterly Report on Private Sector Operations. PSIF prepares annual reports on all of its PPP projects which are used by PSOD and Risk Management Unit (RMU) for administrative purposes. PSIF also prepares an Extended Annual Review Report (XARR)<sup>7</sup> for each project once it is substantially complete, has a minimum of 18 months of operating revenues, and ADB has received at least one set of audited annual financial statements covering at least 12 months of operating revenues

27. PSOD has produced self assessment reports on 12 PPP projects with results ranging from "Partly Successful" to "Excellent". To date there has only been 5 independent OED Project Performance Evaluation Reports (PPERs) prepared on PPPs over the period 1996 – 2006, and in most cases they have received a rating of "satisfactory" (see Appendix 2). To help address this issue, an additional 3 PPERs on PPP projects implemented by PSOD will be prepared to support the proposed SES of ADB's PPP operations.

### **G. Study Objectives, and Scope**

28. The objective of the SES on PPPs would be to evaluate the performance of ADB's PPP related operations and identify issues and lessons to help identify ways in which ADB's contribution to support Private Sector Development through the use of PPP instruments can be enhanced. In line with this objective the SES will focus on the power, transport and water sectors, and seek to address the following main questions:

- (i) What are the dominant trends in the use of PPPs in DMCs?
- (ii) What are the conceptual underpinnings for the use of PPP instruments?
- (iii) How do PPPs influence private investment?
- (iv) What are the necessary conditions for PPPs?
- (v) What has been ADB's strategic approach to support PPPs?
- (vi) To what extent has ADB helped catalyze private investment through the use of PPPs, differentiating between strengthening the enabling environment, and pursuing direct financial participations?
- (vii) What has been the performance of PPP operations?
- (viii) What are the key issues impacting on the quality of ADB's PPP operations?
- (ix) What are the implications for ADB's current and future PPP activities?

29. It is proposed the SES for PPPs be based on: (i) a contextual analysis of industry trends and a literature review; (ii) an analysis of ADB's country strategies and assistance programs (iii) a review of PSOD's PPP portfolio and associated operations; (iv) the synthesized results of 2 intermediate evaluation reports that consist of: (a) an evaluation of the RD operations supporting the creation of the enabling environment for PPPs<sup>8</sup> (the "Public Sector SES"); and (b) an evaluation of PSOD's PPP operations<sup>9</sup> (the Private Sector SES); and (v) a synthesis of

<sup>7</sup> Prior to 2007, XARRs were known as Project Completion Reports (PCRs)

<sup>8</sup> Using OED's Guideline for Preparing Performance Evaluation Reports for Public Sector Operations (the PSO Guidelines)

<sup>9</sup> Using OED's Guidelines for Preparing Performance Evaluation Reports on Nonsovereign Operations (the NSO Guidelines)

the issues, lessons and recommendations drawn from the 2 intermediate evaluation reports (the “Final SES”). The proposed report structures for the Final SES and 2 supporting evaluations for public and private sector operations are presented in Appendix 3.

30. Various OED Sector Assistance Program Evaluations (SAPes)<sup>10</sup>, SESs<sup>11</sup>, PPERs, and Technical Assistance Performance Evaluations will be used in assessing ADB’s support for creating enabling conditions for PPP. However, so far, only 8 of the 25 PPP-related loan projects and 5 of the 59 TA projects have been covered by independent OED reviews. As available evaluations have assessed the development effectiveness of the overall projects, rather than the success of the PPP component, existing success ratings are not presented or analyzed at this stage. Self-evaluations are available for another 2 loans, which reflects the fact that many loan projects are still ongoing. Due to the lack of existing evaluative evidence and the fact that most PPP-related projects, particularly program loans are still ongoing, the SES will have to undertake a review of a larger number of loan and TA projects to be able to derive meaningful conclusions for future operations. It is proposed to focus the review on ADB operations in the following 6 DMCs, which account for 91 percent of the loan projects and 70 percent of the TA projects administered by ADB’s public sector operations involving PPP support: India, Indonesia, Pakistan, People’s Republic of China (PRC), Philippines, and Sri Lanka.

