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Working Paper 24

October 2007

LITERATURE REVIEW ON PRIVATE SECTOR INFRASTRUCTURE INVESTMENT

WSP International Management Consulting
Evaluation Team

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Preface

I am pleased to introduce this literature review on Private Sector Infrastructure Investment which provides an overview and an order to the literature available on this subject and seeks to provide the evaluators with the basis of an evaluation framework from which to design the main evaluation.

DFID's Evaluation Department (EvD) commissioned an evaluation of DFID's support to Private Sector Infrastructure Investment Facilities in October 2006. The evaluation was designed to assess both how effectively DFID's support to 13 Private Sector Infrastructure Investment Facilities has contributed to achieving DFID's core poverty reduction objectives, and to establish what good practice can be replicated and what lessons can be learned in order to improve DFID's contribution in the future.

To date over £200m has been provided to these facilities through the Private Sector Development in Infrastructure Department (PSI) over 8 years. The 13 facilities to which DFID contributes are semi-autonomous, but jointly funded by multiple donors. Each is designed to augment private sector engagement in infrastructure in developing countries by increasing private investment in physical infrastructure, as well as private provision of infrastructure services. These activities in turn are believed to contribute both directly and indirectly, to DFID's poverty reduction mandate.

The evaluation is being carried out by independent consultants - WSPimc. Up to March 2007 the evaluation was managed by Miguel Laric and from March 2007 until the present by James Bianco.

We are grateful for the inputs provided to this paper by many people, including the evaluation's advisory group comprising a broad range of DFID advisers and managers, as well as CSO organisations.

Nick York
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October 2007

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- This Literature Review was drafted by a team led by Professor Richard Batley, comprising Philip Amis, John Horberry, Smita Biswas and Claes Lindahl. Valuable research assistance was provided by Rebecca Shah. Overall technical support and guidance was provided by Mike Dyson, Technical Team Leader of the Evaluation Study.
- Full responsibility for the text of this report rests with the authors. In common with all evaluation reports commissioned by DFID's Evaluation Department, the views contained in this report do not necessarily represent those of DFID or of the people consulted.

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Abbreviations

ADA	Austrian Development Agency
CAS	Country Assistance Strategy
CBO	Community Based Organisation
CLIFF	Community-Led Infrastructure Finance Facility
DAC	Development Assistance Committee of the OECD
DGIS	Directorate General for International Cooperation of the Dutch Ministry of Foreign Affairs
DevCo	Infrastructure Development Collaboration Partnership
DFID	Department for International Development
EAIF	Emerging Africa Infrastructure Fund
ESMAP	Energy Sector Management Assistance Programme
FDI	Foreign Direct Investment
GPOBA	Global Partnership for Output-Based Aid
ICA	Infrastructure Consortium for Africa
IDA	International Development Association of the World Bank
IFC	International Finance Corporation of the World Bank
IFI	International Financial Institutions
MDGs	Millennium Development Goals
NEPAD	The New Partnership for Africa's Development
OBA	Output-Based Aid
OECD	The Organisation for Economic Co-operation and Development
ODA	Overseas Development Aid
PIDG	Private Infrastructure Development Group
PPI	Private Participation in Infrastructure
PPIAF	Public Private Infrastructure Advisory Facility
PPP	Public Private Partnership
PPPUE	Public-Private Partnership for the Urban Environment

PRSP	Poverty Reduction Strategy Paper
PSI	Private Sector Infrastructure department (within DFID)
SEA	Strategic Environmental Assessment
SECO	Swiss State Secretary for Economic Affairs
SME	Small and Medium Enterprises
Sida	Swedish International Development Cooperation Agency
SSA	Sub-Saharan Africa
SUF	Slum Upgrading Facility
TAF	Technical Assistance Facility
TSP	Target Strategy Paper
UNDP	United Nations Development Programme
UN-HABITAT	United Nations Human Settlement Programme
WSP	Water and Sanitation Program
WSUP	Water and Sanitation for the Urban Poor

Executive Summary

Introduction

S1 This literature review is the first product for DFID's Evaluation of Private Sector Infrastructure Investment Facilities. The two overarching objectives of the evaluation are: i) to establish how effectively DFID's support to these facilities has contributed to achieving DFID's core poverty reduction objectives; and ii) to establish what good practice can be replicated and what lessons can be learned in order to improve DFID's contribution in the future.

S2 The purpose of the literature review is to inform the evaluation of DFID's support for international 'facilities' which are intended to promote private investment in infrastructure, so as to promote economic growth in poor countries and reduce poverty. The review was undertaken to assess and order the current literature available on private sector infrastructure investment facilities and to provide the basis for mapping the causal linkages from inputs through to outcomes so as to aid the development of an evaluation framework.

Structure of the Literature Review

S3 The literature review covers first the general rationale for the promotion of private sector investment in infrastructure, and second the literature relating to issues of gender and environment. The main review is presented in sections covering three levels of literature.

(i) The first level is the literature generated by the facilities themselves, and by DFID in direct reference to the facilities, to inform an understanding of what they perceive to be the rationale for and causal pathways of their work. It examines the facility literature in four groupings of facilities according to the main issue they address: the enabling environment, project development, financing, and local or community approaches

(ii) The second level considers the understanding of the barriers and pathways within private participation in infrastructure (PPI), as addressed in the literature of donors and development agencies (that support the facilities), including primarily DFID and the World Bank Group.

(iii) The third level explores whether the wider academic literature offers support for the facilities' rationales and causal pathways in promoting PPI. Its principal focus is the literature that discusses the relation between PPI, economic growth and poverty reduction, but it also refers to literature that refers to all investment, whether public or private.

S4 The second part of the literature review covers the relationship between infrastructure and the two cross-cutting issues - gender and environment. It examines how the literature on environment and gender have considered infrastructure and applied these considerations to policy.

Conclusion

S5 The Literature Review establishes that, while at the broad level, there is a clear association between infrastructure investment, economic growth and poverty reduction, the steps in the causality chain that lead from one to the other, and how these work specifically in the case of PPI are less obvious. Causality is difficult to track in all three levels of literature that are explored. The facilities offer little explanation of the linkage between inputs to outputs to outcomes to impacts. Goals, barriers to PPI and activities are easier to identify and there is much synergy in these areas across the levels of literature. However, it appears that empirical evidence for robust links between the steps in the causal chain is limited. There is simply a lack of evidence and this is true for the public and the private sectors as well as the partnerships between them.

PART 1: MAIN LITERATURE REVIEW ON PRIVATE SECTOR INFRASTRUCTURE INVESTMENT

1. INTRODUCTION

Purpose of the Literature Review

1.1 The ultimate purpose of this literature review is to inform an evaluation of DFID's support for international 'facilities' which are intended to promote private investment in infrastructure so as to promote economic growth and reduce poverty in poor countries. This literature review is concerned with the rationale used by the infrastructure investment facilities to inform their work and the support (or lack of it) for this rationale in the wider literature. It is one source from which the evaluators seek to establish a causal framework that can be used to test whether DFID is supporting the facilities in addressing barriers to private sector investment, through inputs that lead to outputs and outcomes in terms of an improved environment for private sector investment in infrastructure, and to the final intended impacts – poverty reduction and economic growth.

1.2 It is important to point out at the outset that the purpose of the literature review is to establish what is understood or described in the literature and to order this; it is not intended to offer judgement or to superimpose the writers' own understanding. Judgements on the reliability, timeliness and availability of the existing secondary data are given in the separate Evidence Based Assessment Paper. The literature review is not intended to be exhaustive, neither is it intended to evaluate the operational and managerial aspects of DFID's support for the private sector infrastructure investment facilities or to evaluate ultimate impacts. As far as possible it aims to inform a generic causal map and so does not expect to uncover detailed causal pathways for different facilities, sectors or regions.

1.3 The review is in two main parts. Part 1 covers the literature relating to the general rationale for the promotion of private sector investment in infrastructure. This part first presents an historical overview of experiences of and perspectives on infrastructure development in the development community in order to situate the sections that follow. The main review is then presented in sections reflecting three levels of literature.

(iv) The first level is the literature generated by the facilities themselves, and by DFID in direct reference to the facilities, to inform an understanding of what they perceive to be the rationale for and causal pathways of their work. It examines the facility literature in four groupings of facilities according to the main issue they address: the enabling environment, project development, financing, and local or community approaches

(v) The second level considers the understanding of the barriers and pathways within private participation in infrastructure (PPI), as addressed in the literature of donors and development agencies (that support the facilities), including primarily DFID and the World Bank Group.

(vi) Level 3 explores whether the wider academic literature offers support for the facilities' rationales and causal pathways in promoting PPI. Its principal focus is the literature that discusses the relation between PPI, economic growth and poverty reduction, but it also refers to literature that refers to all investment, whether public or private.

The main review follows a logic that goes from identifying the rationales of the facilities to attempting to trace these rationales to the commitments of donors and to the explanations offered by the academic literatures. Each stage of the review first presents findings in summary and then goes on to offer a fuller account.

1.4 Part 2 of the review covers the relationship between infrastructure and the two cross-cutting issues - gender and environment. It examines how the literature on environment and gender have considered infrastructure and how these considerations have been brought to bear on policy.

1.5 The review ends with a concluding section, summarising the main observations and findings drawn from the literature.

Figure 1. Definitions of Evaluation Terms

Standard DAC Evaluation Terms	
Output	The products, capital goods and services which result from a development intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Outcome	The likely or achieved short-term and medium-term effects of an intervention's output.
Impacts	Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.

2. PRIVATE PARTICIPATION IN INFRASTRUCTURE – AN HISTORICAL PERSPECTIVE

2.1 The waxing and waning of interest in infrastructure development is well documented[1]. The early emphasis was on the provision of infrastructure hardware, influenced by the post war period in which Europe had human capital but much of its physical infrastructure had been destroyed. Physical infrastructure development became a significant focus for overseas development in the years that followed. It was later realised that this approach failed to meet the needs of the poor as it neglected the 'software' of development, such as social, environmental, health, education and gender issues, so the pendulum swung in the opposite direction to realise the value of developing human capital and institutions for poverty reduction and growth (Dervis, 2005, DFID, 2001c, OECD, 2006a). Infrastructure fell into relative neglect as a direct pursuit of development agencies during the 1980s and 1990s. Donor funding for infrastructure fell dramatically during this period (Nickson and Franceys, 2003, World Bank, 2004). Instead, much of the development community came to favour private sector financing solutions for infrastructure, or, later, private partnership with the public sector (World Bank 1994).

2.2 If the initial assertion of market-led development in the 1980s was effectively to replace public provision wherever possible, by the mid-1990s a more balanced view of the role of state and market had emerged. First, it was understood that infrastructure development was crucial for economic growth and poverty reduction. The effect on poverty might operate directly (by improving living conditions and access to services) or indirectly (through economic growth and reduction of gender imbalances). Second, public provision was (and remains) the majority source of funding for infrastructure; Estache 2006 estimates that the public sector accounts for 70%, the private sector 20% and aid 10% of funding). Thirdly, however, public investment in infrastructure in developing countries was grossly insufficient to meet human need; and public provision of infrastructure was often inadequate, inefficient, and incapable of meeting the needs of the poor (e.g. DFID, 2002b). Fourth, aid could not adequately make up for the gap in financing. Fifth, private sector participation – through a combination of ownership, investment funding and management – had the potential to make up the difference.

2.3 Private investment, mostly in the form of foreign direct investment (FDI) in infrastructure, increased dramatically during the 1990s, particularly in Latin America and East Asia, although remaining far below levels of public investment in all sectors and regions and of negligible size in Sub-Saharan Africa. The international financial and macroeconomic crises of 1997 then caused a step change, with massive adjustments in the risk attitudes of capital markets and operators, plus a major decline in the fiscal ability of the public sector in developing countries to finance maintenance or capacity additions (e.g. PPIAF, 2005b). The inability of the public sector to finance infrastructure depressed private investment as base networks and grids failed. Private investment, particularly FDI, sharply declined and continued to do so in the years that followed. Whilst macro-economic conditions played a major role, the decline in investment was simultaneously motivated by significant failures in existing private investment in infrastructure projects. There were failures both from the perspectives of regulation, affordability and access for the poor (e.g. the Cochabamba case, see Nickson and Vargas, 2002; Rives Argeñal, 2004; UNDP, 2006:92) and widespread, high profile contract renegotiations and cancellations

[1] See for example, Harris 2003, Sader 2000, World Bank 2006, Estache 2006 for broadly similar perspectives

amounting to 40% or more of PPI contracts (e.g. Schur, von Klaudy, and Dellacha, 2006). These failures may be attributable in part to the failure of states to reform and to make utilities creditworthy, but also to over-optimistic assessments of financial and political risk and levels of financial returns, and to public opposition to 'privatisation' (e.g. Lindahl and Rudo, 2004), and.

2.4 The basic rationale that infrastructure is essential for development (growth and poverty reduction) remains predominant in all levels of the literature. The view that *private* investment is a crucial ingredient in infrastructure development is prominent in the donor literature but contested elsewhere, though it is also quite widely accepted in the academic literature. Recent World Bank estimates now consider that the average infrastructure share of GDP for developing countries needs to double, from 3-4% to 7%; for low income countries, the financing requirement may be even higher, at 8% to 9%. Approaches to PPI, however, have evolved. There is now an increasing recognition of opportunities for synergy between hardware and service provision in infrastructure and between private and public investment that may reduce poverty and help achieve the new global goals of the MDGs. The old dichotomies of the past (especially of private versus public provision and growth versus pro-poor targeting) are being rejected in favour of more nuanced approaches to 'what works' (Meridian Institute, 2005; UNDP, 2006). However, in the post-1997 investment climate, the barriers to attracting PPI are significant and multifarious, and it is to these that the facilities direct their energies. There is evidence that levels of PSI investment in infrastructure have started to increase again (Estache, 2005 and 2006), although this can largely be attributed to investment in the telecommunications sector (Izaguirre, 2005).

2.5 For many of the facilities these historical trends are not reflected in their internal workings as many were created in response to recent appreciation of the complexity of PPI post 2000 (e.g. GPOBA, CLIFF, EAIF, DevCo, InfraCo, GuarantCo, TAF, SUF and WSUP). As such they were designed to fill specific gaps that emerged from new understandings of the problems facilitating private investment in infrastructure. Also PPIAF (established 1999) provides upstream policy advice and technical assistance that may adjust flexibly to current doctrine within the broader and unchanging rationale that increased PPI is necessary.

2.6 New trends can, however, be detected in facility and donor literature. These will be dealt with in the sections that follow, but include (i) the increasing appeal to local, domestic and regional investors in light of the failure to attract enough foreign investment in infrastructure and of investments to reach the poor, particularly the rural and peri-urban poor (as illustrated in the changing activities of PPIAF (PPIAF, 2004a) and in the mandates of newer facilities such as SUF), and (ii) preferences for shorter-term contracts including PPPs over longer-term concessions, due to regulatory shortcomings and investment risks especially in controversial services (PPIAF, 2004a). There has also been a growing realisation of the importance of South-South investment (by China, Malaysia, India and South Africa).

3. THE FACILITIES LITERATURE

Introduction

3.1 The literature in this section comes from websites, project memoranda, logical frameworks, annual reviews, interim reviews, annual reports, project reports, project submissions, DFID PSI background reports, project header sheets and communications, independent reviews of the facilities and other documentation directly relevant to the 13 facilities under consideration, namely PPIAF, PPPUE, GPOBA, CLIFF, PIDG (which is the governance and finance umbrella for five facilities - EAIF, DevCo, InfraCo, GuarantCo and TAF), ESMAP/ SME, SUF, WSP/DPSPI (Domestic Private Sector Participation Initiative) and WSUP. Considering the significant overlap between documents, individual sources are not attributed in what follows unless it serves a specific purpose to do so. All key documents may be found under 'level one: facilities literature' in the bibliography.

3.2 Our main purpose in reviewing the facilities literature is to identify how they seek to intervene, with what ends, and with what understanding of how their intervention will lead to these ends. On this basis, we would hope to identify the 'causal pathway' on which they operate, and then to explore whether and how far this causal logic is supported by the literature. This section will present a summary of the rationale used by each facility, the barriers to PPI that they identify and how they address these barriers (their activities). This is the best proxy for a causal pathway that can be found given the restrictions of the literature (see Summary; causal pathways below). It does not aim to identify sector or region specific findings.

Summary

Rationale

3.3 All the facilities identify and present a single basic rationale to explain their work, which finds agreement within the level 2 and much of the level 3 literature. In brief it is that current infrastructure in developing countries is inadequate for the present and growing needs of the poor. This is compromising the achievement of the MDGs and frustrating economic growth. Public provision of infrastructure services has often been proven to be inefficient and inadequate. PPI can be efficient, effective and pro-poor, but only if it is properly and prudently implemented. Private (as well as public) investment has diminished significantly over the past ten years and ways to reinvigorate investment are needed. The main objectives are to improve the volume and quality of PPI, leverage domestic and international private resources, and improve the sustainability of investment. There are a number of barriers and potential pitfalls to successful PPI which the different individual facilities address.

Poverty Impact

3.4 Most facilities also support the dual impact of PPI on development goals; directly, by improving the living conditions of the poor including addressing gender imbalances and often by improved environmental management, thus contributing to achieving the MDGs, and indirectly, by stimulating economic growth which is presumed to have long term pro-poor benefits. Almost all the facilities endorse both main routes (i.e. direct and indirect) to poverty

reduction simultaneously and some (e.g. ESMAP and WSP) highlight environmental improvement as a key objective. The facility documentation generally argues for investment that gives pro-poor benefits, whilst also promoting economic growth. That said, some facilities (e.g. GPOBA, CLIFF) may prioritise the former in their work, presuming that immediate pro-poor achievements will enable economic growth, and some (DevCo, EAIF) will prioritise the latter. Independent reviews of facilities' progress and assessment of differences in sectoral and regional investment suggest that the areas of greatest concern to the poorest, e.g. water and sanitation in sub-Saharan Africa, are receiving the least private sector investment attention. They also find that the pro-poor impact of the facilities' work is difficult to assess. Therefore, three of the four independent evaluations and mid-term reviews of facilities that have been undertaken so far have not been able to demonstrate a clear link between facility activities and poverty impact. The mid-term reviews of DevCo and EAIF indicate an indirect trickle-down impact on poverty, and the strategic review of PPIAF indicates a limited causal link between PPIAF's mission of reducing poverty and actually achieving that goal.

3.5 Less articulated in the facilities literature is a third area of impact emerging from newer facilities (e.g. CLIFF) in which PPI can have a direct pro-poor, engendered impact through the *process* of infrastructure development. This can be achieved, for example, by offering employment opportunities to the poor in infrastructure projects, organising communities to have a voice (through strong women leaders), or making informal suppliers formal. The independent review of CLIFF (Cities Alliance/GHK 2006) suggests relative success with regard to its direct impact on poverty and gender mainstreaming, but unquantifiable long-term impact on growth and investment. The IFC (2006) also emphasises the fiscal benefits of PPI, which can release public funds and aid for direct pro poor activity.

Causal pathways

3.6 Much of the facilities literature identifies the basic rationale for PPI outlined above, but the step by step pathway linking their activities to poverty reduction and the achievement of the MDGs is not clearly articulated. The facilities all present their own logical frameworks but, despite identifying goals, purposes and outputs (and indicators of all of these), there is much less work identifying how the achievement of outputs leads to the achievement of purpose and eventual goal.

3.7 The facilities' annual reports often restate the rationale of why private investment in infrastructure is necessary for poverty reduction and economic growth. They then tend to jump to the middle sections of the causality chain (the broad barriers to PPI and the strategies/activities adopted to address them) without showing how their approach derives from the rationale and will lead to outputs and outcomes that will contribute to poverty reduction and economic growth. Their annual reviews focus on inputs and outputs in terms of operating practices, number of projects initiated, underway and signed off. There is little causal linkage made between the inputs and outputs of the facilities and proposed outcomes and impacts. This is partly because outputs are much easier to identify than outcomes and impacts, both of which are difficult to assess and may not be apparent in the short-term. The point here is not that effects on poverty reduction do not exist, but that the logic by which it is to be achieved and whether this occurs in practice are not spelt out.

3.8 Due to this difficulty in identifying clear causal pathways, the facilities literature is presented in the closest conceptually equivalent way, according to the rationale, articulated barriers and activities of each facility.