31. The Private Sector SES will be supported by information derived from 3 PPERs that will be prepared for the following representative PPP projects:

**Table 5: Proposed Project Performance Evaluation Reports**

Country	Sector	Project
India	Power	Tala Delhi Transmission
PRC	Water	Chengdu Water
Sri Lanka	Transport (Port)	Colombo Port Development

PRC = People’s Republic of China.

Source: Operations Evaluation Department.

32. These PPP projects were selected as they encompass: the 2 major DMCs (India and the PRC); and the 3 PPP sectors of interest, (power, transport and water). Financial performance of these projects was not used a selection criteria. PPERs (together referred to as the PPERs) will be prepared for each of the case study PPPs using the Evaluation Guidelines for Non-Sovereign Operations (NSO) and form supplementary appendices to the SES on PPPs as well as separate PPERs. The proposed PPER report structure is presented in Appendix 4. Profiles of the 3 PPER projects and the critical issues that will need to be considered during their evaluation are presented in Appendices 5, 6 and 7.

<sup>10</sup> SAPes relevant to this SES are likely to include reviews of the energy and transport sectors in India, and the power sectors in the Philippines and Bangladesh

<sup>11</sup> Relevant SES’ may include ADB’s Support to Public Resource Management Program in India (2007), Policy Based Lending (2007), Energy Policy Review (2000), Privatization of Public Sector Enterprises, Lessons for DMCs, Selected Economic and Sector Work, Sustainability of Policy Reforms through Advisory Technical Assistance, Operation and Maintenance of Road Facilities and their Impact on Project Sustainability, Port Projects,

## **F. Evaluation Approach and Methodology**

### **1. Context of ADB's PPP Support**

33. Initially, the SES will provide a broad based review of trends in PPP investment in Asia and the rest of the World. The analysis will seek to determine the size of the overall PPP market in Asia, and how rapidly it was growing within major countries in the region. The analysis will seek to differentiate PPP flows by country, sector, purpose, form of funding vehicle, and if feasible, source of funding (foreign or local). Investors in PPPs in the region will be profiled. An analysis will be provided on the performance of PPPs in the region, and how risks and rewards compare to the rest of the World

34. The PPP industry analysis will be supplemented with an exploratory review of the literature to determine the conceptual justifications for providing support to PPPs. The literature review will seek to differentiate between forms of assistance that improve the enabling environment, and directly catalyze investment. Key factors impacting on performance and the availability of PPPs will be analyzed, including contractual uncertainty, level of competition, PPP procurement capacity, tariff uncertainty, availability of critical inputs such as land, and ability to access foreign and domestic capital. A discussion will be provided on the pros and cons of the different forms of PPP assistance.

### **2. ADB's Country Partnership Strategies (CPSs) and Assistance Programs**

35. A desk based review will be conducted of the CPSs (formerly CSPs) and where available, Private Sector Assessments, in the 13 countries where PPPs have been put in place.<sup>12</sup> This desk review will help determine how RD's operations on enabling environment reforms complemented PSOD's PPP support/operations. The desk review will identify trends in the RD's portfolio of technical and financial assistance targeted at PPPs and it will be supplemented by information gathered from interviews with ADB staff to understand the country programming context and private sector development project prioritization process.

36. PSIF's portfolio and operations will be analysed. This analysis will consist of a broad desk based overview of trends in the PSIF's PPP-related portfolio, distinguishing between country, sector, and form of assistance provided. The PSIF portfolio of PPP projects will be analyzed in terms of forms of technical and financial assistance, financial structure, financial returns and risk rating. PSIF's criteria for selecting countries, sectors and projects will be considered. Selected projects will be subject to a desk review to gain an understanding of PPP structures used in DMCs and how PSIF adds value to these transactions. Discussions will be held with RDs and support departments with ADB such as Office of Co-financing Operations, Regional and Sustainable Development Department (RSDD), and the Integrity Unit to determine the nature of the organizational relationships, processing and administration procedures. The PSIF operational review will entail discussions with departments such as Treasury Department to understand funding and cost of capital requirements, Controllers Department to elaborate on reporting, and RMU to understand credit assessment and portfolio management practices. Where possible these arrangements would be benchmarked against international best practice and conclusions drawn on the strengths and weaknesses of the PPP related activities. The suitability of the PSIF organization structure and adequacy of resources and reporting and risk management systems for PPPs will be assessed and potential issues identified. The review will