Flexible facilities

3.9 Indeed, a clear account of a causal pathway, in terms of specific inputs that lead to specific outputs, outcomes and impacts, may not be necessary or even appropriate for all the facilities. Most of the facilities are guided by a generic rationale about the objectives and merits of PPI and a more specific goal of addressing particular barriers to the achievement of PPI. Exactly how this is achieved may vary according to the circumstances of a country or locality, and over time as ideas about best practice progress. The key activities of a facility, such as the provision of advice may remain constant but the content of these activities (e.g. the nature of the advice given and the anticipated outcomes from that advice) may change, making a rigid causal pathway potentially more of a hindrance than a help. Learning lessons and adjusting are essential to such work at the public-private interface. The identification by the different facilities of specific barriers to investment (such as the lack of local currency guarantees, real exchange rate risks, or niche barriers) and developing individual approaches to addressing them can be seen as ways of accommodating this flexibility.

DFID and other donors' influence

3.10 Through donor meetings to review progress and establish new directions and strategic workplans, DFID and other donors exert significant influence over the claimed strategic directions of the facilities, as can be seen, for example, in the business plans of ESMAP/ESME or the reviews of PPIAF.

Thematic grouping

3.11 The facilities address different obstacles to PPI investment and these may be understood and grouped in different ways, as illustrated by Table 1. They may be categorized according to the barriers they address, their client group, working methods, sector specificity, geographical focus or size of operation. We adopt a structure closest to that advocated by the IFI/PSI, grouping the facilities according to their focus on the enabling environment (PPIAF, ESMAP, WSP), project development (DevCo, InfraCo, TAF), financing needs (EAIF, GuarantCo), and local or community level approaches (PPPUE, GPOBA, CLIFF, WSUP and SUF).

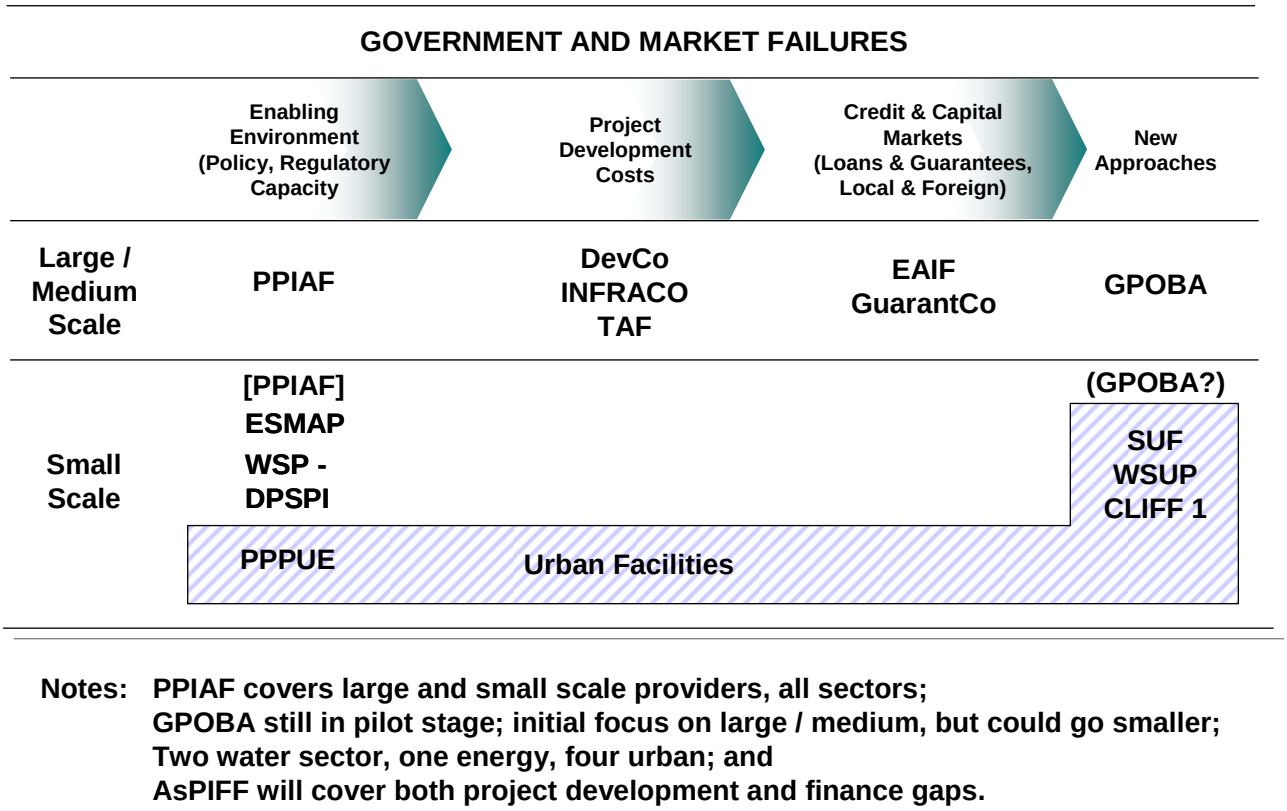
Table 1. Thematic organisation of the facilities (as suggested in different documents)

McGillivray 2004	IFI/PSI 2004	DFID 2006b	PSI portfolio overview 2006
Enabling policy and regulatory environment (PPIAF)	Laying the foundations (PPIAF, ESMAP/ ESME, WSP/DPSPI)	Enabling environment (PPIAF, TAF, ESMAP, WSP)	Government failures (PPIAF, PPPUE, GPOBA?, CLIFF)
Financing needs (EAIF, GuarantCo)	Develop projects (DevCo, InfraCo, TAF)	Project development (DevCo, InfraCo, GPOBA, SUF, WSUP)	Market failures (PIDG, i.e. EAIF, DevCo, InfraCo, GuarantCo, TAF)
Shortage of long-term debt (EAIF)	Innovative approaches (GPOBA, CLIFF, SUF, WSUP)	Capital and credit markets (CLIFF, GuarantCo, EAIF)	Small/sector-specific facilities (ESMAP/ESME, SUF, WSP/DPSPI, WSUP)

McGillivray 2004	IFI/PSI 2004	DFID 2006b	PSI portfolio overview 2006
Shortage of local currency investment (GuarantCo)	Financing (EAIF, GuarantCo)		
High up-front costs of project preparation (DevCo, InfraCo, TAF, CLIFF, SUF)			
Inability of the poor to cover costs, access and sustainability (GPOBA)			

3.12 We have attempted to illustrate the PSI portfolio diagrammatically in Figure 2 below:

Figure 2. PSI Portfolio



Notes: PPIAF covers large and small scale providers, all sectors;
GPOBA still in pilot stage; initial focus on large / medium, but could go smaller;
Two water sector, one energy, four urban; and
AsPIFF will cover both project development and finance gaps.

PIDG - Private Infrastructure Development Group

3.13 Before presenting the individual facilities literature, it is worth distinguishing PIDG. Established in 2001 PIDG is a group of collaborating donors (DFID, Sida (Sweden), Seco (Switzerland), DGIS (Netherlands), the World Bank and ADA (Austria) with a trust fund and a management/coordination organisation for a number of the facilities which fall under its remit, i.e. EAIF, InfraCo, GuarantCo, DevCo and TAF; PPIAF and GPOBA are associated. While

PPIAF broadly deals with governments and concentrates on the enabling environment, PIDG programmes mainly deal with the private sector and direct facilitation of investments, i.e. focus on project finance market failures. PIDG activities aim to support private involvement in financing, ownership, operation, rehabilitation, maintenance, or management of an infrastructure service. The PIDG facilities (TAF is an internal TA challenge fund and DevCo is operated via an IFC trust fund) are unique in the sense that they operate as commercial ventures, governed by the rules and regulations applying to publicly owned companies.

3.14 In 2005 at DFID's request, PIDG implemented a monitoring and evaluation framework for all projects in its subsidiary facilities. It covers all three ways PPI can impact on poverty reduction and stipulates indicators for all of the following objectives: Improve access for the poor, Better quality services, Increase employment, Increase service capacity, Mobilize investment in infrastructure, Increase government revenue, Contribute to national development plans, Harmonize with other PIDG facilities and/or other partners, Improve the enabling environment, and Improve government capacity. Significantly, there are no environmental or gender related indicators or objectives.

4. FACILITIES I: FOUNDATIONS – THE ENABLING ENVIRONMENT

PPIAF - Public Private Infrastructure Advisory Facility

4.1 PPIAF is a multi-donor facility to assist governments at all stages of the process of engaging the private sector from the initial development of an infrastructure strategy, through the implementation of a sound enabling environment, to the execution of transactions. As one of the best documented and well developed of the facilities it has produced extensive self-reflective literature, disseminated publications and has been subject to independent external strategic review. The techniques used by PPIAF are so varied that a precise pathway is unclear but also unnecessary as its rationale and identified barriers are clear and PPIAF continues to develop and respond to best practice.

4.2 Rationale: PPIAF's mission is to help eliminate poverty and promote sustainable development. Quality infrastructure influences productivity, costs and competitiveness and therefore impacts on investment, employment and export earnings. Better infrastructure has its greatest direct (for example through reduction of disease) and indirect (for example through access to economic opportunities) impacts on the very poorest, particularly women and children whose time is freed to invest elsewhere. Investment in infrastructure has been insufficient, especially in the poorest countries. Public sector monopolies have been fraught with failures and poor service delivery and divert public funds from other priorities. Artificially low tariffs are attractive to users but are unsustainable and subsidies are more often beneficial to the middle classes than the very poor. As a result, PPIAF sees its work as relating to the following MDG related goals: principally the elimination of income poverty and hunger, and significantly the promotion of environmental sustainability, good governance, improving the lives of slum dwellers, and increasing access to safe water and sanitation.

4.3 Barriers: PPIAF identifies the main barriers to PPI as the lack of an appropriate enabling environment (policies, laws, regulations and institutions) and the weak capacity of the public sector to support and engage with private sector involvement. Previous failures and the current confidence crisis on the part of investors illustrate that PPI must be properly designed and implemented to reap benefits. Barriers are most acute in the poorest countries where investment is riskier and more challenging. Specific barriers include:

- Government capacity
- High political risk
- National (post) conflict situations
- Full cost-recovery vs. subsidies
- Government debt
- Risk adversity of investors since 1997
- Utilities have proven less credit-worthy and efficient than expected.

4.4 Activities: PPAIF is demand led, which means it responds to requests from governments and others. It engages in a wide range of activities aimed at addressing all possible government failures that impede PPI through two primary mechanisms. The first mechanism is technical assistance to governments, including defining infrastructure strategies (informed by World Bank country framework reports), providing policy advice, drafting laws, designing and strengthening

regulatory institutions, building consensus for appropriate PPI among politicians, trade unions and the general public, capacity building, transaction structuring and best practice guidance. As such its activities address all stages of the PPI process from upstream to downstream factors. The second mechanism is identification and dissemination of good practice and lessons learnt through its publication *Gridlines* and elsewhere. This provides a feedback loop, which also enhances its ability to apply evidence based and up-to-date information in its internal working practices.

4.5 Independent Review: (Michael Jordan and Associates, 2004). This review is largely positive for PPIAF. It echoes PPIAF's own justificatory rationale for its work and the need for PPI to be properly enacted to be beneficial. Its assessment of impact reveals that levels of expenditure are good and perceptions of quality of services from observers and users are mostly good, where they can be accurately assessed. Yet, PPIAF's internal review procedures have focused more on programme outcomes than longer-term impacts of better access to better services, and measurement of outcomes is inconsistent and insufficient across countries and time. This is a common problem among the facilities. The review notes the relative neglect of the political aspects of PPI in PPIAF's previous work in favour of economic and technical concerns, and credits PPIAF with adopting more capacity building and consensus building activities partly in response to growing criticism of public-private investment in infrastructure.

4.6 Yet there are also more serious issues for concern. The 2004 review identifies continued high demand for PPIAF services as an indication of its continued relevance but notes that this may be a poor measure as it neglects that most requests come from World Bank task managers rather than country governments, indicating that 'demand' may be roused by donors rather than being indigenous. Most critically, in light of PPIAF's rationale, is the charge that there is a poor link between PPIAF's mission of eliminating poverty and actually achieving this.

4.7 Emerging issues: PPIAF has directly taken up a number of the recommendations from the independent review and prioritised them in documents from 2004 onwards. The primary factor is increasing pro-poor impact and engagement with stakeholders. Trends also include moving towards new methodologies such as output based aid (OBA); supporting post-conflict reconstruction; promoting small scale private investment, community infrastructure and shorter-term management contracts in the absence of multinational firms' interest and to reach the rural and peri-urban poor; supporting regional development and integration as necessary for scale economies and the free movements of goods and people; improving regulatory capacity; and promoting environmentally sustainable development.

ESMAP - Energy Sector Management Assistance Programme

4.8 ESMAP is a technical assistance programme managed by the World Bank that was established in 1983. It focuses on the role of energy in economic development. ESMAP channels policy advice and other technical assistance to governments and focuses on three priority areas: market-oriented energy sector reform and restructuring, access to efficient and affordable energy, and environmentally sustainable energy production. Despite its longevity, it is difficult to find evidence of ESMAP's early work and rationale before the late 1990s. Its annual reports, however, indicate that ESMAP's justifying rationale remains stable despite new challenges raised in the energy environment – it also has flexibility and responsiveness to local conditions built into its methods of operation.

4.9 Rationale: Access to energy in developing countries is very poor, which impacts on the time and health of poor people as well as on the economy. Unreliable energy means businesses require backup generators, which are unaffordable to small companies and so slow growth. Women

lose one third of their time gathering fuel so they cannot invest that time in other activities and economic opportunities. Indoor pollution contributes to high child and maternal mortality. Lack of lighting reduces the study time available to children, limiting educational attainment and job prospects. Energy impacts on all of the MDGs. The poor have been, and remain, particularly underserved. To be sustainable, energy programmes need to harness private entrepreneurship.

4.10 Evidence suggests decentralised and small-scale energy services are best delivered by small and medium size enterprises (SMEs). This area has held little interest for foreign direct investment (FDI), though more perhaps for south-south investors, and often there is political and public resistance to foreign control of utility services. Local SMEs, financial markets and communities can reduce political and foreign exchange risks, handle specific managerial challenges, such as revenue collection, and develop decentralized energy systems. SMEs are likely to be more flexible in the use of technology, use locally available resources, and to integrate better into the local social fabric. This model identifies particular barriers in SME's access to financial resources, their capacity to operate in private-public partnerships (e.g. lack of experience of SMEs to attract, establish and maintain effective partnerships) and effective regulation of small local monopolies. Hence the 2005 DFID sponsored Energy SME facility, which is the only ESMAP activity that PSI department funds.

4.11 Barriers: Foreign investors have little interest in decentralised energy services, because of high transaction costs, the political resistance to FDI in utilities, and the inability of large utilities' foreign management to operate effectively to a significant scale in rural or peri-urban areas. SMEs face general barriers of low-capacity and high-risk, including:

- Rigid legal and regulatory frameworks
- Energy market rules that eliminate small producers
- Lack of business experience of traditional entrepreneurs
- High market and project development costs and risk mitigation instruments
- Difficulty to access pre-investment financing
- Prohibitive banking regulations
- High commercial risks given the low effective demand
- Limited knowledge about best practice and scaling up
- Perceptions that decentralized off-grid solutions are inferior to national energy networks

4.12 Activities: ESMAP primarily works 'upstream' at the pre-implementation stage and 'downstream' in ex-post evaluation and dissemination of good practice. ESMAP sponsors innovative research, the development of locally appropriate solutions and forges alliances and partnerships with organizations, governments, private and community stakeholders to help provide modern energy to the poor. ESMAP acknowledges public and political resistance to PPPs for energy and therefore pays attention to the needs of the poor and creates flexible business models through continued consultation that includes the local community. Activities are of four broad types:

- Technical assistance and training to governments, public institutions and private sector banks and enterprises
- Analytical work on sector strategy and policy, at country, regional or global level

- Knowledge transfer from experience available around the globe
- Pilot projects to test innovative institutional and financing solutions

4.13 It operate across four thematic programmes:

- Energy security: Design sector policies for the poorest countries and for low income people that take into account factors of vulnerability or instability
- Renewable energy: Secure and diversify energy resource portfolios, increase the availability of energy services in un-served areas, in particular where the poorest people live, and accelerate the shift to a low carbon global economy
- Energy-poverty: Integrate results from previous projects and operational programmes to reduce energy-poverty in rural areas, synthesize substantial existing work, and expand activities in peri-urban areas
- Market efficiency and governance, including for SMEs: Accelerate the building-up of policy formulation, regulatory and implementation capacity; develop the capability of entrepreneurs, utilities and domestic financial institutions, in order to facilitate the mobilization of financing for investments and services; and target the market failures of decentralised energy services by small scale providers.

WSP - Water and Sanitation Program

4.14 WSP has been operational since 1979 as a partnership between the World Bank and UNDP; it has had a formal governance structure since 2000 and DFID PSI funding support since 2005. WSP is concerned with lack of access to water and sanitation for the poor and focuses on poverty-targeted, community-based, small-scale solutions for rural areas, small towns and the urban poor. Within WSP, DFID specifically funds the Domestic Private Sector Participation Initiative (DPSPI) which aims to support client countries and multi-lateral initiatives to promote the development of, and leverage greater financial and technical inputs from, the domestic private sector including SMEs.

4.15 Rationale: Unlike some other facilities, WSP does not identify its rationale directly with private investment in infrastructure. Rather, it is concerned with the general problem of lack of access to water and sanitation services for the poor. Its long history evidences the changes in approaches to this basic problem over time from focusing on hardware provision (e.g. hand pumps and latrines) in the 1980s, to a service approach in the 1990s, and to the current focus on capacity building and effective partnerships. As such it does not identify any singular causal pathway in its work: its basic purpose of providing safe water and sanitation has not changed, but its governing structure and methods have evolved along with the world's views on how those services should be provided.

4.16 Barriers: Barriers to water and sanitation provision for the poor are multiple, and WSP does not tie itself to the identification and targeting of specific barriers. However, key challenges at national and local level include overcoming political barriers, building capacity (which is especially challenging in decentralizing contexts), ensuring sustainability, and creating an environment which encourages good governance and allows for engagement over time.

4.17 Activities: Based on analysis of the bottlenecks, there are two primary areas of action required to unlock the market: developing the capacity of the supply and demand sides; and promoting an effective enabling environment for domestic private actors to operate. Specific DPSPI activities supported by DFID include:

- Support policy and regulatory reform – identifying policy constraints, supporting the development and implementation of policy and regulatory reform strategies and reforms
- Facilitate financing – researching constraints to accessing domestic market-based finance, facilitating the development of financial transactions and supporting the improvement of existing financial mechanisms
- Build institutional capacity - identifying interested providers and developing and supporting strategies for capacity building
- Develop appropriate monitoring and evaluation systems
- Enhance capacity of small and medium private providers – designing a package of supporting instruments and building business, customer service, technical and financial capacity
- Support interfacing and transitioning processes – supporting small and medium private providers, communities, and utilities/municipalities in the transition to local private sector involvement.
- Promote accountability mechanisms – working with communities to increase accountability and build capacity
- Roll-out strategies for scaling-up
- Coordinate and disseminate information.

5. FACILITIES II: PROJECT DEVELOPMENT

DevCo - Infrastructure Development Collaboration Partnership

5.1 DevCo was established by the PIDG in 2003 to identify and structure infrastructure project opportunities in developing countries so as to make them attractive to potential private sector investors and lenders, and economically acceptable to host governments and the consumers of public services. This was established as a trust fund with the World Bank/IFC, aiming to operate under market conditions. DevCo focuses on 'pioneering transactions' in difficult economic and political environments in the sectors of water, energy and transport in DAC list I and II countries.

5.2 Rationale: Much like the other facilities, DevCo is built on the consensus that poor infrastructure is a critical obstruction to development. It inhibits trade, stifles economic growth and severely limits services required to alleviate poverty. The mixed success to date of PPI indicates the critical role that is played by the proper structuring of partnerships to take into account, *inter alia*, the social, political and the regulatory environments, including corruption, ensuring affordable cost recovery levels, taking due account of sensitivities to layoffs, tariffs and public subsidies etc. Infrastructure projects are inherently complex and proper design is expensive, especially as investors have become more risk averse. Being market-based in its concerns, DevCo is more concerned with the impact of infrastructure development on growth than on poverty.

5.3 DevCo is designed to complement other PIDG initiatives by reducing the up-front costs of identifying infrastructure investment opportunities in developing countries. It fills a gap in the lack of perceived good investment opportunities and the private sector's reluctance to investigate opportunities further. DevCo's mission is to identify and structure infrastructure project opportunities in developing countries so as to make them attractive to potential private sector investors and lenders, and economically acceptable to host governments and the consumers of public services. Once the projects have been structured and developed, DevCo will support host governments in offering these opportunities to private sector investors through a competitive and transparent process.

5.4 Barriers: DevCo identifies a number of barriers contributing to investors' lack of interest. There is a lack of favourable enabling environments with political and macro-economic stability, laws and regulations, and adequate governance including the institutions to enforce laws and regulations. Local credit and capital markets lack the depth to provide the volumes of long-term debt needed for infrastructure development and lenders are not prepared to lend without considerable levels of insurance. It is extremely difficult to structure PPPs in some sectors having public good characteristics, such as water. Potential investors are unwilling to commit to the high level of risk capital needed to develop investment opportunities. Of specific concern to DevCo are the high up-front transaction costs, risk and poor information that deter the private sector from investing in working up prospective infrastructure projects in developing countries in the way they would in developed countries. As a result, there is a paucity of infrastructure projects structured in a way that is attractive to private sector involvement.

5.5 Interestingly, the most significant constraint identified by DevCo's independent mid-term review is the lack of willingness of governments to engage in PPPs (and sustained commitment to them). This reason alone justifies the payment of fees by governments to demonstrate their commitment to the project.

5.6 Activities: DevCo provides fee-based transaction advice to governments to help them to structure major infrastructure deals for implementation by the private sector in partnership with governments. Once the projects have been structured and developed, DevCo supports host governments in offering these opportunities to private sector investors through a competitive and transparent process.

5.7 Independent Review: (Rudo, 2005). This mid-term independent review was generally positive in its findings, citing DevCo's achievements as impressive and on track to meet or exceed expectations. DevCo had also added value beyond that anticipated, for example the incidental capacity building benefits that arise through the process of working through a PPI transaction. As with other reviews, it indicates the difficulties of assessing genuine impact, which will only become clear in the fullness of time. It does, however, make the important observation that any impact on poverty through DevCo's work is likely to be through the indirect trickle-down effect of incremental economic growth. The review commends the increased pro-poor considerations of DevCo's recent undertakings and urges that a pro-poor focus be maintained in the future. It also says that the DevCo facility has had a major positive impact on the International Finance Corporation's interest and activity in poorer (IDA-supported) countries. In short it has addressed the lack of institutional focus on DFID's target countries.

InfraCo

5.8 InfraCo was established in late 2004 as a publicly owned (by the PIDG) private sector company registered in the UK. InfraCo complements the work of other PIDG facilities, particularly DevCo, by acting as a principal project developer to stimulate greater private investment in African and Asian infrastructure development. The role of InfraCo is to manage the earliest and highest risks in the development of infrastructure transactions, with the aim of selling them to investors once a full development process has been completed. InfraCo is designed to catalyse new investment in water, power, transport and other related sectors.

5.9 Rationale: Much like the other facilities, InfraCo identifies infrastructure services as essential to achieving the MDGs. Current investment is grossly inadequate to meet needs which cannot be met through public financing alone. Well designed PPI presents opportunities to contribute to economic growth and pro-poor access to infrastructure. The world's poorest countries have always struggled to attract private investment in infrastructure, a challenge which has heightened since 1997 with investors becoming increasingly risk-averse. The collapse of the PPI market is not just due to the withdrawal of foreign direct investment but to the lack of opportunities, due to failed utilities, poor regulation and lack of public and aid funds for projects. The fundamental rationale for PPI remains unchanged. The transition from public provision to PPI is difficult and costly in social, economic and political terms. PIDG and other facilities provide a variety of supports to smooth the transition.

5.10 DevCo helps stimulate investors to re-enter the infrastructure market in developing countries, but as it only acts to advise governments it cannot substitute the entrepreneurial approach of the private developer who seeks out gaps in the market for the provision of infrastructure services. Few such private sector developers can be found in poorer developing countries. This is the gap InfraCo aims to address by operating as a private sector development company taking projects on its own books from the outset and then seeking other private sector partners to share the risk of developing the project at the earliest possible stage so as to minimize exposure and risk. The main focus of DevCo is the privatisation of existing public assets, whilst InfraCo focuses on the development of greenfield investment opportunities.

5.11 Barriers: InfraCo identifies general barriers to PPI, including the market failures of high transaction costs, and the government failures of weak legal and regulatory enabling environments and institutions, vested interests and political priorities, and the low quality of sponsorship for developing investment opportunities. Additional barriers include the shortage of long term debt (both in foreign exchange and local currency), insufficient cover of risk insurance, and the high up-front costs of project development. In particular, InfraCo activities aim to address the lack of well-developed investment opportunities in high-risk environments.

5.12 Activities: InfraCo undertakes all activities necessary to identify, develop and sell new infrastructure projects in frontier environments (difficult situations where successful activities are currently absent). These activities include: coordination of feasibility studies, contractors, lawyers and financial institutions; consultation with NGOs, local communities, government agencies, regulatory authorities, etc; and all other necessary functions – including structuring and negotiating all required contracts and licences – to develop a bankable transaction that will be attractive to investors. It will then take the project to the point of offering the investment or development opportunity for sale to the private sector, aiming to recoup sufficient revenue to cover costs, plus a mark up for profit where feasible. It is likely that the bulk of the project proposals developed by InfraCo for sale to the private sector will be in the power, transport and communications sectors, not water or sanitation.

TAF - Technical Assistance Facility

5.13 The TAF is a PIDG initiative established in 2003 with World Bank funding to deliver short and medium term technical assistance and capacity building through the provision of advisers, training, secondments, workshops etc. The TAF primarily supports the public sector (e.g. policy makers and regulatory bodies) but is able to support private sector activities where inputs relate to achieving objectives of the TAF and the various PIDG Investment Vehicles, i.e. it is directly designed to support the work of the other PIDG facilities, acting as a pro-development challenge fund for PIDG and PPIAF/GPOBA.

5.14 Rationale: Poor infrastructure frustrates development by inhibiting trade, economic growth and services required to alleviate poverty. Among the main constraints to private sector participation are the lack of an appropriate enabling environment (policies, laws, regulations and institutions) and the weak capacity of the public and private sectors vis-à-vis private sector involvement. TAF's objective is to enhance the ability of public and private sector clients to attract private capital to the financing of infrastructure and related services, and thus to enable developing countries to contribute to growth and poverty reduction. Its specific objectives all aim to strengthen the work of PIDG and its constituent bodies, by building capacity in the public and private sectors, mobilising additional resources directed towards the implementation of PIDG initiatives, and promoting better co-ordination in the delivery of technical assistance in PIDG projects.

5.15 Barriers: Lack of capacity in central and local government and the private sector in developing countries to attract, manage and operate public/private partnerships for the provision of infrastructure services.

5.16 Activities: TAF assists PIDG clients to evaluate, develop and/or implement risk mitigation, financial and regulatory mechanisms, standards, systems and procedures essential to raising funds in the capital markets. TAF funding is available for four main types of support:

- Infrastructure development strategies (studies intended to guide governments on options for financing of infrastructure)

- Policy, regulatory and institutional reforms
- Pioneering or pilot transactions
- Building government capacity and/or local capital markets, financial institutions, and/or quasi-public enterprises.

6. FACILITIES III: FINANCING NEEDS

EAIF - Emerging Africa Infrastructure Fund

6.1 EAIF is a PPP investment company initiated by PIDG in 2002 to provide long-term debt finance for infrastructure development in frontier environments in sub-Saharan Africa (SSA). It lends money obtained from donors and commercial banks to private sector projects in SSA. .

6.2 Rationale: As with most other facilities, infrastructure development is seen as a pre-requisite for economic growth. The private sector is seen as being best able to identify and manage risks associated with such development in many sectors and to ensure performance over time. Infrastructure in SSA has suffered the most acute under-investment. Infrastructure development requires long-term financing which is difficult to access due to high perceptions of economic and political risks which inhibit international lenders, including many of the development finance institutions (DFIs). Addressing risk and uncertainty in the long-term requires widespread reform. Yet in SSA, even where considerable reform has been undertaken, it is unlikely that negative perceptions will change in the short term. EAIF therefore aims to address the scarcity of long term debt for significant private sector-based infrastructure development through the provision of long term debt finance that can be tailored to suit the typically longer term nature of cash flow profiles arising in infrastructure. Its objective is both direct and indirect poverty impact.

6.3 Barriers: Challenges to government exist in the inappropriateness of legislative frameworks, inadequacy of regulatory frameworks, resistance from vested interests, past tariff history of sub-economic pricing, tariff inaffordability for the poor and incompatibility with poverty reduction strategies, lack of integration of donor aid, multilateral institutions and private sector finance, and the 'weak appetite' of the international investment market. These factors, combined with poorly developed local capital markets and high perception of investment risk in SSA contribute to a shortage of long-term debt necessary for infrastructure development.

6.4 Activities: EAIF creates a pooled lending fund from international donors (which account for the equity in EAIF), DFIs and commercial banks (which providing loans to EAIF) so that EAIF, as a commercially operating fund, can lend to viable, often high risk investment projects in SSA. EAIF thus provides an alternative source of long-term debt to the DFIs in SSA using a model intended to demonstrate the viability of long-term commercial lending to SSA by commercial banks. EAIF lends to private sector owned, managed and controlled entities with a focus on infrastructure in the energy, transport, telecoms and water sectors. In practice, EAIF's lending has also been for resource exploitation in SSA.

6.5 Independent Review: Lindahl and Rudo's 2004 Independent Review presents insightful analysis. It indicates EAIF's success in its work to date by providing an additional source for infrastructure lending, particularly for high risk ventures, and an alternative to the DFIs by being more market oriented and more flexible. It highlights that EAIF's twin developmental and commercial objectives only partly coincide. Its ultimate goal of poverty alleviation can only really be judged on the basis of its explicit initial rationale which was to support 'trickle down' from its economic growth focus. It attempted to address the additionality of EAIF in actual and emerging transactions, and found that, at least in some of these, EAIF seems to have been critical for the investment to take place. The authors of the review recommend a more flexible approach by the PIDG, enabling EAIF to focus on a pro-poor lending policy for more effective poverty reduction.

6.6 DFID's annual review of EAIF (2006) indicates confidence in its achievements of increasing the appetite for investment in infrastructure in SSA. It remains too early to tell the influence on international banks, but anecdotal evidence suggests that commercial banks operating in Africa are beginning to take note of EAIF's success. It takes up the concerns of the independent review in acknowledging that EAIF might not be able to maintain its strong performance because it cannot identify enough high risk projects in difficult and/or frontier environments that are suitable for private sector investment. Other risks are the potential clash between development and commercial goals and the fact that EAIF, as a commercial venture, is undercut by lending from development finance institutions.

GuarantCo – Local Currency Guarantee Facility

6.7 GuarantCo was established initially in 2003 and then revived in 2005 as a PIDG initiative. Due to various debates and delays on structure, focus and funding, it has only recently made its first transaction. GuarantCo was initially set up to address the emerging experience of market failure, in terms of limited local financing of private sector investment. By providing local currency guarantees and mobilising domestic credit and capital markets, it mitigates risks and facilitates local currency financing of infrastructure.

6.8 Rationale: Infrastructure is needed for economic growth and poverty reduction. Current investment in infrastructure is insufficient and the need cannot be met by public money alone. Private investment is necessary but is beset by many obstacles. International investors have little incentive to invest in very poor countries, and local investors cannot access long-term debt from local banks in local currencies. Lack of long-term local finance is thus a major constraint to infrastructure development. GuarantCo aims to support long-term local currency loans by risk intermediation. It aims to meet the demand for local long-term funding through the supply of funding by commercial banks, institutional investors, such as insurance companies and pension funds, as well as individual bondholders.

6.9 Barriers: Lack of access to long-term debt in local currency sometimes inhibits PPI. A barrier to wider adoption of local lending is that there is little understanding on the part of local financial institutions of how to appraise the risks of infrastructure projects, combined with an absence of risk reflective insurance products. The GuarantCo initiative is aimed at addressing both of these problems.

6.10 Activities: GuarantCo primarily provides guarantees for local finance such as bond issues or local bank lending for the funding of all the types of 'economic infrastructure' that underpin poverty reduction. Its activities cover the full range of infrastructure sectors. GuarantCo focuses on countries with stable macroeconomic environments (i.e. low to moderate inflation to make borrowing in local currencies feasible) but where local financial markets are not very well developed and need its support.

7. FACILITIES IV: LOCAL AND COMMUNITY APPROACHES

PPPUE - The Public-Private Partnership for the Urban Environment

7.1 Perhaps PPPUE is least well suited to its thematic categorisation in this literature review as its work may no longer be considered genuinely innovative. PPPUE was established in 1994 by the UNDP. The programme provides technical assistance and advisory support for the establishment of partnerships between government, business and civil society organisations at the municipal level for the delivery of basic infrastructure services to the urban poor. It is concerned with water and sanitation, solid waste management, energy services and decentralised renewable energy production, and central municipal services (for example, municipal markets, slaughterhouses, bus terminals). It is directed at more modest and local interventions than PPIAF and EAIF

7.2 Rationale: Governments of poor countries lack sufficient resources to supply services especially to the poor. Yet users are willing to pay for essential services and often the poor pay higher rates than the better off. Willingness to pay indicates the opportunity to apply partnerships to optimise service provision. Private investment now exceeds development aid in investment, but its coverage is patchy and private investment tends to neglect the most difficult environments. PPPUE's starting rationale is not infrastructure but public-private partnership (PPP). PPPUE works with the private sector to increase the flow of capital to poorer countries and to urban environmental infrastructure projects in particular.

7.3 Investors and financial institutions have focused on large-scale, full privatisation. Small and medium-sized investments present less attractive balances of risks and transaction costs for investors, yet the highest demand for support is at the small and medium-sized scale. PPPUE works to establish partnerships at the local level where some of the greatest funding gaps occur, utilising UNDP's skills at forging partnerships with communities, NGOs, micro-financing institutions and local political leaders. It also allows PPPUE programmes to play a more direct role in poverty alleviation.

7.4 Barriers: Governments engaging in PPPs at the local level are challenged to assume the roles of regulator and enabler so as to ensure that all citizens have access to basic services, while meeting the needs of private investors. They also face the challenge of managing risk to convince the private sector that their investment opportunities will offer good returns. Major gaps also exist in the capacity of both public and private actors arising from reciprocal mistrust and lack of understanding of each other's interests and needs, the absence of locally available information on, and experience with, arranging sustainable partnerships, and underlying legal, political, and institutional obstacles to forming effective public-private relationships. These gaps contribute to lengthy negotiations, increase transaction costs and make smaller projects unattractive to potential investors.

7.5 Activities: PPPUE works in small and medium-sized cities with all potential stakeholders, including investors, providers, regulators, users, and experts. Its aim is to be responsive to the demands expressed by these local constituencies. PPPUE does not seek to prescribe solutions, but rather to establish institutional and policy frameworks that will facilitate partnerships and provide a range of options from which local stakeholders can choose the most appropriate arrangement for their given situation. To this end, PPPUE aims to demonstrate the benefits of

PPPs to stakeholders, to support government in removing political, institutional and legal bottlenecks, and to broker partnerships with all relevant stakeholders.

GPOBA - Global Partnership for Output-Based Aid

7.6 GPOBA is a multi-donor trust fund established by DFID and the World Bank in 2003. It utilises a specific and innovative approach to the problems of subsidies and access for the poor through the use of Output-Based Aid (OBA). GPOBA is currently supporting pilot OBA projects and disseminates emerging lessons.

7.7 Rationale: Lack of access to adequate infrastructure may be considered a defining condition of poverty. Donor investments focusing on inputs (e.g. capacity building, providing physical infrastructure etc) have often failed to deliver improvements, especially for the very poor. Moves to cost-covering tariffs have often not served the poor and have been too quickly implemented leading to unsuccessful outcomes. Under OBA, private and non-profit organisations deliver services but public money is provided as subsidies under performance-based contracts. OBA may increase accountability, transparency, value for money and better targeting, and help reduce economic distortions associated with subsidies. The core principles of OBA are:

- Ensuring intelligent subsidy design, i.e. effectively targeting subsidies to simultaneously help the poor and avoid market distortions, and ensuring that subsidies are sustainable and do not threaten development goals
- Developing a performance regime, i.e. determining which outputs should be linked to subsidies and how, according to the circumstances
- Creating a competitive dynamic or tension, i.e. ensuring subsidies do not compromise competitiveness and in fact create it in order to achieve value for money.

7.8 Barriers: Several barriers gave rise to the phenomenon of OBA. Cost recovery is now considered a realistic goal of infrastructure services, yet the poor continue to face serious constraints on their ability to pay connection charges, to meet regular bills or simply the price of infrastructure services. Subsidies and tariffs in the past have failed to meet the needs of the poor. Intelligent subsidy design is difficult.

7.9 OBA also confronts internal challenges, including scaling-up, accessing peri-urban areas where introduction of competition is more difficult, problems of access to finance for local service providers, and the potentially over-burdensome nature of adhering to the procurement, financial management and environmental policies of a facility managed under the World Bank.

7.10 Activities: These include supporting the design, implementation and evaluation of individual OBA pilot schemes, contributing to the financing of output-based payments for services under OBA schemes and facilitating the identification and dissemination of knowledge on issues relating to the role and application of OBA.

CLIFF - Community-Led Infrastructure Finance Facility

7.11 The CLIFF facility emerged in 2000/2002 directly from the results of the DFID-funded research project - Bridging the Finance Gap in Housing and Infrastructure - conducted by Homeless International and partners. CLIFF provides loans, guarantees, bridge finance and

technical assistance for slum development projects that are implemented by the urban poor, and which have the potential to influence policy and practice that in turn can lead to a scaling-up in the provision of suitable housing and related infrastructure for the urban poor. Activities to date are largely restricted to pilot projects in India and Kenya.

7.12 Rationale: Urbanisation has been accompanied by huge urban poverty, which is recognised in the MDG target to improve the lives of slum dwellers and address urban poverty. The development of safe, secure shelter and its associated infrastructure for the urban poor requires finance, which is difficult to access in sufficient quantities at sub-sovereign levels. Local entrepreneurs and poor communities are often active in successful small-scale projects constructing infrastructure. They demonstrate skill, knowledge, and willingness to shoulder risks, but are often not recognised by formal institutions and lack access to the longer-term finance necessary for infrastructure development and scale-up. Traditional bank lenders do not foresee these communities being able to repay loans, and are not designed to cope with the informal sector, from which many of the urban poor earn their living. CLIFF was designed to fill this gap as a donor-assisted facility that would share some of the risks that the urban poor were taking, and would help to catalyse the release of local resources, from both the private and public sectors, so as to support community-led slum upgrading, resettlement and infrastructure initiatives.

7.13 Rather than starting with the rationale that PPI is necessary for infrastructure development, CLIFF has come to this understanding through its pilot work. It recognises that PPI is still contentious but that providing large scale solutions to slums does require involvement with the private sector, which can be a positive experience so long as there are strong pro-poor conditions on the engagement with the private sector. Through their pilot experiences they have developed some guiding principles, such as ensuring contractors treat slum dwellers as clients, not just passive beneficiaries, and making contractors sub-contract a third of their work to slum dwellers, thus increasing employment and skills development.

7.14 Barriers: The urban poor lack access to the long-term debt necessary to generate their own solutions to urban infrastructure development. CLIFF identifies specific barriers to financing community-led projects (which differ slightly from barriers to private investment in infrastructure *per se*). Financial institutions are unwilling or unable to invest in community driven development because:

- Local financial markets are relatively underdeveloped, and medium and long-term financing is not offered at all by banks
- Demand from the commercial sector and higher income consumers may absorb available finance
- Governments may crowd out commercial loans by borrowing extensively on the domestic market
- Banks may see the margins to be made on lending for community projects to be uncompetitive
- Banks are unfamiliar with this type of lending and its risks
- CBOs may lack the capacity to appropriately articulate requests to lenders.

7.15 Activities: focusing on community-led projects, CLIFF provides financing (in the form of technical assistance grants, capital grants, knowledge grants and management grants) for:

- Pilot and demonstration projects

- Initial scaling-up of projects (through bridging finance and technical assistance to enhance leverage)
- Risk management and mitigation to appease lenders and alleviate the risk burden on the poor
- Learning, knowledge creation and partnership capacity building.