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<sup>12</sup> Afghanistan, Bangladesh, Cambodia, India, Indonesia, Lao PDR, Nepal, Pakistan, Philippines, PRC, Sri Lanka, Thailand, Viet Nam.

encompass an analysis of how ADB's financial, environmental, social, and reputation risks arising from PPPs are managed.

### **3. Public Sector Operations - PPP Evaluation**

37. In line with the OED guidelines for public sector operations, a combination of top-down criteria (strategic positioning, ADB performance, and contribution to development results, and bottom-up criteria (relevance, effectiveness and sustainability of projects) will be used to evaluate the RD's PPP enabling environment initiatives:

#### **a. Strategic Positioning**

38. The strategic positioning of ADB's enabling environment promoting activities will be considered focusing on issues such as: (i) alignment with Government strategies and infrastructure development needs/priorities; (ii) consideration of country conditions/binding development constraints; (iii) sequencing with other sector, legal, financial sector and public resource management reform measures; and (iv) coordination with activities of other development partners and the private sector.

#### **b. ADB's Performance Assessment**

39. The public sector evaluation will assess ADB's performance in improving the overall business enabling environment for private sector participation in infrastructure sectors. Sector-specific issues considered will include: sector unbundling, tariff reforms, establishment of independent regulators, and creating creditworthy offtakers such as municipal finance institutions. The analysis of physical infrastructure reforms will be complemented with an evaluation of reforms to improve availability of long term local currency bank finance, capital market development, foreign investment, and legal reforms such access to international arbitration and dispute resolution.

40. The evaluation will consider support provided by the RDs for the development of the policy and regulatory framework for PPPs. This analysis will encompass ADB's policy dialogue and assistance related to: (i) concession/BOT laws; (ii) investor protection; (iii) Government incentives for private sector including viability gap funding between the public and private sector; (iv) PPP modalities and model contracts; (v) defining the PPP procurement process, and related issues such as treatment of unsolicited bids; (vi) addressing governance issues such as designing mechanisms to ensure probity standards are maintained during procurement; and (vii) putting in place social and environmental safeguards.

41. The evaluation will review ADB support provided for the development of PPP procurement capacity for managing PPP at national and local government levels: (i) by creating national and municipal procurement funds; (ii) establishing PPP Units; (iii) identifying projects; (iv) conducting project appraisal and feasibility assessments; (iv) preparing draft contracts; (v) facilitating the bidding process and negotiation of contracts; (vi) ensuring compliance with probity standards; and (vii) putting in place systems to manage and provide oversight of the contracts, including management of social and environmental impacts.

42. The evaluation will also consider the nature of the support provided by ADB for the development of PPP components in infrastructure investment projects financed under ADB's public sector window. The analysis will differentiate between: (i) ADB's advisory services for

project development; (ii) ADB's funding of Government contributions to PPP projects; and (iv) support for financial institutions funding infrastructure projects under PPP modalities.

43. In addition to generic approaches to PPP support, the evaluation will also assess sector-specific responses to increasing the involvement of private sector entities in infrastructure financing and management.

44. The evaluation will provide an assessment of the level, quality, and management of staff and consultant resources; operational synergies; and the quality of knowledge products and services related to PPP. Value addition by ADB in terms of policy dialogue and advisory services will also be assessed.

### **c. Development Results/Impact**

45. The performance assessment will be complimented with an assessment of the broader and long term development results/impacts of the RD's assistance programs on the enabling environment for PPPs. Specific issues that will be considered include: (i) additional infrastructure investment that occurred as a result of PPP capacity development, policy and institutional reforms; (ii) level of innovation in project design and implementation; and (iii) extent to which there was improved access to local and foreign capital, and introduction of private sector management skills.