7.16 Independent Review: Cities Alliance/GHK's 2006 independent evaluation of CLIFF's pilot project in Mumbai (CLIFF 1) was largely favourable. CLIFF had proved fairly successful at leveraging other sources of finance for its projects from banks and government subsidies. Despite contributing to short term financing, it has not yet led to the assumption of long-term financing and risk by the commercial sector. More importantly, perhaps, its 'third way' to impact on poverty through involvement of the poor, particularly poor women, had proven very successful. It provided employment and entrepreneurial opportunities to the poor, unlike top-down donor led projects. Through its activities it is also having an impact in changing institutions and private investors' perceptions of the viability of investment in community-led projects, which may have enduring impact. A second smaller pilot, CLIFF 2, is now underway in Kenya but funding remains to be secured; this is also the case for the envisaged global or apex CLIFF, although CLIFF 1 has finance until 2008.

7.17 Although gender mainstreaming is not an explicit goal of CLIFF, it is implicit in the fact that all the savings and credit related organising is led and managed by women leaders.

WSUP - Water and Sanitation for the Urban Poor

7.18 WSUP was established in 2004 to promote an innovative approach to plugging a perceived gap in the existing arsenal of facilities in the form of tri-sector partnerships (NGOs, private sector and local) to deliver water and sanitation services at the sub-state level. WSUP responds to the expressed needs of local authorities to improve and expand water and sanitation services and aims to build broad capacity from the bottom-up. WSUP is itself a coalition of NGOs, academic institutions and private sector entities.

7.19 Rationale: The scale of water and sanitation provision in urban areas is grossly inadequate to meet rising and anticipated need. The poor have been let down by public provision, and they (particularly women) currently waste valuable time and resources in accessing water and sanitation. Public provision is discredited as inefficient, corrupt and insufficient to meet the needs of the very poor. CBOs lack capacity to effect real change. Attempts to attract private sector investment have had mixed results, including difficulty in sustaining investment. A new approach is necessary to achieve the MDGs. WSUP's goal is to ensure delivery of a total water and sanitation/hygiene package that will have a measurable impact on basic health standards and support broader poverty reduction objectives. It offers an innovative way to achieve this through its constitution as an alliance of different types of organisations. Each type contributes different expertise towards the development of sustainable water services to urban and peri-urban populations. Partnerships generate skills mixes.

7.20 Barriers: WSUP does not identify specific barriers to overcome, other than the lack of investment in water and sanitation and a poor history of generating pro-poor outcomes. Rather it acknowledges that existing approaches are not working in the water sector and is therefore trying an innovative approach based on well-accepted principles of enhancing sustainability through partnership, collaboration, building local capacity and skills, pro-poor targeting etc.

7.21 Activities: WSUP aims to address poverty by improving water and sanitation and also integrating concern for hygiene education and behaviour change activities. It begins with the

expressed needs of local or regional service authorities to improve water and sanitation delivery and aims to build capacity from the bottom up. Specific activities include:

- Identifying and scoping suitable water and sanitation projects
- Carrying out feasibility studies and facilitating the establishment of service partnerships with local authorities, NGOs and CBOs
- Bringing potential funders together with WSUP and local authorities and engaging local communities and NGOs from the outset
- Coordinating WSUP and member activities
- Monitoring and evaluating at project level, implementation and initial operational phases
- Capacity building and knowledge management, and disseminating to facilitate scaling-up and replication of the overall concept
- Communication and advocacy to prioritise water, sanitation and hygiene for poverty reduction.

SUF - The Slum Upgrading Facility

7.22 SUF is a UN-HABITAT initiative started in 2003, but has been subject to major contacting delays and has only recently - in November 2006, after some two years of delay – really become operational. The central objective of SUF is to mobilise domestic capital for slum upgrading by facilitating links among local actors and by packaging the financial, technical and political elements of development projects. SUF works with a wide range of sub-state stakeholders in government, CBOs, NGOs, the private sector, lenders and utilities.

7.23 Rationale: The developing world's urban population is increasing. Slums present a grave threat to health and wellbeing that potentially compromise the MDGs (particularly public health, water and sanitation and pro-poor growth). Environmental conditions contribute to nearly one quarter of global disease. Poor health contributes to unemployment and indebtedness. Slums allow communicable diseases to flourish. Public service improvements in slums are compromised as professionals are unwilling to live or work in such conditions. Public provision, official development assistance and international private investment have all been insufficient during the 1990s. The solution rests in encouraging domestic financial investment. A 2002 UN-HABITAT study identified gaps in the preparation of bankable slum upgrading projects: lack of community, local government and domestic financial institution awareness and capacity on how to access funding and support the development of projects. SUF mobilises domestic capital for slum upgrading activities by facilitating links among local actors, and by leading and coordinating the packaging of the financial, technical and political elements of development projects. The aim is to develop bankable projects that promote affordable housing for low-income households, the upgrading of slums, and the provision of urban infrastructure in settlements in cities of the developing world.

7.24 Barriers: Failures that contributed to the current situation include poor government policies, bad governance, inappropriate legal and regulatory frameworks, dysfunctional land markets, unresponsive financial systems and a lack of political will. Current specific barriers to local 'bankable' projects are that

- Urban slum infrastructure is under-resourced, marginalised and unsystematic
- Little attention is given to assisting NGOs, CBOs or municipalities
- No other facilities address housing and land

- There is a gap in easy-to-access support for brokering or packaging existing products and building local capacity.

7.25 Activities: SUF aims to act as an 'accelerator facility' enabling urban projects at the municipal and community levels. It is not primarily a financing facility although it will provide seed finance, bridge and working capital for innovative and scaling-up activities. It directs its advisory and financing assistance at several different client groups:

- Municipalities: assist in scaling-up and packaging projects to make them more attractive to investors
- Central governments: assist in accessing finance for expansions and improvements, help to structure projects, and develop cost-recovery mechanisms to interest local private investment
- NGOs and CBOs: fund outreach and advocacy to stimulate the appetite for slum upgrading, help structure projects, and develop financial reporting systems to comply with lending institutions
- Private developers: identify and link-up with financial institutions, and provide bridge finance for initial construction
- Commercial banks: explore securitisation and pooling of mortgages to provide liquidity
- Microfinance institutions: help transform microfinance institutions into lenders for housing improvements and construction, and help develop new products designed to reach the urban poor.

PSI – DFID's Private Sector Infrastructure Department

7.26 PSI is responsible for managing DFID's involvement in the facilities. PSI's literature has directly informed the review of the facilities literature above. Much PSI literature, especially internal reviews, is more relevant to the operational aspects of DFID's input into the facilities than to the rationale for facility activities and as such is not of direct concern to this literature review. However, there are some PSI documents that complement the facilities' documentation.

7.27 Rationale: PSI's rationale is well reflected in the facilities' own rationales. PSI's performance report (DFID, 2006b) restates a comparable rationale to that of the facilities. In short, the poor require more and better infrastructure and it needs to be more effectively managed. Considering the failures of public provision, PPI may present solutions. Similar to the facilities, however, the causal relationship between private sector infrastructure and development goals is not spelt out. The performance report indicates the money invested and the number of projects, but not the pathways to impacts. The presence of improved infrastructure is taken to be evidence of improvements for the poor.

7.28 Activities: PSI's activities are about making direct financial support to the 13 facilities above as well as performing operational and management oversight roles.

7.29 Barriers: Three primary barriers are identified: the weak enabling environment including the respective capacities of the public and private sectors to work in partnership to deliver infrastructure services for the poor; the difficulties, risks and costs associated with project development; and the shortage of suitable finance caused by weaknesses in capital and credit markets. Corruption is also acknowledged as a general problem in infrastructure projects. PSI is concerned to ensure internal vigilance against corruption in the way it works and also to reduce the demand side of corruption by improving regulation.

7.30 McGillivray (2004) expounds these three categories of barriers as they relate to each of the facilities endorsed by PSI (as represented in Table 1 page 13):

- Addressing the enabling environment: PPIAF (now also ESMAP and WSP)
- Meeting financing needs including shortage of long term debt and shortage of local currency investment guarantees: PIDG group (EAIF, GuarantCo)
- High up-front costs of project preparation: DevCo, InfraCo, CLIFF, SUF and TAF
- Inability of the poor to cover the initial full cost of service and sustainability: GPOBA
- Insufficient coverage of political risk: PIDG is currently investigating the need to strengthen or extend coverage for currency devaluation, arbitrary changes by the regulator, etc

7.31 Lessons learnt: PSI learns from the lessons of reviews (there have been three mid-term reviews - of EAIF, DevCo and PIDG, an evaluation - of CLIFF and a strategic review of PPIAF) and is attempting to implement these considerations in continued work with the facilities (DFID, 2006b, 2005d):

- Better research and indicators are needed to demonstrate the contribution made by the PSI portfolio to achieving economic growth and poverty reduction, especially where economic growth is the main criterion for judging success
- Systematic and widespread stakeholder involvement is essential to project development
- Facilities should focus on outcomes rather than outputs
- The identity or branding of facilities should be given more focus as the programme expands
- More should be done to promote closer cooperation/synergy between the various facilities
- Post mandate evaluation should be systematic in all facilities.

8. THE DONOR LITERATURE

Summary

Rationale for supporting facilities

8.1 As many of the facilities are so closely situated within the rationale, strategic direction, oversight and management of their donor agencies (DFID, World Bank, Sida etc), it is difficult to separate level 1 from level 2 literature. The facilities are often justified in terms of the wider mandates and literatures of these agencies. For example, DFID's PSI literature justifies its portfolio (the facilities) in terms of DFID's overall poverty reduction objectives. In some instances, the facilities even amount to programmes run by a donor organisation and directly reflect the parent organisation's priorities and values, even as they evolve over time. At another extreme is the PIDG set – one of which is hosted by IFC while others are hosted by the World Bank, UN HABITAT, UNDP, or a partnership or alliance. Multi-donor partnerships inherently have complex governance arrangements.

8.2 Considering that the rationale for many of the facilities is couched in terms of the immediate goals of their donor bodies and the common wider development goals of the MDGs, and considering that the causal pathways advocated by the facilities are often not distinct, there is considerable synergy between the rationale and barriers identified by the level 2 and level 1 literature.

DFID

8.3 DFID policy documents largely chime with those of the facilities in goals, rationale and identified barriers to PPI. DFID's approach has evolved from recognising the direct poverty impact of infrastructure (DFID, 1997) to later including its indirect effect on poverty through support to economic growth (DFID, 2002b). Points of departure between the facilities and wider DFID literature include (i) the extent to which DFID policy documents (TSPs and white papers) emphasise community engagement and pro-poor activities more than is the case of the majority of the facilities, except for PPIAF and the smaller and more recently developed ones (such as CLIFF and SUF), (ii) DFID's call for joining up local and national infrastructure campaigns, which is not reflected in the work of the facilities, and (iii) a call for recognition of differences between sectors. However, the question of community level provision and smaller scale infrastructure have all gained momentum in recent years.

World Bank

8.4 The World Bank provides the greatest body of literature on the subject, both in internal documents of programmes and facilities and in reports written by independent experts. The latter include a number of documents reflecting on previous performance, lessons learnt and directions for the future. The World Bank literature is a particular challenge to situate as it ranges from effectively being 'facilities literature', written by facility staff for Bank publications, to Bank policy guidance, to more or less autonomous documents written by non-affiliated academics but published by the Bank.

8.5 The modern Bank literature reflects on the period of transition for the Bank in which it acknowledges the failures of past infrastructure-related policies and asserts a new path for the future. The bulk of its rationale, the barriers it identifies and the activities it advocates match well with the work of the facilities. It is committed to the view that PPI is appropriate for poverty development, yet it is open about negative public opinion and previous failures of PPI projects during the 1990s. Its approach now (reflecting the level 3 literature) is more nuanced, and it has rejected a 'one size fits all approach' for different countries and different sectors, in favour of promoting the right mix of strategies for individual circumstances. It acknowledges the continued importance of public sector involvement in infrastructure, and that public sector infrastructure services may be preferable to private participation at times, so long as this is commensurate with the longer-term objective of increasing overall service levels, both in quality and access.

8.6 The Bank supports new initiatives and emerging perspectives including addressing political risk as an impediment to PPI, encouraging small-scale infrastructure projects, and bringing local and regional investors into PPI.

Wider donor literature

8.7 The basic rationale of other donors is largely consistent with the arguments above. It is only worth noting points of departure, for example:

- Most critically, the lack of evidence about the presumed causal pathway between the activities of facilities and similar initiatives and the desired outcomes of increased PPI is highlighted in a 2004 document for Povnet, the DAC network for poverty reduction.
- A 2005 UNDP document finds that technological problems in very poor countries may be as significant a barrier to infrastructure development as government or market failures.
- The OECD highlights that in considering the dual impact of infrastructure on poverty reduction, the indirect route must engage with pro-poor economic growth, including improved environmental management and consideration of the gender dimensions of infrastructure investment, rather than just economic growth per se that depends on trickle-down pro-poor benefits.
- In synergy with this, most of the wider donor literature covered indicates the need for greater attention to pro-poor impacts (direct and indirect) and the involvement of the poor and local communities especially women in infrastructure development projects.
- Environmental risks from infrastructure projects are highlighted by UNDP and OECD as factors that can harm the local community and the long-term sustainability of investments. However, investing in improved environmental management through infrastructure provision can contribute significantly to poverty reduction.
- Corruption is raised as an impediment to transparent and accountable infrastructure projects. Whilst none of the facilities directly addresses corruption, it may be implicit in the capacity building functions of facilities like PPIAF and TAF, and in the independent verification of subsidies under GPOBA.

DFID literature

8.8 DFID's White Papers and target strategy papers have formed the rational basis for PSI's portfolio.

White papers

8.9 The 1997 White Paper (DFID, 1997) first outlines DFID's modern perspective on the challenge of basic infrastructure. The rationale is echoed by several facilities. Lack of infrastructure frustrates development. For example, in rural areas it absorbs the time of women and children in obtaining water and fuel, and prevents access to schools, health centres and economic opportunities. In urban areas, housing is often temporary and inadequate, lack of safe water and sanitation contribute to health problems, and energy sources are inadequate for small enterprises to develop and yet may be very expensive.

8.10 The white paper pledges DFID's support to the areas of integrated water supply and sanitation projects (this pledge is met in the work of WSUP), the use of alternative energy systems, rural roads for remote users, urban slum development (taken up in SUF) and the encouragement of private sector investment. It emphasises the importance of collaborative and participatory methodologies that harness the energies and meet the needs of the poor in both rural and urban environments; these are partially reflected in the newer and more innovative facilities but generally remain neglected in the portfolio work. The focus is particularly on local provision of infrastructure to directly improve the living conditions of the poor rather than on the role of infrastructure as central to pro-poor economic development.

8.11 Infrastructure is not a central element of DFID's 2000 White Paper (DFID, 2000), although it is acknowledged as an impediment to the poor enjoying the fruits of globalisation. For example, poor infrastructure discourages investment and is a barrier to the poor taking up economic opportunities. The white paper announces the forthcoming (2001) launch of the Africa Private Infrastructure Financing Facility (APIFF) which came into existence as the EAIF. In recognition of the difficulty in raising long-term debt for infrastructure development, it also cites DFID's involvement in PPIAF.

8.12 The 2006 White Paper (DFID, 2006f) shows DFID's increased awareness of the indirect poverty impact of infrastructure on economic growth. It sets out how DFID will deliver on the promises of 2005, including the promise to: "promote rapid growth by supporting private sector development and employment, investing in infrastructure and agriculture, and working for international trade rules that maximise the opportunities for the poorest countries". It highlights the importance of investment for infrastructure development and the need to strengthen partner governments' capacity to prepare, finance, implement and maintain projects. It testifies to the emerging view that regional cooperation must also be prioritised. Whilst it mentions a number of projects and organisations it will support and work with to this end (including NEPAD, ICA, ICF, Business Action for Africa), it does not mention any of the facilities at all, although it does contain a commitment to increasing DFID's support to private sector investment initiatives. See also para 11.11 for the white paper's statement on the environment.

8.13 The UK Parliament's International Development Committee Report on Private Sector Development (IDC, July 2006) comments that the DFID 2003 White Paper does not present a clear private sector development strategy, despite the impressive array of initiatives (policies and financing mechanism) presented. It concludes that "without a long-term vision and coherent strategy, backed up by the necessary resources and expertise in the Department, their (DFID's) capacity for innovation could end in a scatter-gun approach to PSD" (IDC, July 2006).

Target strategy papers (TSPs)

8.14 PPI is mentioned in a number of TSPs. For example, it is referred to in three published in 2001. *Making Government Work for Poor People* (DFID, 2001b) gives an overview of the consensus about the rationale for private investment. Many developing country governments had attempted to address market failures by involving themselves in business and by controlling private sector activities, which were often ineffective and corrupt in the absence of competition. There is now consensus that government should be neither controlling nor disengaged but rather must regulate and promote an enabling environment for private activity. This requires legal systems that enable the fair and prompt settlement of disputes, mechanisms and systems to register ownership, and simple modern regulatory systems, which all inspire investor confidence. Where there is competition, privatisation (or contracting out the management) of state resources has brought substantial benefits.

8.15 With specific reference to water, DFID (2001a) recognises the increasingly important role of the private sector in water services and the problems of attracting private funding for water provision, particularly in light of contention over payment for water. It advocates good PPPs as key to improving water services and is mindful of the need to strengthen government's role in these relationships as regulator and enabler. Similarly, with specific reference to urban poverty, DFID (2001c) highlights the importance of housing and other infrastructure for urban living conditions and economic opportunities, and cites positive experiences with PPPs in big cities.

Making Connections

8.16 DFID's most significant contribution on PPI is the 2002 paper *Making Connections: Infrastructure for Poverty Reduction* (DFID, 2002b). It specifically aims to reinvigorate donor interest in infrastructure development as key to poverty reduction, reflecting its place in the evolving historical perspective on infrastructure. It presents a rationale now familiar in the facilities for promoting PPI: current infrastructure is grossly inadequate, better infrastructure can lead to growth and improvement of living conditions for the poor. Mistakes of the past indicate that if improperly implemented, infrastructure spending does not always lead to pro-poor growth, so it must be properly managed. It presents awareness of the dual impact (direct and indirect) of infrastructure development on poverty reduction, and the need to consider infrastructure services as well as hardware. This rationale is repeated and supported in subsequent DFID documents (e.g. DFID, 2006e)

8.17 Yet, this paper is perhaps more circumspect about the role of PPI than much of the facility documentation. It indicates that governments are likely to continue to provide the bulk of infrastructure investment, so donors should support them to improve the policy arena, link up with private investors and, where private investment is inappropriate, support public sector reform.

8.18 Although it argues that DFID must learn from past mistakes in infrastructure projects, *Making Connections* does not present particular models and solutions for action, but rather suggests possible actions relevant to different circumstances, many of which are central to the working practices of the facilities. These include increasing accountability and capacity building for infrastructure development, which are directly reflected in the current aims and practices of PPIAF, TAF and WSUP, and indirectly by other facilities. Another priority, however, is joining up the local and national infrastructure agendas, a priority which is not reflected in the work of any of the facilities, which direct their attention to either national or sub-national levels.

8.19 Identified barriers to attracting PPI that positively benefits the poor are the same as those identified by the facilities and include a lack of:

- Political and stakeholder commitment to maximising pro-poor benefits, which often requires a communication and consultation strategy, and a long time frame
- Legal, policy and fiscal frameworks that 'make the poor financially attractive' and attend to the environment-poverty links
- Capacity to ensure appropriate type and design of contractual arrangements
- Adequate credit, capital and insurance markets
- Well-prepared and viable projects (DFID, 2005d).

8.20 PSI/CDC (2003) indicates that the work of PSI contributes directly to DFID's public service agreement (PSA) objectives of sustained improvement in the climate for foreign investment, local private sector development and market access for the poor, and the generation of evidence-based and innovative approaches to development. It also asserts that the work of the facilities ties in with DFID's 1997 and 2000 white papers.

Alternative views

8.21 Few DFID documents suggest any disjuncture with the rationales and barriers identified by the facilities. The internal audit review of PSI projects (2005d), however, whilst primarily concerned with internal project management operations, does highlight that the evidence base with regard to the impact of facilities on poverty alleviation and the 'additionality' of the facilities is weak. Certain PSI activities run the risk of incurring negative media coverage. A better evidence base and engagement with civil society are important to counter this, but neither have received much attention within the PSI portfolio to date.

8.22 An internal memo from a Sida seminar (DFID, 2005b) suggests that there are very different demands and financing solutions for the different infrastructure sectors, and that these differences are often not sufficiently taken into account by the various professionals working on urban issues, infrastructure services and finance.

World Bank literature

8.23 The World Bank is either a partner in or provides management functions for the majority of the facilities DFID supports, including PPIAF, GPOBA, some PIDG facilities, ESMAP and WSP. For this reason and for its role as lead global development institution, World Bank perspectives on PPI are particularly relevant. This section includes a range of literature that falls within the wide remit of the Bank; some of this has the status of commissioned papers and evaluations that might also belong to the next section on the Wider Literature.

8.24 The Bank has published a number of recent documents reflecting on previous infrastructure policies and projects, admitting to and accounting for failures, and identifying the appropriate course for future activities. In summary, they all suggest that the problems of the past do not relate to PPI *per se*, but to poorly implemented and poorly regulated PPI. The future still clearly lies with PPI and finding modern solutions to past pitfalls.

History

8.25 The World Bank infrastructure policy changed during the 1990s from a 'bricks and mortar' approach, beset by environmental problems (see para 10.4), to focusing on infrastructure service delivery, reflecting the emerging consensus that institutional capacity and an appropriate policy environment are crucial for sustainable infrastructure development. As a result of private sector investment increases in the 1990s, and internal recognition of the complexities of infrastructure development projects, overall Bank funding of infrastructure investment decreased significantly. Bank reticence along with other factors has led to infrastructure being somewhat neglected in country assistance strategies and Poverty Reduction Strategy Papers (PRSPs) (World Bank, 2003). Investor interest in PPI in developing countries is now very subdued. However, the Bank has been reinvigorating its involvement in infrastructure over the last three years.

Failures

8.26 Harris et al (2003) present a detailed history of the waxing and waning of infrastructure as a development focus and the impacts of PPI on infrastructure. The fact that there were significant failures in the 1990s approach to infrastructure is more starkly realised in this literature than in the facilities literature: investment levels fell dramatically, contracts were renegotiated and cancelled. Failures were greatest in Latin America and East Asia where investment had previously been highest. Guasch (2003) suggests 76% of transport concessions and 55% of water concessions in Latin America had to be renegotiated (although less than 2% of contracts were cancelled or renationalised). The literature attributes the failures of PPI projects to various reasons:

- Failures were mostly caused by the expectations of the private sector and the government being out of step with reality, particularly in water and electricity where government previously provided services far below cost (Harris et al, 2003).
- Overly technocratic projects or projects that failed to properly analyse the needs and capabilities of beneficiaries were proven not to work. Excessive conditionality and complexity led projects to collapse under their own weight (World Bank, 2006b).
- The biggest failures of PPI for the poor are related to prohibitively high tariffs and connection costs once subsidies are removed. These negative impacts are greatest in poor regulatory environments and when starting conditions did not allow competition to develop and drive down prices (World Bank, 2005).
- PPI has been unpopular in Latin America because there was insufficient voice given to customers and there was a perception that benefits were siphoned off to commercial and foreign interests (World Bank, 2005).
- Methods to assuage exchange rate risk in the 1990s were ineffective under conditions of macro-economic instability (Sheppard, von Klaudy, and Kumar, 2006).

Successes

8.27 Despite the identification of individual project failings, the overall experience of PPI is considered successful by the Bank, and the PPI rationale is still heavily endorsed as the most appropriate course of action for infrastructure. Harris et al (2003) indicate that in many cases private provision has been proven to expand access to services, increase efficiency, and provide better quality services, as well as having positive fiscal impacts. PPI has also enabled improved access by the poorest sections of society, and while it is claimed that such improvements are

often unaffordable to the poor, Harris et al (2003) present research evidence to suggest it has had positive impacts on indices such as child mortality. Andres et al (2006) analyse the impact of privatisation on the performance of 116 electric utilities in 10 Latin American countries. Their results suggest significant improvements in labour productivity, efficiency, and product and service quality.

Barriers

8.28 The continuing barriers to PPI identified in World Bank literature below are mostly covered by those identified in the facilities literature:

- There is high public discontent/lack of public consensus for PPI projects especially in Latin America (Harris et al, 2003; Bhatia and Gupta, 2006)
- Private suppliers are unlikely to assume both capital/borrowing risk and operating risk in developing country environments, which are the best means of achieving the efficiencies that are the potential comparative advantage of the private sector (Clark Annez, 2006)
- The Bank has found the risk of foreign exchange mismatches to be more difficult to address than expected (World Bank, 2006b)
- Achieving cost recovery and designing well-targeted subsidies are more difficult than expected (Bhatia and Gupta, 2006)
- Lack of transparency (Bhatia and Gupta, 2006)
- Low government capacity including ineffective regulation (Bhatia and Gupta, 2006)
- Problems raising finance, especially long-term debt, for infrastructure, particularly in SSA because of low sovereign credit ratings which prevent access to foreign/long-term debt, limited capacity local financial markets, the higher risks and potentially lower returns associated with long-term infrastructure investment (Sheppard et al, 2006)

Solutions

8.29 The range of potential solutions to the complexities of PPI outweighs the barriers and failures identified. Many of these have already been assumed in the activities and priorities of the facilities.

- The World Bank recognises the essential role of addressing public opinion and political economies. Bad public, civil society and media opinions of Bank infrastructure activities can threaten project success. Key solutions are: increasing transparency and accountability in project implementation to improve public support; attending to potential political problems such as reforms and job cuts with increased transparency; building consensus and trust; and improving communication and consultation with the public (e.g. Apoyo, 2002; Harris et al, 2003; World Bank, 2006b).
- Projects must therefore also be closely tailored to individual local circumstances in all respects (World Bank, 2006b; Irwin et al, 2005).
- Dual poverty impact is essential. Historically, in explaining the poverty impact of infrastructure, the Bank has swung between the indirect model of the trickle-down impact of economic growth on poverty and the direct impact on the lives of the poor model. It now recognises that both are necessary: growth with access, not growth or access. This implies concern with regulatory design, how services will be paid for, appropriate use of subsidies such as through OBA and using connection subsidies more

than consumption subsidies, and ensuring a range of affordable options for the poor (World Bank, 2006b, Harris et al, 2003; Bhatia and Gupta, 2006; IDA 2006).

- Financing constraints must be eased by encouraging banks and other financial facilities to invest and try innovative approaches (Bhatia and Gupta, 2006).
- Competition should be encouraged (Harris et al, 2003).
- Develop government capacity for quality and credible regulation, including mitigation of inappropriate regulatory interference, sector strategy, investment and expenditure prioritisation, regulation, and risk management (Harris et al, 2003; World Bank, 2006; World Bank, 2003; Sheppard et al, 2006).
- Address exchange rate risks (Harris et al, 2003).
- One deviation from the facilities literature is that the World Bank gives more recognition to the fact that the public sector will remain a key source of infrastructure investments and that the mobilisation of public financing in developing countries is important (Clark Annez, 2006, World Bank, 2006b, World Bank, 2003; Irwin et al, 2005). This should, however, be consistent with the long-term goal of stepping up PPI.
- There will be sectoral differences. For example, as telecommunications continue to elicit private investment, the Bank will support this through policy advice, institution building, IFC transactions and MIGA guarantees. In water and sanitation, where private investment is very low, the Bank will support sustainable public sector delivery and sustainable subsidies for the private sector (World Bank, 2003)
- There will also be country differences – for example, support for the poorest countries is likely to be through public sector investments as private investments have not been forthcoming, whereas in middle-income countries the Bank will support an appropriate public-private mix, and in upper-middle-income countries the Bank will continue to try to leverage private investment (World Bank, 2003).
- The World Bank's Infrastructure Action Plan (2003) will focus on responding to client country demand, strengthening country analytical work, and applying new and existing Bank instruments effectively.

Emerging perspectives

8.30 Schur et al (2006) and Kariuki et al (2006) highlight the emergence of local and regional investors and small scale providers in the absence of foreign direct investment. Improvements in local capital markets have enabled local investors to mobilise more resources, smaller firms have gained valuable experience as minority partners with developed country investors, and these firms are often better placed to understand and deal with political economy issues in PPI. Small and medium-sized enterprises may better serve the interests of the poor, particularly in rural areas. For all PPI projects reaching financial closure between 1998 and 2004, 29% of investment came from local in-country investors, and 13% from neighbouring country or regional investors, although the pattern is unequal with local and regional investors contributing more to transport and telecommunications than to water. Policy-makers must now ensure that privatisation design is not biased against domestic investors.

8.31 Based on a review of the PPI database, Clark Annez (2006) suggests that PPI has more potential to improve the efficiency of infrastructure services than to mobilise new finance.

8.32 Looking at the factors that contribute to signing PPI deals Jenson and Blanc-Brude (2006) find that the protection of property rights and the quality of bureaucracy emerge as the most important institutions that encourage PPI. Rule of law and the control of corruption are

significant, albeit at a lower level, while the quality of contract law and political stability are not robustly significant. Perhaps more importantly, they also suggest that the role of international financial institutions may be significant in the success of PPI. Recent research indicates that a political backlash against policies linked with IFI involvement may threaten projects (Henisz and Zelner 2004).

Wider donor literature

UN-HABITAT

8.33 For UN-HABITAT, the SUF is a significant factor in its new (as of 2004) sub-programme on financing human settlements and a priority of that programme to support the slum dweller target of the MDGs. SUF is part of the attempt to close the gap between financiers and the normative technical operations of UN-HABITAT, which has previously constrained progress. As such, SUF's activities are consistent with UN-HABITAT's rationale on PPI (UN-HABITAT, 2005).

UNDP

8.34 Dervis (2005) presents an historical appraisal of infrastructure development. Dervis argues that we are now reaching some sort of synthesis of the two areas of infrastructure hardware and software and an acknowledgment that they must be undertaken together. There is now agreement that private investment is needed for infrastructure development, although the private sector often cannot work alone and PPPs are needed. In synergy with the World Bank, Dervis states that the exact nature of these relationships will have to be relevant to the particular time and place: one prototype is not appropriate for all countries (Dervis, 2005).

8.35 Jahan and McCleery (2005) also support the facilities in asserting that all the MDGs depend on infrastructure. They present a review of infrastructure projects across four countries, which, amongst other things, supports the facilities in drawing attention to the role of small scale infrastructure projects. Small scale infrastructure can bring more direct impacts for poor people. Local communities can be more involved in the decision-making, implementation, maintenance and monitoring processes for small scale infrastructure, so the project can better meet local needs and can engender a sense of ownership. Small scale enterprises also consolidate human and social capital, can complement larger-scale infrastructure by filling the gaps it leaves, and may also present governance lessons for larger projects. This is an implicit endorsement of the triple impact of smaller scale projects on development goals such as that advocated by CLIFF. Going a step further, the authors highlight that small and large-scale projects can be complementary and the policy environment should enable projects to coexist and to learn from each other.

8.36 Focusing specifically on energy, Modi et al (2005) also indicate its essential role in the achievement of all the MDGs. The barriers and potential solutions they identify is comparable to those identified by the facilities and other donors across sectors: the need for regulatory frameworks to facilitate tri-sector partnerships for energy (in the mould of WSUP); the need to take the needs and interests of the poor into account when defining the obligations of service providers; using multiple mechanisms to lower costs to poor users (like GPOBA); and the need to create incentives for utilities to increase distribution. They also highlight the technological barriers to energy infrastructure and the need to consider diversifying technologies, which was also an early DFID recommendation (DFID, 1997) that has not really been taken up by the

facilities. They identify familiar challenges to scaling up energy services for the poor as the difficulties in devising tariffs and subsidies to ensure cost-recovery and ability to pay, the need for transparent and efficient regulatory and legal frameworks, and the need for effective tri-sector (public, private and community) partnerships.

Bodies not involved in support to facilities

DAC/OECD

8.37 Although not directly involved in sponsorship, the OECD has contributed significantly to the literature on infrastructure development. The complementary 2006 papers on private sector development and infrastructure (OECD, 2006a and 2006b) are illustrative. Both affirm the facilities' and PSI's founding rationales that infrastructure needs remain unmet and that private sector growth and infrastructure development are essential for poverty alleviation and achieving the MDGs, assuming adequate concern for environmental sustainability. Lack of infrastructure is a barrier to the growth that is necessary for poverty reduction. They indicate the direct and indirect impacts of infrastructure on poverty reduction. More than some of the facilities, however, the OECD perspective places greater emphasis on the understanding that economic growth *per se* is insufficient for meeting the needs of the poor, i.e. trickle-down is not enough. The form of economic growth must itself provide both opportunities for the poor to participate and distributional benefits for the poor. Solutions rest in strengthening the regulatory and administrative environments of poor countries so as to enable effective PPPs, and using techniques such as OBA to strengthen demand for services and stimulate market development. More specifically, its guiding principles for infrastructure development are:

- Donors should coordinate to support coherent, network-wide, partner country-led frameworks as the basis for co-ordinated donor support. The facilities mostly do not prioritise budget-funded sector-wide approaches, although this may be implicit in the government capacity strengthening support provided by PPIAF. The facilities do aim at partner country-led approaches. For example PPIAF's work is always demand-led, but the reality may be more complex as suggested by PPIAF's review indicating that the majority of 'demands' actually came from World Bank task managers.
- Infrastructure's impact on poor people should be enhanced by promoting pro-poor targeting; involving the poor in the entire process of infrastructure development; providing incentives for the local private sector and affordability for the very poor; and tailoring strategies to long term considerations and mitigating impacts on vulnerable groups. Impacting on poverty through employment in infrastructure development and maintenance is also supported.
- Management of infrastructure investment should be improved to achieve sustainable outcomes, in line with the facilities' activities, particularly those aimed at the enabling environment.
- Infrastructure financing should be increased and all financial resources used efficiently, as also argued by the facilities, especially those aimed at the financial environment.

8.38 Curtis (2004) presenting on behalf of POVNET (the DAC network on poverty reduction) identifies problems of PPI in developing countries that coincide with the barriers identified by the facilities and their activities to address them:

- Institutional barriers to mobilising equity and long term debt in domestic financial markets and weak institutional capacity, e.g. immature domestic capital markets and weak financial institutions, low domestic liquidity, weak legal, regulatory and policy frameworks, and complex and costly administrative processes.
- Absence of bankable projects, high project preparation costs, constraints on cost-recovery for poor service-users.
- Insufficient protection for investors against political, social and environmental risks and inadequate mechanisms for apportioning risk among stakeholders.
- Foreign investors' lack of interest due to risk aversion and to the most attractive privatisations having already being concluded.

8.39 While recognising GPOBA and SUF as being among the small minority of initiatives that have an explicitly pro-poor focus, she identifies a number of gaps that may not currently be adequately covered by the facilities generally, including:

- Governments giving low priority to infrastructure within PRSPs
- Few linkages between interventions aimed at improving finance mobilisation and pro-poor interventions.
- Insufficient attention to partners' risk in risk mitigation initiatives
- A lack of attention to marketing or promotion of innovative approaches to the (domestic and international) investor community and commercial financial institutions, although innovative approaches are being taken up by new facilities, and in particular InfraCo addresses these concerns.

8.40 Most crucially for the current evaluation, however, she indicates the causal gap between the initiatives to promote PPI (new funding vehicles, new risk mitigation tools and innovative partnership structures) and the desired outcomes of new private investment in pro-poor infrastructure. Between the goals and the activities, however, is a chasm where she says 'something wonderful happens', indicating the lack of clarity about the steps in the causal pathway.

ADB

8.41 A collaborative analysis of infrastructure in East Asia by the Asian Development Bank, Japan Bank for International Cooperation and World Bank (ADB/JBIC/WB, 2005) confirms the dual benefits of infrastructure on poverty reduction indirectly by supporting growth and directly on the lives of the poor. In setting out a new framework for infrastructure development in the region, it highlights the importance of inclusive development, in other words the need to unify growth with sharing the benefits of growth to reduce poverty. Inclusion requires coordination both at the local and regional levels to promote active community participation, competition, regulation to strengthen accountability, effective risk management for all stakeholders, and to address corruption.

8.42 A number of lessons from regional experience can be applied to future directions, including that

- Despite past doctrine, subsidies, whilst risky, may be important for pro-poor access
- Competition may be difficult to achieve in infrastructure, but it is the best way to bring accountability

- Regulatory independence matters more in the long run than in the short run
- Civil society has a key role to play in ensuring accountability in service provision
- Addressing corruption in infrastructure is a priority
- The private sector will invest again if conducive policies are present.

Other initiatives

8.43 The World Bank engages in a number of other initiatives besides the facilities that aim at similar objectives, such as under the World Bank Infrastructure Network and the International Finance Corporation (IFC) of the World Bank. MIGA (Multilateral Investment Guarantee Agency) aims to support foreign direct investment in developing countries, not only in infrastructure, and acts by insuring investors against political or non-commercial risks, an area currently not covered by the facilities.

8.44 The Investment Climate Facility for Africa (ICF) is a multi-donor and private sector partnership endorsed by NEPAD and African heads of state. It is also supported by DFID, which has pledged £30 million to the first three years of this seven year project. Its rationale is for indirect poverty impact through increased investment rather than focusing on infrastructure specifically, i.e. it is motivated by the need to improve investment in order to improve economic growth in order to improve poverty reduction. It seems likely that it will work in the areas currently served by PPIAF, i.e. mainly with governments in the areas of property rights and contract enforcement, business registration and licensing, taxation and customs, financial markets, infrastructure facilitation, labour markets, competition, corruption and crime. Its added value comes from being independent, in Africa, pan-African and endorsed by African heads of state.

8.45 The Infrastructure Consortium for Africa (ICA) emphasises infrastructure at the regional level although support will be given at national level in recognition that this is where most infrastructure services are addressed. It is intended to make the members (tripartite membership between bilateral donors, multilateral donors and African institutions) more effective by pooling efforts in information sharing, project development and good practice. It aims to advocate for the priority of infrastructure, for example in PRSPs, improve the available data on infrastructure development, improve effectiveness and coordination between donors and build capacity particularly for project preparation. DFID has given major support to the ICA secretariat in Tunis at the AfDB; and the latter is also being restructured as the main financing mechanism for NEPAD and major regional projects are now under preparation. The ICA has recently published a guide to infrastructure project preparation facilities in Africa, funded by a grant from PPIAF.

8.46 The European Bank for Reconstruction and Development has a major PPP programme involving national and sub national infrastructure investments throughout Eastern Europe and the Former Soviet Union. The European Union has recently announced a major African infrastructure financing initiative that will be linked with the European Investment Bank.

9. THE WIDER LITERATURE

Summary

9.1 As already indicated in the review of donor literature, there is almost universal acceptance of the argument that investment in infrastructure is essential to economic growth and poverty reduction – whether by the direct or indirect routes. The division in the 'wider literature' is between those who question the role of private investment in the provision of 'public goods' (a term that is often used in a more popular than technical sense), and those who pursue the PPI rationale but question how to improve its impact. Most of this part of the review focuses on the latter, because our purpose is to understand the claimed causal chains that can be tested in the evaluation, but the oppositional literature is noted too.

9.2 Given that the facilities do not clearly articulate the causal pathways in their work, it is difficult to find wider literature that either supports or challenges these pathways. It is possible, however, to find literature that confirms or disputes the barriers to PPI identified by the facilities and the merits of the activities implemented to remedy them. Considering the breadth of barriers identified and approaches utilised by the facilities, most of the wider literature finds support for at least some facilities' work. This section is thematically organised according to the main issues raised by the literature and finds:

- Perhaps most critically, while the facilities' basic rationale finds plentiful support in all levels of literature, there is a lack of evidence about the causal pathways both from facilities' actions to outcomes and from outcomes to pro-poor impacts.
- PPI has not been sufficiently pro-poor in the past and is an imperative for the future, including through intelligent subsidies and 'third way' poverty impacts.
- PPI must genuinely engage with public opinion and respond to the needs of local communities in order to achieve success.
- Broader factors of good governance and political stability may be as important to successful PPI as more specific barriers to investment. While the facilities do not address these broader factors, they are addressed in DFID's good governance agenda.
- Evidence on corruption in PPI is mixed.

Basic rationale: points of agreement

9.3 The common ground needs first to be established. The literature that questions the case for promoting private investment in infrastructure, nevertheless clearly accepts the general case that infrastructural investment is necessary to economic growth and poverty reduction. On the latter, the evidence, or at least the general consensus, is clear. DFID's (2002b) paper *Making Connections: Infrastructure for Poverty Reduction* assembled the evidence available at that time. Some more recent donor literature has already been referred to in previous sections. Independent and donor-commissioned academic literature attest to the impact on economic growth and poverty reduction (Raj, 1993; Arndt et al. 1999; Collier and Gunning, 1999; Hanmer et al. 2000; Willoughby, 2004; Estache, 2006), and to the value that the poor themselves put on infrastructure provision (Narayan et al, 2000; Narayan and Patesch 2002; Amis, 2001; Benjamin, 2000 and 2001). Vietnam's commitment to the provision of infrastructure has been found to underpin a high economic growth rate as well as to act as an integral component of the country's successful reduction in poverty since the mid 1990s (Bartholomew et al, 2006: DFID,

2006e). There is very good and compelling information of the negative effect of the lack of infrastructure provision on economic growth (Raj, 1993; Arndt et al. 1999; Collier and Gunning, 1999; Hanmer et al. 2000; Willoughby, 2004; Estache, 2006; Bartholmew et al., 2006), The argument in the Indian context is that economic development is basically constrained by the lack of provision of infrastructure (Ravallion and Datt 2002). Similarly from the experience of Indonesia, Uganda and Kenya, there is clear evidence that the lack of provision of basic infrastructure is inimical to economic development (Amis and Kumar, 2000). Furthermore, there is also strong evidence from India that the lack of provision of basic infrastructure tends to lead to capital intensive or non labour intensive industrial development (Raj, 1993).