### **d. Performance of Public Sector PPP Operations**

46. The performance of PPP components of ADB's lending and nonlending operations will be evaluated using the criteria of relevance, effectiveness, and sustainability. The evaluation will draw on previous evaluation studies and where necessary supplement it with new information generated by desk and field work. It will primarily focus on (i) Creation of an Overall Enabling Environment for Private Sector Participation in Infrastructure Development; (ii) Support for the Development of a Policy and Regulatory Framework for PPP; (iii) Support for the Development of PPP Procurement Capacity; and (iv) Support for the Development of PPP Projects

### **e. Issues, Lessons and Recommendations**

47. The Public Sector SES would then identify the critical issues that had arisen identifying sector reform programs and coordinating activities to support: (i) physical infrastructure development by improving private sector ability to provide infrastructure through PPPs in a transparent competitive environment; and (ii) private sector to access capital from foreign and local sources to support this process. Lessons that would enhance the development of future PPP enabling environment programs would be identified. Recommendations would then be presented for management consideration on actions that could be taken by ADB to support this process.

## **4. Private Sector Operations - PPP Evaluation**

### **a. Overview**

48. The evaluation of ADB's PPP operations conducted through its private sector window will draw upon the findings of the review of PSIF's portfolio and operations and the 3 PPERs that will be prepared as part of the SES. In line with the NSO Guidelines, the rationale for PPP investments presented in RRP's will be identified. The following criteria will then be used to

evaluate PSOD's PPP operations (both for PSIF's operations as a whole, and for the 3 PPER projects):

- (i) Development outcomes and impacts;
- (ii) ADB's investment profitability;
- (iii) ADB's operational effectiveness; and
- (iv) ADB's additionality.

**b. Development Outcomes and Impacts**

49. The development outcome evaluation criterion is made up of five sub-criteria:

- (i) Private sector development and the impact on economic growth, differentiating between beyond company impacts such as improvements to the enabling environment and direct company impacts such as demonstration effects;
- (ii) Business success, focusing on profitability of PPP concessionaires;
- (iii) Economic sustainability, focusing on issues such as the extent projects are dependent upon protection to remain profitable;
- (iv) Contribution to living standards such as through payment of wages and taxes, job creation, poverty impacts, applying acceptable safety standards in the work place, and by complying with ADB resettlement and indigenous people's policies; and
- (v) Environmental performance, considering factors such as contribution to environmental protection, ensuring there is compliance with policies and standards of ADB and local governments.

50. The characteristics of the PPP projects will be assessed to determine in which countries, sectors and stages of firm development the PPPs financings occurred and identify any linkages with ADB's enabling environment programs for PPPs. ADB public sector interventions pursued by RDs will be considered to determine the extent they helped improve the legal and regulatory environment, and/or strengthened capacity of the Government to implement PPP related reforms. An assessment will be made of the wider impacts of reform on the PPPs generally, as well as in regard to ADB's PPP investments. Issues considered will include, the extent to which value for money (VFM - whether or not ADB has obtained the maximum benefit) was achieved, the long-term fiscal impact of projects involving concessions, the impact on private sector participation within the sector, and overall contribution to private sector development.

51. ADB's PPP projects will then be analyzed in terms of their regulatory and contractual structure, investment strategies, ownership and management structures, operational resources, financial structures, and systems for monitoring project risks. The views of the PPP sponsors and managers in the case study PPER projects will be sought on the following types of issues: (i) what characteristics of the enabling environment were important for the PPP projects? (ii) what externalities such as competition effects did the projects generate? (iii) were the projects profitable and create positive demonstration effects?; (iv) what were the social and environmental impacts? and (v) were attendant risks in areas such as resettlement adequately addressed?

52. This information will be used to help determine the regions, sectors, and types of PPPs that had the most impact, the critical development constraints and risks, the types of assistance provided by ADB, and the extent they were successful at catalyzing private investment in PPPs.