9.4 Some aspects of this common ground will be referred to below, particularly in the section on poverty impacts.

Basic PPI rationale: the evidence (gap)

9.5 The basic PPI rationale and claims for direct and indirect pro-poor impacts of PPI that are consistent across the facilities and the donor literature also find much support in the level 3 literature (e.g. Mills, 2006; Nickson and Franceys 2003; Sader, 2000; Willoughby, 2004). As in the case of several independent evaluations and papers commissioned by donors (see para 8.27 – Harris et al., 2003; Andres et al., 2006), there is evidence that private sector investment is necessary to infrastructure development and poverty alleviation and that private provision can improve the quality and efficiency of services. Despite the widespread public concern about the affordability of privately managed services, it is also clear that, given appropriate regulation, it can improve access to basic services by the poor. There is also plentiful evidence to support the argument that volatile currencies, financial institutions and the absence of a well-functioning capital market have a negative impact in encouraging private investment (e.g. Allayannis and Weston, 2000; De Soto, 2000; Estache 2006; Ghosh Banerjee et al 2006; Ghura and Hadjimichael, 1995).

9.6 In a comprehensive review, Estache (2006) validates the basic rationale for infrastructure development that existing infrastructure is grossly inadequate for the basic needs of the poor as are current levels of investment to meet the deficiency. Crucially, however, he highlights that relatively little is known about the relationship between infrastructure and growth and that we have a weak understanding of everything surrounding the development of infrastructure: Are regulatory agencies really needed? What kind of institutional reforms work? Can the public sector deliver improvements without the private sector? The weakness of the evidence base supporting the dominant PPI rationale is a significant challenge for the facilities.

9.7 Given the evidence gap, experience counts for a lot, and perspectives on infrastructure have evolved away from an either-or choice between private and public provision towards an acceptance of the complexity of infrastructure development and the advancement of more nuanced associations between public and private sectors (Meridian Institute, 2005; Gilbert 2007). While emerging evidence and public pressures may have led to donors advocating broader and more flexible approaches to infrastructure development, Kessler (2004) criticises donors and particularly the World Bank for not allowing these options to genuinely be open to developing world governments, who are presented with options that compromise genuine choice and pressure them into certain routes (favouring PPI).

9.8 However, there is still considerable opposition to PPI. This results from a number of factors including the instances of failed PPIs, ideological objection to the 'privatisation' of 'public goods' (a term which is often used loosely in the critical literature) and especially water, and

concerns that big businesses can unduly pressurise and manipulate weak governments against the needs and interests of their people, particularly the poor. There is also concern that business may put profits ahead of environmental protection. Opposition, or at least concern, may be found among the (potential) users of infrastructure, non-governmental organisations (e.g. World Development Movement, Citizen's Network on Essential Services) and some academic sources (e.g. Carrera et al., 2004). These perspectives have been instrumental in driving a moderation of theory and practice relating to PPI.

9.9 While not directly critical of private investment in infrastructure, Carrera et al (2004) explore the Latin American discontent with PPI and, by analysing people's perspectives according to personal and social criteria, find that the 'ideal' conditions for 'privatisation' are often antithetical to the goals of international development. 'Privatisation' will be betterl accepted when it does not involve basic utilities, there is relatively low income inequality, and where the reforms can have a positive impact on state revenues.

9.10 The more critical (often NGO) literature disputes the accepted PPI rationale on both evidential and ideological grounds. The World Development Movement (WDM, 2005) is one of the most eloquent on this front. Whilst acknowledging the desperate need for improvements in infrastructure, a WDM campaign rejects the (DFID) rationale that private investment is an appropriate solution to the problem. The campaign is extremely critical of UK aid money being used to promote 'privatisation' of the water sector, or as the website prefers it: 'knee-jerk privatisation at any cost' and cites a history of DFID supporting failing projects. WDM contends that the preference for privatisation policies is rooted in an ideological belief in the free market and a desire to further the interests of foreign businesses rather than a suitable evidence-based approach to the water crisis of the world's poor. WDM also criticises the amount of UK development funding spent on consultants whose ideological biases lead them only to advocate privatisation policies and who aim to 'convince' the poor of the merits of privatisation. A WDM study (Hall and Lobina 2006) of experience also criticises the private sector for failing to invest in the water sector and delivering few connections where urban water management has been 'privatised' – i.e. contracted through concessions and leases. A review of PPIAF undertaken with the Public Services International Research Unit (Cann and Jones 2006) goes on to argue that this facility puts pressure on governments to 'privatise' water supply and that, instead, it should promote 'public-public partnerships'.

9.11 The Citizens' Network on Essential Services (CNES 2003) is also highly critical of the World Bank Group's renewed agenda on infrastructure, believing the policies to be progressing a highly contestable agenda based in unsubstantiated neo-liberal policy. Powell (2005), writing for the Bretton Woods Project, claims that the facilities' rationale (in this case that of the PPIAF) on the benefits of private provision, is 'bullish'. ActionAid and '50 Years is Enough' are other organisations critical of the PPI rationale and policies perceived to be inappropriately imposed on developing countries by powerful aid agencies.

9.12 Some sector specific NGOs, particularly in the water sector (WaterAid and Tearfund, 2003) have commissioned country level case studies to assess whether private sector participation (PSP) does indeed benefit the poor. Their conclusion is carefully qualified. From a study of 12 countries the finding is that PSP can contribute towards the reform and improvement of water services, in a stable environment with good governance, active civil society and strong political commitment to reaching the poor. However, in the absence of such an environment, as is the case in many developing countries, the report opposes donors pressuring developing countries into PSP arrangements.

Poverty impacts of infrastructure and PPI

9.13 Willoughby (2004) reviews the literature on the relationship between infrastructure and the MDGs. Despite the fact that economic infrastructure is only specifically identified in the MDG target indicators in respect of water and sanitation, he concludes that the attainment of almost all the MDG goals depends at least in part on improvements in other infrastructure services also – including telephones, personal computers and internet use. The author's appraisal supports the rationale of indirect but pro-poor impacts of infrastructure on development, as infrastructure improves productivity among the poor by improving their access to economic opportunities, often through improved environmental conditions. This may be one of the strongest endorsements of the validity of focusing on infrastructure development as a means to achieving DFID's ultimate goals.

9.14 There is very strong evidence that the provision of infrastructure is important to the poor themselves as well as to key policy makers and/or politicians in developing countries - however it is funded or provided. This is a useful corrective to outsiders' perceptions of the (urban) poor's problems, and to alternative prescriptions based on preconceived ideas, ideologies or internal politics. The concern of the poor with infrastructure provision especially that associated with transport, water and sanitation and energy have been frequently documented in participatory poverty exercises (see Narayan et al, 2000; Narayan and Patesch 2002; Amis, 2001; World Bank, 2006c). Thus for example, in urban Uganda flooding is identified as the major problem; and the latest detailed survey work in Nairobi tells us that the four major priorities for the urban poor in slums are "toilets, water, health and electricity" (World Bank, 2006c:9). Another insight from the participatory assessment literature is the importance of infrastructure provision in protecting the poor from shocks, in particular flooding, fire and infectious diseases. These major events can greatly increase the incidence of poverty.

9.15 In addition there is good evidence that the increased provision of infrastructure is a high priority for national politicians and policy makers (Devas et al., 2004). In Uganda's PRSP, local ownership and priorities generated a particular commitment to transport and roads[2], in addition to the commitment to the provision of health and education. Not ignoring or "not denigrating" such demands by national governments for assistance in the infrastructure sector by bilateral and multinational donors is seen as an important issue (DFID, 2002b:5).

9.16 In the Indian sub-continent, the provision of infrastructure (roads and water) is the classic political 'pay-off' for support from electorates (or 'vote banks'), indicating its importance to the urban poor and as a resource that politicians can deliver (Benjamin, 2000 and 2001). Studies have shown the positive impact that improved levels of infrastructure can have in improving the living conditions of slum dwellers in India and elsewhere (Amis, 2001). The impact of these improvements on poverty needs to be unpacked; thus in India it was found that such improvements were more significant in improving the "quality of life" dimensions of poverty than income-poverty. The provision of basic infrastructure in slum areas is one of the clearest links between infrastructure and poverty reduction.

9.17 Particular poverty-related issues arise when water provision is commercialised or 'privatised'. Nickson and Franceys (2003) show that, at least in some middle-income countries (such as

[2] President Museveni of Uganda is extremely committed to infrastructure provision in general and road construction in particular. He is on record as saying "let the donors build the roads and we will do the rest!" President Lula da Silva (2003) of Brazil has indicated a similar priority from personal experience.

Chile, Malaysia, Trinidad and Tobago, and Colombia), where water services have been contracted out, tariff arrangements have been pro-poor, and where effective regulation has been maintained, there have been increased service coverage and quality. Gilbert (2007) describes the effectiveness of Bogotá's water company in extending coverage and serving the poor; though in public ownership, it has adopted commercial practices and sub-contracted aspects of the service to the private sector.

9.18 Despite this, PPI has often failed to meet the needs and interests of the poorest. As with the World Bank literature, there is much independent literature exploring the experiences of past PPI projects. Estache (2006) reviews experiences from the 1990s and, whilst he finds that PPI has contributed to improvements in infrastructure efficiency, these have often not been passed on to users, particularly the poor. Poverty has been inadequately addressed in the projects of the 1990s.

9.19 McKenzie and Mookherjee (2002), Nickson and Vargas (2002), Harris *et al* (2003) and Rives Argeñal (2004), and the Human Development Report (UNDP 2006), reflect on one of the highest profile failures of PPI, the Cochabamba water and sanitation service in Bolivia. Following a rushed concession of these services in 1999, water tariffs increased immediately to cover the cost of the expensive bulk water scheme selected by the government (in preference to a lower cost option). This rise was as high as 200%-300% in some neighbourhoods. Prices for poorer consumers increased by 43% on average, and doubled for a small segment of the very poor. These rises were unanticipated by consumers, with a lack of transparency about the planned tariff increases and financial terms of the concession. Following massive public protest, which effectively shut down the city for three days and forced a declaration of martial law, the government was forced to terminate the contract. Econometric analysis of the concession arrangement suggests that poverty increased by 2%, although there was little impact on inequality.

9.20 The Cochabamba project is an example of how not to introduce private investment in infrastructure. Haselip (2004) agrees, similarly finding that the major failures of infrastructure reform, particularly in Latin America, may be attributable to rushed reform concerned with securing investment but insufficiently concerned with the adequacy of regulatory arrangements and the social and political consequences. Other evidence suggests previous PPI failures have related to huge forecasting errors arising out of economic, technical and institutional errors (Prud'homme, 2004). If anything, these experiences support the facilities' work in ensuring that, if PPI is entered into, it is properly understood, planned and implemented by all stakeholders.

9.21 Governments or regulators face the difficult task of balancing the needs of the poor with the interests of the private sector, which is a particular drain on the resources of the poorest states (Nickson and Franceys 2003; UNDP 2006). Nkhoma-Mbawa (2006) illustrates a number of these conflicts in the Malawian experience. For example, the Malawian government has undertaken considerable reforms aimed at liberalising the economic environment so as to promote trade and investment by providing a good environment for business. Yet the private sector has pressed the government to withdraw all business licences, claiming they inflate the cost of doing business in Malawi. The government has resisted, claiming some licences are necessary to maintain standards that protect the public, for example for food products. These potential conflicts show there is need for support to both governments and business of the sort provided by the facilities at present. It also shows that increased investment and efficiency cannot be the only concerns of PPI in infrastructure development: impacts on the poor must be factored in.

9.22 Meeting the needs of the poor is one of the greatest impediments to investment in infrastructure. For example, because of the public pressure for returns to be within socially acceptable boundaries, financial returns for investors may be low despite their high risk (Ghosh Banerjee *et al*, 2006). Estache (2006) suggests that tariffs necessary to generate minimum returns in the poorest countries may have to be higher than elsewhere to cover the higher cost of capital, making investment in these countries unpopular with investors and politically sensitive, especially for basic goods infrastructure.

9.23 Subsidies represent one of the central tools in ensuring services reach the poor, and while they fell out of favour in the 1990s there is acceptance that they may now be necessary and if well designed can be beneficial (Estache, 2006). Kessler (2004:9) is critical of the fact that while subsidies to support public sector utilities were characterised as fiscally irresponsible, "using public resources from the same government to lure hesitant private firms becomes an innovation in development assistance." However, another view is that the great problem of public infrastructure systems was that historically subsidised services benefited the people who least needed the subsidy (Nickson and Franceys 2003). Subsidies must be carefully targeted.

9.24 Delegates at a PPPUE conference discussed and challenged the logic behind tariffs for the very poor. It is usually argued that the poor pay more per unit for services such as water and a higher proportion of their income than do the middle classes, therefore demonstrating that the poor are willing to pay, that higher tariffs are justified, and cost recovery is possible. However, the discussants found that, even though the premise may be true, if tariffs exceed customers' 'willingness-to-pay threshold', this can lead to system collapse. The level of service delivered must be considered relative to what people are *willing* to pay, rather than just what they are *able* to pay. It may be possible to offer reduced service (that will ensure cost-recovery) without compromising quality of service (PPPUE, 1999). Moreover, as other research points out, tariffs may be structured so as to subsidise poor communities or to subsidise lifeline tariffs for basic levels of consumption (as for water in South Africa), by cross-subsidies within a full cost-recovery system whether publicly or privately managed (Winpenny 1997; Batley and Larbi 2004, UNDP 2006). Moreover, Plummer (2002a and b; also Kayaga et al., 2003) highlights the point that this is not just a problem of the level of tariffs; consumption charges may be a problem for the poor because they are not adjusted to their irregular and uncertain sources of income.

9.25 Mathews and Lynch (2006) reinforce the third way for PPI to contribute to poverty reduction in which the private sector facilitates additional local economic and social benefits through the *process* by which projects and services are delivered, acting both through their direct operations and the management of their subcontractors and supply chain. Potential benefits include enhanced waged employment, training and skills development, local enterprise development, technology transfer and capacity building for local government authorities. These types of social and economic benefits through reforms have emerged as a feature of CLIFF's pilot work, and may present an area for future development through ESMAP, E SME, WSP/DPSPI, SUF, PPUE and DevCo.

Public opinion and participation

9.26 The wider literature increasingly recognises that top-down imposition of PPI is inappropriate, unacceptable and even counter productive. Infrastructure needs to be increasingly demand rather than supply led to ensure suitable standards are set (PPPUE, 1999). Henisz and Zelner (2004) take the case study of private investment in energy as advocated by multilateral agencies and find that reforms adopted in response to coercive pressures exerted by these organisations encounter much greater public resistance. Because reforms instigated in response to

international pressure have not organically evolved, they will face greater resistance. This suggests that much public resistance may be attributable precisely to the fact that PPI has been externally driven. This presents a challenge for the facilities, not necessarily because they impose PPI, but because their involvement may be seen by local communities as an imposition. Public approval and participation in PPI may not only be advisable but also essential if reforms are not to be rejected.

9.27 Some of the more independent level 2 World Bank literature also supports the need for locally driven, collaborative and small scale solutions (e.g. Schur et al, 2006 and Kariuki et al, 2006). Through interviews with 'thought leaders' (stakeholders) in infrastructure (mainly water and energy), the Meridian Institute (2005) taps a different perspective to that usually represented in either traditional academic or donor literature. Respondents highlighted the need for transparency, accountability, participation and an understanding of user needs in order to foster a sense of community ownership and acceptance to enable PPI project success.

Good governance, political commitment and political risk

9.28 Political risk and commitment to PPI are related to broader issues of good governance and political stability. All are identified as potential barriers to PPI. The Meridian Institute (2005) stakeholder interviews identified the impact of wider factors such as good governance and political ideology for developing public sector capacity for management and regulation of successful infrastructure projects, and found that political intrusion or lack of political will influence PPI outcomes. Ghosh Banerjee et al, (2006) focus specifically on the role of institutional risk in PPI. They find that the quality of the regulatory environment (effective, market-supporting legal system including property rights protection, contracting ability and contract enforcement) is essential (e.g. North, 1990; Mauro, 1995; De Soto, 2000), but government *commitment* to its regulatory and legal roles may be even more important. Related to this, unstable, unreliable and/or ineffective political institutions hinder private sector investment (Howell, 1998; Bergara et al., 1998; Nickson and Franceys, 2003; Batley and Larbi, 2004). The broader good governance indicators of democracy, an active civil society, independence of the judiciary and effective public administration present conditions within which private investment is more successful and secure, and therefore likely to be entered into.

9.29 More bluntly, Mills (2006) claims that, if the political elite is not fully behind private participation in infrastructure, there is no chance of the project being a success. Estache (2006) also notes that politics matter: politicians are reticent to give up control of infrastructure sectors that buys in votes or generates a lot of corruption money. Gilbert (2007) describes how Bogotá's public water company, charging commercial rates for water and working with private partners, is under attack from politicians of the left and right who ignore its defence that it 'it is creating a service for everyone and in the process creating a more equitable city. It cannot continue to do this if it is required to cut prices'.

9.30 Jordan (2004) assesses the availability of Political Risk Insurance (PRI) for infrastructure projects and whether this is a gap donors could fill. He finds that a number of multilateral agencies, national official agencies and private insurance companies provide PRI, but that political risk is not the most important impediment to investors. Areas such as sound regulatory regimes, risks of currency devaluation and currency mismatch are of greater importance, coinciding with the current priorities of the facilities.

9.31 Political risk and broader governance factors are perhaps too far upstream to be directly engaged with by the facilities. In particular government commitment is assumed to be an entry

condition for many of the facilities rather than something to be addressed in their work. However, it may be implicitly addressed by for example the requirements of PPIAF that its work is (in principle) demand led and DevCo's requirement for governments to pay for its services in order to demonstrate commitment. Nevertheless, these factors are consistent with the concerns of DFID's wider good-governance agenda.

Corruption

9.32 Findings on the role of corruption in PPI are mixed. In the 1990s the high levels of corruption in infrastructure were used as an argument for privatisation (Estache, 2006). Brown et al (2004), however, contend that corruption is not eliminated by privatisation, and indeed that it is most likely to occur at the nexus between private and public bodies. The debate has thus now shifted from focusing on the relationship between public providers and users to the relationship between governments and private providers.

9.33 Some studies suggest that the lower a country's income the higher the problem of corruption and that corruption in infrastructure is easier when regulation is poor (e.g. Laffont, 2005). However, despite hypothesising that corruption would be an impediment to FDI (Brunetti et al., 1997; Brunetti and Weder, 1997), Ghosh Banerjee et al (2006) find that corruption actually encourages higher FDI. In East Asia corruption has been shown to have positive short and medium-term effects on growth, but the long-term effects are as yet unclear (Rock and Bonnett, 2004). Laffont and Meleu (1999) point to a U-shaped interaction between corruption and the privatization rate in Africa, i.e. corruption facilitates private investment in the short-term but is a detriment in the long-term.

9.34 Studies on the impact of regulation on corruption are similarly diverse in their findings. Estache et al (2006) suggest privatisation does not significantly impact on corruption in electricity, telecoms and water, whereas Clarke and Xu (2002) found that privatisation did reduce corruption in Eastern Europe.

Government failures

9.35 Lack of government capacity to perform its regulatory and enabling roles are as well represented in the level 3 as level 1 and 2 literature. Sader (2000) identifies the core problems of PPI as the lack of overall sectoral reform in developing country infrastructure markets combined with the complicated nature of project finance transactions unfamiliar to the typical civil servant. Solutions rest in regulatory reform and ensuring the legal framework does not present unnecessary barriers to private investment. Regulatory bodies must have sufficient internal skill and capacity to provide an enabling environment for the private sector whilst simultaneously protecting the public, and particularly the very poor (Kirkpatrick and Parker, 2005).

9.36 Kessler (2004) highlights the difficult position regulators are in to solicit disinterested investors without sacrificing the public interest. Meanwhile investors are hesitant to engage with inexperienced regulatory agencies. Investors may also conceal cost information from regulators meaning they cannot assess whether prices for services are fair or realistic for the public.

9.37 Looking at public services across a number of regions and sectors including water services, Batley and Larbi (2004) assess reform implementation and success. They analyse the significant barriers to governments successfully conducting the regulatory and contracting roles required to

support service delivery. In terms of contracting, specific barriers included internal organisational, inter-organisational, and wider institutional factors. The internal factors include weak basic administrative and financial systems and skills, limited staff experience of contract design, staff resistance and lack of incentives and poor information systems to compare bids and performance. Inter-organisational factors include poor definition and coordination of roles and gaps between contract design and implementation agencies. External institutional factors were socio-political opposition to privatisation, economic and financial instability, limited private sector development and trust, a weak legal framework, unpredictable policy, centralized civil service rules and systems, and lack of a culture of performance.

9.38 In terms of regulation, barriers included lack of staff skills in accounting and performance assessment, vested professional interests and inadequate information on price and performance, blurred boundaries between the regulators and the regulated, political and professional influence being exerted on the regulator, economic and political instability, and private sector distrust of government (Batley and Larbi, 2004). Political pressure on public companies that seek to offer commercially and to weaken the regulator's defence of viable tariffs, such as in Bogotá (Gilbert 2007), is likely to be easier to assert than in the case of privately managed companies. In Buenos Aires, maintaining the commercial viability of the private operation was impossible in the face of weak regulation and heavy political pressures (Nickson and Franceys 2003).

9.39 Kirkpatrick and Parker (2005) review the relationship between poverty and regulation. The theoretical view they present is consistent with the facilities' (especially PPIAF) perspective that effectively regulated private participation in infrastructure can have both direct (by increasing access and affordability for the poor) and indirect (by increasing economic growth and investment) impact on poverty. However, in reviewing the research on these issues, they find mixed results about the effectiveness of regulation, indicating that poor people are not always a priority, or even an agenda item, for all regulators, that the poor genuinely do struggle with affordability even in the presence of regulators, and that there is evidence of regulatory and administrative weakness. Estache (2006) uses country comparisons to suggest that having an independent regulator does not necessarily guarantee PPI, nor does a lack of a regulator prevent PPI. Whilst Estache may see that this shows the relative unimportance of regulatory independence compared to other influences on PPI, it may also be argued that this only strengthens the facilities' rationale that regulation per se is insufficient; better regulation is necessary. A more hopeful view comes from Nickson and Franceys' (2003) cross-national comparison of water supply. This found that, while the conditions for effective regulation were difficult to maintain in poor countries, where there was at least some degree of independent regulation there were positive effects in terms of service improvement and maintaining a tariff structure that reflects real costs, including in Sri Lanka, Ghana and Zambia.

9.40 Estache (2006) suggests that improving public sector regulation of infrastructure is a neglected area for research. The energy of recent years has gone into improving PPI, and yet, even at its peak, the private sector never contributed more than 20-25% of infrastructure investment, and much less than this in the poorest countries. It would make sense to focus more energy now on the considerable role that the public sector plays and will continue to play for the foreseeable future.

Support for the small non-state sector

9.41 Several of the 'innovative' facilities (CLIFF, SUF, WSUP) particularly target small enterprises or civil society organisations that will invest at the level of local communities and urban slums. We

have noted several recent World Bank papers that find that small and medium-sized enterprises may better serve the interests of the poor, particularly in rural areas. There is a literature on small 'non-state providers' (NSP) that matches this concern particularly in water and sanitation. International private water operators are now much less likely to enter long term contracts in developing countries, but there is increased interest in how governments can engage more effectively with in-country NSPs such as small-scale private water and sanitation providers and civil society institutions (NGOs and CBOs) (Sansom 2006). These are often predominant but also probably the part of the 'private sector' that is most difficult to engage with. A study of ten cities in Africa (Collignon and Vézina, 2000) reported an average of 47 percent of households used small water providers or traditional sources such as dug wells, as their main sources of water. NSPs in a number of South East Asian cities serve between 20 to 45 percent of households (McIntosh, 2003). Improving the effectiveness of government agency engagement with NSPs to improve services is, therefore, important for all stakeholders who are concerned with poverty reduction.

9.42 There are clear challenges for government intending to work with NSPs, not least of which is the institutional incompatibility between bureaucratic agencies and the more informal NSPs. Collignon and Plummer (2005) highlight a number of actions required to enable better government engagement with local informal water private providers:

- Reconciling informality with conventional procedures. Most small operators are informal and difficult to monitor. Identifying mechanisms to overcome the incompatibility of informal business practice and formal procedures is essential if providers and utilities/municipalities are to work together.
- Sharing the market. Public or private water utilities typically capture the market through their monopoly status and are concerned that formal revenues and informal payments will decline with more recognition of local providers. Evidence in a number of utilities suggests, however, that bulk supply contracts with NSPs can result in win-win agreements with formal and informal businesses and provide an incentive for both to share the market.
- Changing attitudes. Government officials do not easily understand local private operators' working methods, and they do not have skills to work with these providers. There is often a deep mistrust between officials and local entrepreneurs.

9.43 Collignon and Plummer (2005) and Plummer (2002) argue for tri-sector partnerships similar to those advocated by WSUP (between the public sector, the large and small private sectors, and civil society) as an expanded form of PPP, which includes actors that can support poor communities and ensure that services meet the needs of all the poor, especially the poorest and marginalised groups. Sansom (2006) identifies some positive examples of tripartite water or sanitation contracts and agreements involving government, civil society and the local private sector. A key element of the widely cited Orangi Pilot Project approach in Pakistan is 'component sharing' or co-production, where a community group, supported by an NGO, provides its own neighbourhood sewer and the utility provides the larger sewers. This approach offers advantages over the 'cost sharing' approach that is commonly used by governments and donors. In particular, the community group and NGO can proceed with their component of the new infrastructure without undue interference from government and vice versa.

9.44 Other tripartite contracts involve the small private sector (Sansom 2006). Community toilets that have been constructed as part of the Mumbai slum sanitation project in India have good potential revenues and are well used by slum residents. A key reason for success is the fact that the main responsibilities have been allocated on the basis of the comparative advantages of

each project partner (the municipal corporation that lets the contracts, private contractors, NGOs and CBOs) through contracts and agreements, with suitable degrees of flexibility. However, for these successes to be sustainable and effectively scaled up requires intensive management support to CBOs when they directly manage the service themselves, or multiple small contracts with local private operators.

9.45 As part of the same study with Sansom, Batley (2006) concludes that tight contractual arrangements between government and NSPs present challenges to governments' capacity and tend to rule out the local and informal providers that are often most important to poorer people. On the other hand, joint ventures with non-state providers and co-production with service recipients present the possibility of clearly stating the roles of the partners without subordinating one to the other. They allow the scaling-up of organised service provision, not by creating massive organisations but by disseminating replicable models of collaboration.

9.46 The specific and micro nature of these arrangements and their need for complex collaboration represent specific problems for CLIFF, WSUP and SUF, and also for the ESMAP and WSP small scale advisory work. .

PART 2: CROSS-CUTTING ISSUES

John Horberry and Smita Biswas

10. STRATEGIC ENVIRONMENTAL ASSESSMENT

John Horberry

Introduction

10.1 The Terms of Reference call for a Strategic Environmental Assessment to be undertaken as part of the Evaluation.

10.2 This brief literature review is designed to illustrate the overall context of development agency environmental policy, the recent adoption of SEA as a tool for the changing array of types of development intervention and the possible "benchmarks" that are relevant to applying SEA to financial support for a portfolio of investment facilities.

Infrastructure and the Environment

10.3 Since the early 1970's, the potential environmental impacts of infrastructure projects have been well recognised by officials and practitioners striving to ensure that development projects and private sector investments are environmentally sustainable (Stein and Johnson, 1979). Probably the clearest evidence of this is the substantial volume of environmental assessment guidelines produced by development agencies during the late 1970s and the 1980s – much of which was focused on the potential environmental impacts associated with, among others, the energy, water and sanitation and transport sectors (ERL, 1988; IIED, 1995). Some of the most controversial cases in recent years have been in these sectors – including major hydro-electric projects and road construction through vulnerable tropical forests.

10.4 Development agencies, both multilateral and bilateral, have addressed the risk of environmental impacts from infrastructure projects by introducing environmental assessment policies which require projects to be screened for potential environmental impacts and subject to an environmental assessment if significant impacts are expected (Horberry, 1984; World Bank 1995). Increasingly developing country governments have introduced their own environmental assessment legislation which typically covers major infrastructure projects as well as other sectors (Wandesforde-Smith et al. 1985; Biswas and Geping, 1987). Despite these efforts, large infrastructure projects have often faced significant problems associated with environmental and social impacts – for example the Pergau dam in Malaysia, the Narmada dam in India and many others. It is fair to say that large infrastructure projects of this nature created more environmental and social controversy for international development agencies in the 1980's and 1990's than any other projects. (OED, 1996). These problems and the level of public concern prompted the World Bank and others to set up the World Commission on Dams in order to bring donors and stakeholders together to set out principles for environmental and social safeguards associated with large dams (World Commission on Dams, 2000).

10.5 In recent years, as the investment for major infrastructure projects has increasingly come from the private sector, financial institutions such as the IFC and EBRD which finance the private sector have played a vital role in ensuring the rigorous environmental assessment of such projects, associated with development banks has been applied to major private sector projects. In many cases, the IFC or EBRD are leading the way on applying environmental and social safeguards and other private sector financing institutions are following. A notable recent example is the Nam Theun 2 hydro-electric investment in Laos PDR – which has been subject

to extensive environmental and social assessment by IFC, the World Bank and ADB as well as private banks before approval (ADB, 2004). There are parallel cases in the extractives sector, such as the Chad-Cameroon and BTC pipelines. These types of projects have attracted high levels of public scrutiny and concern and have required more comprehensive and intensive environmental and social assessments than have been previously undertaken.

10.6 More recently, efforts to mainstream environment into development assistance have focused as much on environmental benefits as on environmental impacts. Infrastructure investments can be designed and targeted to provide significant environmental benefits which feed through to poverty reduction. Water and sanitation deliver better environmental health and improved livelihoods. Clean energy can bring about significant reduction in pollution levels. Transport investments can reduce pollution and congestion. Development agencies have increasingly made efforts to mainstream environmental issues into strategic decisions about infrastructure provision at a global level and in the case of individual countries. For example, in 2001 the World Bank produced an environmental strategy for the energy sector – entitled *Fuel for Thought* (World Bank, 2000). At the same time, it was supporting a series of country specific energy and environment reports aimed at identifying the environmental issues related to different energy options.

10.7 The increasing level of concern for the environmental impacts of strategic upstream policy choices about infrastructure investment has been mirrored by an increased level of effort by agency specialists and practitioners to adapt conventional project level environmental assessment approaches to be appropriate to higher level decision making – about policy reforms, development plans, sectoral strategies and regional programmes. These approaches have broadly been described as Strategic Environmental Assessment (SEA) which is discussed in more detail below (Dalal-Clayton, and Sadler, 2005).

10.8 Coming to the present, *Making Connections,* DFID's policy document on infrastructure (DFID 2002) contains a very clear message that infrastructure provision can provide substantial environmental benefits to the poor, leading to poverty reduction, improved livelihoods and reduced vulnerability. The document also concludes that inadequate attention has been given to the environmental impacts of infrastructure and that "environmental assessment should be at the heart of any pro-poor approach".

10.9 Reflecting a current consensus among international development agencies, the OECD DAC 2006 Policy Document *Promoting Pro-Poor Growth - Infrastructure* (OECD 2006a) makes an equally strong argument for integrating environmental concerns in the context of achieving pro-poor growth through better infrastructure provision. "Principle 3: Improve management of infrastructure investment to achieve sustainable outcomes" includes a section on environmental sustainability. The document goes on to detail the principles at the sectoral level, highlighting environmental issues in several sectors, such as energy, transport, water and ICT The document also sets out the potential positive or negative contributions of different infrastructure sectors to achieving the Millennium Development Goals – including MDG 7.

DFID Corporate Policy on Environment

10.10 Like other development agencies, DFID has for many years committed itself to an environmental policy and has applied internal environmental assessment procedures. In early 2006, DFID published its current environmental policy - *DFID's Approach to the Environment* (DFID 2006a). In this document, DFID's commitment to an integrated approach to the

environment includes a clear commitment to managing environmental risks within its interventions and programmes – through its environmental screening process.

10.11 The recent DFID White Paper (DFID 2006f) contains the statement – "Reducing poverty sustainably means ensuring that today's development successes do not become tomorrow's environmental failures". It goes on to commit as follows: "The UK will help partner countries identify and respond to environmental opportunities and risks, for example by helping them to undertake strategic environmental assessments".

10.12 The environmental risk management procedure to be followed by DFID staff is set out in DFID's *Environment Guide* (DFID 2003). The Guide describes clearly that the intent is to "mainstream issues of environmental sustainability into all DFID's development activities". The specific procedures cover the financial threshold (£1m), who does the screening, when does it happen and what happens next. The principal element is the Environmental Screening Note (ESN) which should be prepared at the time of the project concept note and signed off by the project officer and environmental advisor. The ESN should indicate any additional or follow up actions that are needed.

10.13 The Guide offers some "top tips for screening", including:

- Start as early as possible
- Consider indirect effects
- Consider existing causes of environmental change
- Consider gender aspects of environmental concerns
- Consider impacts on different social groups
- Screening is the start of the process, not the end

10.14 The Guide also covers the use of SEA. It defines SEA as:

> "An SEA is a process for analysing the environmental consequences (positive and negative) of proposed policies, plans, major investment decisions and other strategic interventions. It is undertaken to inform and enhance strategic decision-making and to ensure that the costs and benefits of policy choices are considered. It ensures that environmental considerations are taken into account alongside economic and social factors as early as possible in the policy and planning process".

10.15 The Guide describes a number of types of development intervention to which SEA may be relevant, including: sectoral investment or support programmes. The key factor in these cases is that DFID would support a programme of interventions but not designing and managing the individual investments themselves. Finally the Guide contains checklists covering certain sectors, including infrastructure (such as water supply and treatment, transport, and energy supply, focusing on potential environmental benefits as well as risks. For example, the Guide suggests that environmental assessment can result in the following benefits for infrastructure project design:

- technical alternatives, for example appropriate technology solutions for water and waste management rather than capital intensive options;
- designing with consideration for efficient resource use, including water and energy efficiencies;
- designing to incorporate mitigation measures to withstand natural hazards e.g. cyclones, earthquakes, floods;

- providing healthy living and working environments;
- sourcing construction materials from local and/or sustainable sources.
- recycling and recovering waste; and
- developing performance measures to monitor effectiveness and efficiency in project design and operation.

10.16 It is worth noting two recent sources of comment on the effectiveness of DFID's environmental risk management process. The first is a recent report by the House of Commons Environmental Audit Committee (Environment Audit Committee, 2006) which was extremely critical of DFID's diminished environmental capacity and the quality of its screening process.

> "The lack of foresight at senior level in the Department that has allowed the environment to lose ground in recent years saddens and alarms us. The widespread loss of environmental expertise, both in head office and country offices, is a clear example of this. Sustainability and environmental issues are complex and crosscutting, and - we reiterate - vital to development. They stand little chance of being addressed properly if DFID does not have sufficient capacity and expertise to ensure the environment is properly integrated to its work. The situation must be remedied as a matter of urgency."

10.17 DFID has also recently completed an internal review of the environmental screening process (DFID 2006b). This review presents some critical conclusions, for example poor record keeping, lack of full compliance with procedures in some cases, inappropriate signing-off, and lack of follow up. Two of the main recommendations are that:

- DFID should make clear the responsibility at programme level for screening, in line with new guidance (timely, to a high standard and with appropriate follow-up and monitoring); and
- DFID should ensure that there is adequate capacity for ensuring appropriate screening and follow-up.

SEA Guidance and Practice: Relevance to DFID's PSI Support

10.18 As mentioned above, there has been considerable effort to adapt conventional project level environmental assessment approaches to higher level decisions, interventions and programmes. The recommended approaches and tools are referred to as SEA.

10.19 There is a vast amount of literature on SEA approaches and methodologies but of greatest relevance to this context is the OECD DAC *Good Practice Guidance on Applying Strategic Environmental Assessment (SEA) in Development Cooperation* published in 2006 (OECD 2006b). This guidance which was produced by the OECD DAC Environet Task Team on SEA (chaired by DFID) defines the need to apply SEA to a range of development assistance instruments at the policy and programme level. The guidance specifically includes donor support to PSI Facilities (often multi-donor) managed by another entity. In this context, the Guidance is that SEA can be applied by a donor at the Facility design or funding stage leading to influence over investment policy and environmental risk management procedures at the Facility level. SEA can also be applied in the context of a regular oversight, performance reviews or evaluations to assess the effectiveness of environmental risk management procedures and the potential cumulative environmental impact of resulting transactions.

10.20 Following the OECD DAC *Guidance*, SEA applied to DFID support to PSI Facilities managed by other entities would ideally involve the following elements, applied proportionately to the level of environmental risk:

- PSI Policy: integration of environmental issues into DFID's overall policy for supporting PSI Facilities;
- Facility Design: mainstreaming of environmental issues into Facility strategy and investment objectives;
- Funding and set-up: integration of environment into Facility investment policies/criteria and the establishment of an Facility level environmental risk management process;
- Management: oversight and monitoring of implementation of environmental risk management process at the transaction level;
- Output and Outcomes: assessment of actual environmental impact of transactions: both individually and cumulatively (the overall footprint – e.g. on a regional basis of globally in terms of carbon impact).

Benchmarks

10.21 There are a number of "benchmarks" within the development and investment world which give an indication of the type of environmental risk management process that can be considered best practice in a situation where the funding institution hands over the management of a series of transactions to another entity.

10.22 In the mid 1990s, both IFC and EBRD recognised that, as much of their business consisted of credit to Financial Intermediaries (FIs) which then financed a series of investments, they faced a substantial environmental risk if they did not ensure that the FIs applied an environmental risk management approach similar to their own. They therefore developed an approach and guidance materials which formed the framework for environmental risk management procedures to be adopted by FIs – adapted of course to their individual credit risk management systems and their type of business. There is no single document but a good source is the EBRD website: *http://www.ebrd.com/enviro/tools/fi.htm*.

10.23 A similar challenge faced the World Bank in recent years with the growth of Community Driven Development programmes which delegated the selection, financing and management of small scale infrastructure investments to local institutions. Recognising that the potential individual or cumulative environmental risks that might potentially arise, the World Bank designed Environmental Rusk Management Frameworks to be included as part of the implementation arrangements for the local institutions and which could be monitored and evaluated by the World Bank to ensure appropriate environmental risk management in line with its environmental safeguard policies.

10.24 A further benchmark for best practice environmental risk management for private sector infrastructure projects can be found in the recently updated IFC *Environmental and Social Sustainability Performance Standards* (IFC 2006). These Performance Standards are now widely accepted as the best and most comprehensive international norms and standards for environmental and social assessment of major private sector projects, such as infrastructure. In addition, over 40 of the top international commercial banks which provide project finance have adopted the revised Performance Standards as part of the *Equator Principles*. So any major private sector project in the developing world, which has finance from the IFC or a commercial bank which has adopted the Equator Principles, must comply with the new Performance Standards.

11. GENDER ISSUES

Infrastructure and gender considerations

11.1 *Infrastructure* includes the provision of facilities and delivery of basic services essential to both women and men, such as water, sanitation, energy and transport - as well as other newly emerging areas, such as information communications technology - which have the potential to alter economic activity and women and men's livelihoods. Therefore, infrastructure has a key role to play, both directly (e.g. reduction in child mortality through safe water supply), and indirectly (e.g. time reduction for women in fetching fuel through provision of electricity or opening up employment opportunities through greater mobility) in the quality of life of all citizens (Gaynor and Jennings, 2005b). It is recognized that infrastructure services are critical to achieving the MDGs, in particular MDG1, MDG3, MDG4, MDG5 and MDG 7 (World Bank, 2006b).

11.2 The current infrastructure gap is huge and widely recognised. For example, globally, more than 1 billion people have no access to roads, 1.2 billion do not have safe drinking water, 2.3 billion lack reliable energy, 2.4 billion have no sanitation facilities and 4 billion no modern communication services (OECD, 2006). In the absence of adequate transport, energy and water, the poor (and especially poor women) pay heavily in time, money and health.