**c. ADB's Investment Profitability**

53. Financial returns to ADB for PPPs will be identified and an assessment made on profitability to ADB. This analysis will be coupled with a review of the risk ratings assigned to the PPP projects and identification of common issues impacting on risk ratings. Variations of returns across countries and sector will be considered. PSOD's overall portfolio management strategy for PPPs will be reviewed from a profitability and risk management perspective.

**d. ADB's Operational Effectiveness**

54. PSOD's operational effectiveness for managing PPP projects will then be evaluated, based on the following sub criteria:

- (i) Screening, appraisal and structuring;
- (ii) Monitoring and supervision; and
- (iii) Role and contribution.

55. The SES will consider the adequacy of ADB's screening requirements in the light of the following types of issues: (i) did ADB's planning processes help identify projects that supported the development of an enabling environment for specific PPP transactions and support investor and financier needs? (ii) were the PPP interventions designed and implemented in accordance with ADB's country and sector assistance strategies? (iii) did the enabling environment actions have any relevance for PPPs? (iv) was PSOD responsive to PPP concessionaires' needs and conduct due diligence of a professional standard? (v) did RD's help PSOD resolve implementation problems? (vi) did the PPP's institutional, regulatory and contractual structures reflect best practice? (vii) how was ADB's cost of financing defined and was it determined in accordance with market best practice? (viii) how were ADB's environmental and social safeguard policies applied to the PPP sub-projects? (ix) did ADB's safeguard policies add unnecessarily to transaction costs or were they seen as a source of value by the sponsors? (x) how were potential risks of fraud and corruption addressed?; (xi) did ADB participation facilitate interactions with the public sector PPP procurement agency and regulatory authorities? and (xii) was PSOD's transaction experience on PPPs fed back into ADB's policy dialogue and the country planning process?

56. When considering PSIF's systems and procedures for monitoring and supervising projects the following issues will be considered: (i) how does PSOD monitor and supervise contracts and manage financial, social, environmental and reputation risks on an ongoing basis? (ii) what forms of corrective action does it take when there are problems and are they appropriate?; (iii) does the PSIF organization structure and allocation of resources provide necessary direction and capacity to achieve acceptable levels of development and financial performance? (iv) does PSIF staff have the necessary skills and experience and are incentives appropriate for optimizing performance? (v) to what extent has PSIF staff become involved in PPP management and how did this activity add value? (vi) are the necessary systems in place to manage the drawdown and repayment of ADB funds in a timely and cost effective fashion? (vii); and (viii) are PSOD's management information systems and reporting arrangements adequate to manage resources and meet stakeholder requirements including clients, Management, and the Board?

57. In regard to role and contribution the critical issue that will be considered is the extent ADB was able to pro-actively help develop and implement the PPP projects.

#### e. ADB's Additionality

58. Additionality of PPP projects will be evaluated along two dimensions consisting of: (i) ADB's contribution to improving design of the structure and functioning of the PPP projects; and (ii) the extent ADB helped support the realization of the projects, mobilized private finance either directly or indirectly, and created value for its clients. These factors will be considered at both a portfolio level and by reference to the assessments of the 3 PPER projects.

#### 4. Issues, Lessons and Recommendations

59. Issues identified during the evaluation will be used as the basis for identifying potential areas of improvement in PPP projects in areas such as: (i) introducing better ways of prioritizing projects; (ii) enhancing coordination mechanisms with RDs through provision of critical enabling environment public goods and PSOD follow through with demonstration of PPP projects; (iii) developing stronger linkages and partnerships with other MDBs; (iv) formulating better project structuring and risk screening criteria; (v) enhancing marketing and project administration capacity within PSOD and other relevant departments of ADB; (vi) strengthening efficiency and effectiveness of approval processes; (vii) improving resource allocation, or strengthening staff incentives to improve project origination and administration; and (viii) enhancing reporting systems and procedures to more effectively and efficiently measure performance, manage critical risks, and achieve project objectives. The implications for ADB of potential reforms and how these changes might be managed will be considered.

#### G. Study Implementation

60. The evaluation program will be divided into three phases.

61. In Phase 1 the Operations Evaluation Mission (OEM) will prepare the following analyses:

- (i) Review of trends in PPP investments globally, and in DMCs, supported by an analysis of primary drivers in the use of these instruments;
- (ii) Literature review of the rationale for using PPPs in DMCs, requirements for creating an enabling environment, principles for designing PPPs, bid evaluation and negotiating procedures, and requirements for monitoring and enforcing contracts;
- (iii) Review ADB's country strategies and assistance programs to develop the enabling environment for PPPs, drawing upon details from interviews with RD staff, and analysis of CSPs, CAPEs, SAPEs and other documents as appropriate;
- (iv) Review annual reports and supporting documents such as the 14 XARRs/PCRs prepared by PSOD on PPP projects and identify best practices and common issues;
- (v) Review the PSIF portfolio, including an assessment of the rationale for the portfolio structure, trends in risk ratings and safeguard compliance reports where appropriate; and
- (vi) Review PSIF operations to determine the adequacy of its organization structure and business processes to originate and manage PPPs. Interviews will be undertaken with various ADB staff in both public and private sector operations to clarify PPP assistance programs and operations.

62. The findings of these studies will be compiled in an interim report.

63. In Phase 2, the OEM will conduct field work, as necessary, to assess effectiveness of public sector support for creating an enabling environment for PPP and prepare PPERs for the 3 selected PPPs. The PPERs will be prepared following consultations with key stakeholders including private sponsors, co-financiers, and public sector policy, regulatory and procurement agencies. The PPERs will be prepared consecutively, with 4 weeks being allocated for each draft PPER.

64. In Phase 3, the OEM will draw up from the findings of Phases 1 and 2 and perform the following evaluations:

- (i) Special Evaluation Study Report on Creating an Enabling Environment for Public Private Partnerships for Infrastructure Development (Public Sector SES); and
- (ii) Special Evaluation Study Report on Catalyzing Investments in Public Private Partnerships for Infrastructure Development (Private Sector SES).

65. In Phase 4, the findings of Phase 3 will be synthesized to produce a comprehensive SES on PPPs (the Final SES Report) that refers to the findings of the PPP market analysis, literature review, ADB's policies and programs to develop the enabling environment, the PSIF portfolio and operational review, the findings of the 3 PPERs, and the 2 intermediate SES' on public and private sector operations. The results of the evaluation will be used as a basis for drawing conclusions on the performance of PPP projects, identification of critical PPP constraints, and consideration of areas where further improvements could potentially be introduced to strengthen PPP operations. These results will be presented to selected stakeholders for comment and validation prior to circulation of the final draft report to OED management.

## **H. Schedule and Resource Requirements**

66. It is proposed that the study be prepared between March 2008 and November 2008. In March – April the Phase 1 desk studies and staff interviews will be conducted at ADB. Phase 2 would be initiated in May 2008 with the preparation of the PPER for PRC: Chengdu Water and it would be used as a pilot to test the PPER methodology. PPERs for India: Tala Delhi Transmission and Sri Lanka: Colombo Port Development would be conducted in May and June 2008. Phase 3 would be initiated in parallel with Phase II in May 2008, and draft final reports will be prepared on public sector and private sector PPP operations. The 2 intermediate draft SES' would be circulated within OED in early August for comment. In Phase IV a final SES evaluation will be circulated in early September 2008 synthesizing the findings of the Phase 1, 2, and 3 reports, with a view to finalizing the document by November 2008. The proposed work plan set out below provides a tentative schedule for the SES, subject to Government clearance of missions and availability of suitable consultants. A detailed work plan is presented in Appendix 8.

### **Preparation**

Submission and Approval of Position Paper	II March – III March 2008
Recruit International Consultants	IV March – II April 2008

### **Phase 1**

Desk studies at ADB	II March – IV April 2008
PSIF Portfolio and Operations Review at ADB	I April – II April 2008
PPP Sponsor Review/ PPP Best Practice	III April – IV April 2008
Interim Report	IV April 2008

**Phase 2**

PPER for Chengdu Water	I May – III May 2008
PPER for Tala Delhi Transmission	III May– I June 2008
PPER for Colombo Port Development	I June – IV June 2008
Field Work for Public Sector SES	I May – I July 2008

**Phase 3**

Prepare Draft Intermediate SES Reports:	
Public Sector SES	I May – IV July 2008
Private Sector SES	I May – II July 2008
Drafts for OED Internal Review	III July- IV July 2008
Drafts for Interdepartmental Review	I August – II August 2008

**Phase 4**

Draft Final SES Report	I August – IV August 2008
Draft for OED Internal Review	I September – II September 2008
Draft for Interdepartmental Review	III September – IV September 2008
Draft to Editor	I October - II October 2008
Submission to Director General, OED	I November 2008
Approval by Director General, OED	III November 2008

67. There will be two teams:

**Team 1: Public Sector Review:**

- (i) Principal Evaluation Specialist (1) - (ADB Staff) - to provide an overview of ADB's strategies and assistance programs for creating an enabling environment for PPP for the Interim Report, coordinate and supervise the work of consultants for public sector SES, and prepare PPP Public Sector SES final report, and contribute to the preparation of the Final SES Report (combined);
- (ii) Infrastructure PPP Specialist (1) – (International Consultant, 21 working days) to assess responsiveness and effectiveness of ADB's support for PPP in selected countries/subsectors and assist in the preparation of the Public Sector SES;
- (iii) Domestic PPP Specialists (3) - (Domestic Consultants, combined inputs 85 working days) to gather information and data and obtain feedback from domestic stakeholders on the effectiveness of ADB's PPP support under the public sector window;
- (iv) Local Consultant (1) (2 person-months) to assist in data collection; and
- (v) Evaluation Officer (0.25) – (ADB Staff) - to assist prepare desk studies, help collect and analyze information, arrange field visit itineraries, and follow up information.

**Team 2: Private Sector Review and Final SES**

- (i) Senior Evaluation Specialist (1) - (ADB Staff) - conduct a literature review of trends in PPPs; prepare PPP market analysis; coordinate preparation of Interim Report; coordinate/supervise the preparation of the 3 PPERs; prepare the Private Sector SES; and take lead in the preparation of the Final SES Report (combined);

- (ii) Financial and Legal PPP Specialist (2) – (International Consultant, 25 working days). Review PSIF infrastructure portfolio and operations, assist with the preparation of the Private Sector SES, obtain feedback from international project sponsors on enabling condition, and advise on best practices for PPP support;
- (iii) Water Specialist (1) – (International Consultant, 20 working days, inclusive of travel) to prepare PPER on Chengdu Water and advise on enabling conditions for PPP in the water sector ;
- (iv) Social and Environmental Specialist (1) (Domestic Consultant, 10 working days) to prepare Social and Environmental Impact assessments on Chengdu Water;
- (v) Power Specialist (1) – (International Consultant, 15 working days) to prepare PPER on Tala Delhi Transmission;
- (vi) Social and Environmental Specialist (1) (Domestic Consultant, 10 working days) to prepare Social and Environmental Impact assessments on Tala Delhi Transmission;
- (vii) Port Specialist (1) – (International Consultant, 20 working days) to prepare PPER on Colombo Port Development, and review transport-related PPP support projects in Sri Lanka;
- (viii) Evaluation Officer (0.75) – (ADB Staff) - to assist prepare desk studies, help collect and analyze information, assist with financial and economic modeling for PPERs as required, arrange field visit itineraries, and follow up information.

68. Draft terms of reference for Team 1 are presented in Appendix 9 and for Team 2 in Appendix 10.

69. Based on the estimated consultant inputs, the cost of the study is estimated to be \$180,000 and details are presented in Appendix 11. Consideration will be given to the broader dissemination (in addition to OED's Knowledge Management activities) of the SES results through some form of appropriate medium (the cost of this exercise are not presently budgeted in the estimated project cost).

70. Approval is sought for the work program set out above.