11.3 *Gender* refers to the socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women. Gender issues are those concerns and challenges that are identified from an examination of the role, status and circumstances of women and men in a given context such as in infrastructure. There are a number of gender issues that are relevant across all infrastructure sectors. These arise from the following (Gaynor & Jennings, 2005a):

- Different roles and responsibilities of women and men, leading to differences in division of labour/lifestyle and different needs interests and priorities;
- Differences in access to and control of infrastructure facilities and services; and
- Differences in employment patterns and participation rates.

11.4 Moreover, one of the key paths to economic growth (and thus poverty reduction) is through increased investment in infrastructure, including through increased private sector investment in infrastructure to meet the huge gaps mentioned above (DFID, 2006a). What is critical here, is that this investment in infrastructure and resultant economic growth is designed to reduce inequality (including gender inequality) and to avoid repeating well documented mistakes of the past, where too many large scale infrastructure projects (especially involving the private sector) had unanticipated negative consequences for the poor, especially poor women, as gender and livelihoods issues were not addressed in adequate detail in planning and evaluation (DFID, 2002b).

11.5 Empirical evidence and existing literature recognise that there is a clearly established link between infrastructure, poverty and gender (Klasen, 2005). This arises out of the fact that 70% of the world's poor are women and because poverty impacts differently on men and women, arising out of the different roles they are required to play by society.

11.6 There are several good reasons to promote engendering – that is ensuring gender considerations are included – in the infrastructure sector. World Bank research demonstrates compellingly that greater gender equality translates into greater economic growth and less poverty worldwide (World Bank 2001, Zuckerman and Qing 2005). Another reason to engender infrastructure investment is based on a well-being concern, asking whether both genders have equally benefited from the intervention (Klasen, 2005), as gender equity is a major development goal for the signatories of CEDAW and the UN MDGs.

11.7 Looking specifically at the infrastructure sector, there is widespread recognition of the differential impact of the deficit in basic infrastructure services such as water, sanitation, power and transport on the poor, especially poor women (UNDP 2006, World Bank 2004, Hansen 2006). Conversely, the benefits of improved infrastructure services on women have been disproportionately beneficial in a host of ways, such as freeing up time to engage in increased economic activity or for leisure, increased mobility and increased security (DFID 1997).

11.8 Often it is assumed that women will automatically benefit from new infrastructure, without acknowledging that it has a significant social impact. Both men and women tend to be considered mainly as beneficiaries of infrastructure projects, rather than as active participants, or as specific groups whose daily and seasonal tasks can be substantially affected. If infrastructure is not designed in view of the range of needs of its different users the impact on women and their workload can be disproportionately immense (Ausaid, 1997).

11.9 Looking across other sectors, there is also evidence of the gendered impacts of inadequate infrastructure on services such as health and education. For example, with regard to MDG 4 and 5 – (improve child health, reduce maternal mortality), there is widespread evidence that lack of access to acceptable transport prevents women from accessing clinics for deliveries, thus leading to increased fatalities. Similarly, lack of quality lighting leads to poorly performed obstetrical interventions, leading to bleeding and possibly death. Another common example widely observed is the lack of clean water leading to infection of mother and child and therefore increased death rates. (World Bank, 2006b.)

11.10 Despite the existing evidence that women and men do not benefit equally from infrastructure services, there is widespread acknowledgement that many infrastructure projects and programmes act as if they are gender blind. This is slowly changing, as gender equality policies get translated into action, especially in sectors where gender has traditionally not been mainstreamed, such as infrastructure (World Bank, 2006a).

11.11 For example in irrigation projects, competing household uses for water – for crops, for livestock and cooking / washing – should be addressed, as well as arrangements for collecting and carrying water. The design and location of water systems may fulfil multiple purposes if these different uses are taken into account (Hunt, 1997).

11.12 However, as Gaynor and Jenning's (2005b) paper acknowledges, "while there is some literature available on the pro-poor aspects of public private partnerships in infrastructure (PPPIs), and a wide literature on gender, there is no empirical data available that extracts best practice in relation to gender dimensions of PPPIs". Their paper attempts to identify opportunities and entry points for integrating gender dimensions into PPPIs, but this is restricted to the project level (so not of direct relevance to an oversight department such as PSI), although it is useful in terms of providing project level approaches, analyses and tools.

Infrastructure policy and gender

11.13 DFID's Gender Strategy is set out in the Target Strategy Paper "Poverty Elimination and the Empowerment of Women (2000)" and its gender commitments specified in the Public Service Agreements (PSAs) that are aligned with the MDGs. Although DFID's continuous commitment to gender equality as a central policy objective is indisputable, the recent DFID gender evaluation found that gender is not being consistently mainstreamed in programming (DFID, 2006b).

11.14 The evaluation found that there had been varying degrees of 'policy evaporation', manifest in the lack of gender mainstreaming in the various stages of the project cycle – from the design stage (concept notes, social appraisals, logical frameworks) to implementation and completion phase (inception reports, progress reports, output-to-purpose reviews and project completion reports). A similar finding has been reviewed and recorded with regard to the PSI Department. The gender evaluation found that within DFID (and echoing much of the existing wider literature), there are also divergent interpretations of the term 'poverty reduction'. The interpretations of what constitute poverty reduction, vary from staff that tend to place a greater emphasis on economic growth, to those that prefer a broader interpretation of poverty from a multi-dimensional perspective, emphasising social inequality and regarding gender inequality as essential to an understanding of poverty. The implication of this is that the significance of gender equality to poverty reduction and DFID's mandate depends on interpretations of poverty reduction (DFID, 2006b).

11.15 The DFID policy paper "Making Connections: Infrastructure for Poverty Reduction" (DFID 2002b) provides the policy framework for the PSI department's activities. It acknowledges that "while the evidence is broadly positive, spending on infrastructure has not always contributed to pro-poor growth" (DFID 2002b). Thus, there is a call to learn from past mistakes, although without any explicit commitment to engendering infrastructure investment, except in the context of "addressing gender and livelihoods issues…in planning and evaluation… (to avoid) unanticipated negative consequences for the poor (DFID 2002b).

11.16 The World Bank Group has recently developed a Gender Action Plan (September 2006), recognising that "gender equality is smart economics" and that "economic growth is driven by women." The plan explicitly singles out economic sectors including private sector development and finance and infrastructure, in which to implement operational gender mainstreaming measures (World Bank, 2006a). Consultations with DFID policy division staff have revealed that DFID also is currently undergoing a similar exercise to come up with a DFID-specific Gender Action Plan. The OECD DAC (GenderNet) literature reveals that there is an ongoing effort to revise draft gender guidelines include guidance on addressing gender in the context of multi-donor infrastructure facilities (such as those supported by PSI), but that these are still being prepared.

Lessons learnt and best practice benchmarks

11.17 There are a number of benchmarks of best practice with regard to social assessment (including gender mainstreaming), which could be relevant to the PSI department, in their facility design and oversight role. These include the recently updated IFC Environmental and Social Sustainability Performance Standards, the World Bank's Gender Action Plan, Cathy Gaynor's "Framework for Addressing Gender and Poverty in PPIs" as well as a host of sector specific gender toolkits on the World Bank and/or IFC websites. Most of these however, provide tools

and techniques relevant at the project level, rather than for the programme oversight role played by DFID's PSI department.

11.18 The raison d'être for gender mainstreaming within the infrastructure sector is that men and women have socially imposed, differing roles in society. Thus the aim of undertaking a gender analysis is to ensure that positive impacts from improved infrastructure benefit both men and women equally (and vice-versa). The World Bank's recent Gender Action Plan provides some valuable lessons learnt that are relevant for the PSI department. These are summarised in the box below (World Bank, 2006a).

Box 1 Lessons from the World Bank's Gender Action Plan

The Action Plan builds on the lessons learned from the Bank's recent experience with gender mainstreaming. A comprehensive evaluation of the World Bank's work on gender issues during the 90's showed that the Bank's success in mainstreaming gender issues in health and education was the result of developing a solid empirical rationale and assigning Bank staff with relevant gender expertise to these sectors. The evaluation also showed, however, that the Bank's incomplete implementation of its gender policy was partly due to the weakness in measuring the sex-disaggregated impact of Bank assistance[12]. In response, this Plan proposes develop the business case, strengthen staff expertise, and measure the development impacts of gender mainstreaming in the economic sectors. It also incorporates another important lesson from the 2001 gender mainstreaming strategy – namely, that strategic seed financing can be effective in building institutional commitment to incorporating gender into analytical and operational work.

11.19 This Gender Action Plan is the first Bank gender guideline to "mainstream gender" into policy operations across the entire World Bank Group. Despite this positive step forward, critics have commented that by justifying the need to mainstream gender on the grounds of "smart economics", it lacks a human rights approach to empowering women, essential for a development institution with a mission to reduce poverty. (Zuckerman, 2007.)

PART 3: CONCLUSION

12. CONCLUSION

12.1 Investment in infrastructure, both additional capacity and maintenance, has been and remains inadequate to meet the aspirations of the MDGs. This consistent failure of the network industries has impacted on the growth and structure of the PPI market itself. PPI has not been equally available across geographical regions or sectors. The facilities, donor and wider literature all indicate that investment is lowest and least attractive in SSA (excepting Nigeria and South Africa) across all sectors, indicating a failure of PPI to reach the very poorest. Telecommunications accounted for 73% of all investments and water and sewerage accounted for 1% in SSA in the period 1990-2004 (Leigland and Butterfield, 2006). In general, a far greater proportion of telecom investments are covered by the private sector compared to investments in transport, energy, and water where ODA provides more capital but aid is still a small part of the overall public investment need (Leigland, nd). The water and sanitation sectors present the greatest challenge for investors as they are often perceived to be a public good in more than the technical sense (e.g. Meridian Institute, 2005). DFID (2005d) suggests there are considerably different demands and financing solutions relevant to the different areas of infrastructure, which are often not sufficiently taken into account.

12.2 While at the broad level, there is clearly an association between infrastructure investment, economic growth and poverty reduction, less clear are the steps in the causality chain that lead from one to the other, and how these would work specifically in the case of PPI. Causality is difficult to track in all three levels of literature. The facilities offer little explanation of the linkage between inputs to outputs to outcomes to impacts. Part of the reason a clear causal pathway is not always apparent is that the facilities and donors respond to emerging ideas about how to improve PPI, whilst the rationale for PPI itself remains constant. Goals, barriers to PPI and activities are easier to identify and there is much synergy in these areas across the levels of literature. However, it appears that empirical evidence for robust links between the steps in the causal chain is limited. There is simply a lack of evidence and this is true for the public and the private sectors and partnerships between them.

12.3 The basic rationale for all the facilities finds much support in level 2 and level 3 literature. It is that current infrastructure in developing countries is inadequate for the present and growing needs of the poor. Lack of infrastructure is compromising the achievement of the MDGs and frustrating economic growth. Public provision of infrastructure has been proven to be inefficient and inadequate. Private participation in infrastructure (PPI) can be efficient, effective and pro-poor, but only if it is properly and prudently implemented and regulated. Private investment has diminished significantly over the past ten years and ways to reinvigorate and diversify investment are needed. There are a number of barriers and potential pitfalls to successful PPI, to which the different individual facilities offer a range of assistance via policy and technical assistance, developing and financing transactions, overall capacity building and smart subsidies.

12.4 In general, the expectation is that PPI can have a dual impact on poverty reduction and the MDGs - directly, through improving the living conditions of the poor, and indirectly, by stimulating pro-poor economic growth. Less articulated is a third area of impact emerging from newer facilities and level 2 and 3 literature, in which PPI can have a direct pro-poor impact through the process of infrastructure development, for example by offering employment opportunities to the poor, and by creating fiscal space for pro-poor public investment. It is now accepted that PPI must address both growth and access; the diversity of the facilities and their continued development reflect this. Organising the poor, building up their collective strength and voice to negotiate with authority and the formal sector is another positive 'process' impact.

12.5 Historically, donor support for infrastructure has faced environmental challenges, to which they have responded by adopting more rigorous environmental and social safeguard policies. However, support for PPI – which in sectors such as water and energy can create opportunities to improve environmental conditions – requires an approach that addresses the strategic environmental implications of how facilities are designed and launched as well as the industry standard environmental risk management processes for individual transactions.

12.6 There is a body of (mainly NGO) literature that still does not accept the case for private investment in infrastructure and is highly critical of DFID's support for PPI. However, while it is widely accepted in the literature that PPI can contribute to growth and poverty reduction, it is also widely accepted that not all private investment benefits the poor and that private investment may be at least as bad as public investment in failing to reach the very poorest.

12.7 Attention to negative public opinion and assuring pro-poor impact are emerging areas of concern across all three levels of the literature, but they are emphasised more by levels 2 and 3 suggesting that the facilities could strengthen their contribution in this regard. The emphasis of the facilities is often more market-based rather than rights-based, and the independent reviews of the facilities suggest they need to strengthen pro-poor impact and community engagement.

12.8 Emerging trends are towards facilitating local and regional PPI given the lack of international investment post-1997. The move towards supporting more small scale, community-related and locally involved projects is also evidenced across the three levels. Broader good governance and political issues impact on investor confidence and PPI success, but are not the focus of facility activity. Neither is corruption directly addressed by the facilities, except GPOBA, (although policy advice, legal and regulatory reform touch on it indirectly), an area about which there is mixed evidence. Level 2 and 3 literatures suggest greater attention may be paid to strengthening the public sector in infrastructure service provision, given its past, current and foreseen continued crucial role. The issue is now more about complementarity than ideology; scaling up requires promotion of both. Minor concerns are raised about the number and range of donor initiatives which may confuse, drain or divert resources. Donor coordination and improved coherence are essential. DFID/PSI is aware of the risk and aims to address it.

PART 4: REFERENCES

13. REFERENCES

PART 1: REFERENCES ON PRIVATE SECTOR INFRASTRUCTURE INVESTMENT

Facilities Literature

Cities Alliance/GHK (2006) Draft Final Report: Independent Evaluation of the Community-Led Infrastructure Finance Facility (CLIFF)

Community-Led Infrastructure Finance Facility (CLIFF), nd, *Questions and Answers*, available online at: http://www.homeless-international.org/doc_docs/CLIFFQ&ABrochure_Draft.pdf [Accessed 24 November 2006]

DFID (2001) *APIFF (Africa Private Investment Financing facility) Project Memorandum*

DFID (2002a) *GuarantCo Project Memorandum*

DFID (2003) *Project Memorandum Water and Sanitation Programme 2003-2006: Reaching the Target - Water Supply and Sanitation Services for the Poor*

DFID (2004) Project Memorandum: Global Partnership for Output Based Aid Challenge Fund GPOBA (CF)

DFID (2005a) EAIF Annual Review

DFID (2006a) EAIF Annual Review

DFID (2006b) *Private Sector Infrastructure Programme – a performance report for the financial year 1 April 2005 – 31 March 2006 and future plans*

DFID (2006c) *EAIF Annual Review 2006*

DFID (2006d) *ESMAP Annual review 2006*

DFID (2006g) *Memorandum of Understanding Between The Department for International Development (DFID), United Kingdom of Great Britain and Northern Ireland And The Private Sector Infrastructure Development Group Trust Technical Assistance Facility (TAF)*

DFID/Cities Alliance (2002) *Project Memorandum: Community-Led Infrastructure Finance facility*

EAIF, 2005, 'A partner for Africa', paper presented at DFID *Private Sector Infrastructure Workshop*, 29-30 June 2005

ESMAP (2001) *Annual Report 2000-2001*

ESMAP (2002) *Annual Report 2002*

ESMAP (2004) *Annual Report 2004*

ESMAP (2005) *Project memorandum – Decentralised energy services to fight poverty: Outcome driven engagement of small and medium-sized enterprises in the provision of energy services in IDA countries*

Energy Sector Management Assistance Program (ESMAP), *ESMAP Business Plan: 2005-2007*

GPOBA (2005a) 'Output-Based Aid', *OBA Approaches* Note No. 5, March 2005, Washington: World Bank

GPOBA (2005b) *Global Partnership on Output-Based Aid: Operating Principles and Annexes*, 18 February 2005

GuarantCo, *GuarantCo Feasibility Synthesis Report*

International Financial Institutions Department Private Sector Infrastructure & International Financial Institutions Team Presentation to Amanda Rowlatt, Director ETID, 19th October 2005

IFID/DFID (2005) *WSUP (Water and Sanitation for the Urban Poor): Start-up Funding Project Document*

Jacobs Consultancy in association with ProFina – Project and Finance (2003) *Infrastructure Development Partnership (DevCo) Feasibility Study*.

Leigland, J., nd, *PPI in SSA: Historical Performance and Emerging Trends*, Presentation of behalf of PPIAF

Lindahl, C and Rudo, D. (2004) *Final Report: A Review of the Emerging Africa Infrastructure Fund (EAIF)*

McGillivray, G. (2004) *International Programmes to Promote Private Participation in Infrastructure in Poorer Countries*, DFID Presentation 9 June 2004

Meridian Institute (2005) *The Provisions of Infrastructure Services in Developing Countries: The report of an issue mapping process*, submitted to PPIAF and the World Bank

Michael Jordan and Associates (2004) *Strategic Review of the Public-private Infrastructure Advisory Facility*

Morris, I. (2006) 'Does the private sector have a role to play in the development process? Some insights from the

CLIFF experience', Paper presented at the *Development Studies Association Conference*, University of Reading, 11 November 2006

PIDG, nd, *The Constitution of the Private Infrastructure Development Group*

PIDG (2005) *Briefing Note for PIDG - Regulatory Risk Study*

PPIAF (1999) (revised 2000, 2001), *Programme Charter: Helping to eliminate poverty and achieve sustainable development by facilitating private involvement in infrastructure*

PPIAF (2000) *Annual Report 2000*

PPIAF (2001) *Annual Report 2001*

PPIAF (2002) *Annual Report 2002*

PPIAF (2003) *Annual Report 2003*

PPIAF (2004a) *Annual Report 2004*

PPIAF (2004b) *Strategic Interim Review PPIAF: Terms of Reference*

PPIAF (2005a) *Annual Report 2005*

PPIAF (2005b) *Project Memorandum: Public Private Infrastructure Advisory Facility Phase III, July 2005-June 2008*

PPPUE (1999) Report from Public-Private Partnerships for the Urban Environment: 1999 International Conference, Bonn, Germany, November 9-10, 1999, *PPPUE Conference Paper Series*, Volume III

PSI/CDC Department (2004a) *Slum Upgrading Facility (SUF) Project Memorandum*

PSI/CDC Department (2004b) *Slum Upgrading Facility (SUF) Project Submission*

PSI/CDC Department (2005) *InfraCo Pilot Programme Project Submission*

Rudo, D. (2005) *Final Report: Mid-term review of DevCo*

Rudo, D. (2006) *Draft Report: Mid-Term Review of the Private Infrastructure Development Group and the Programme Management Unit*

TAF, nd, *Statement of Policies and Procedures of PIDG Technical Assistance Facility*

TAF (2005) *PIDG Technical Assistance Fund Status Report*: May 1, 2005

WSP (2001) Charter Water and Sanitation Program Council Adopted March 21, 2001

Donor Literature

Andres, L., Foster, V. and Guasch, J.L. (2006) The impact of privatization on the performance of the infrastructure sector: the case of electricity distribution in Latin American countries, *World Bank Policy Research Working Paper 3936,* World Bank: Washington, DC

ADB/JBIC/World Bank (2005) *Connecting East Asia: A new framework for infrastructure*, Asian Development Bank/ Japan Bank for International Cooperation/World Bank

Auriol, E. and Picard, P.M. (2006) 'Infrastructure and Public Utilities Privatization in Developing Countries', *World Bank Policy Research Working Paper 3950,* World Bank: Washington, DC

Bertolini, L. (2006) How to improve regulatory transparency: Emerging lessons from an international assessment, *Gridlines*, Note No. 11

Bhatia, B. and Gupta, N. (2006) 'Lifting constraints to public-private partnerships in South Asia: The way toward better infrastructure services', *Gridlines*, Note No. 6

Clark Annez, P. (2006) Urban infrastructure finance from private operators : what have we learned from recent experience?, *World Bank Policy Research Working Paper 4045*, World Bank: Washington, DC, available online at: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2006/10/25/000016406_20061025122215/Rendered/PDF/wps4045.pdf [Accessed 16 November 2006]

Curtis, L. (2004) *POVNET: Infrastructure Financing: Current Initiatives, New Opportunities*, presentation 27 October 2004

Dervis, K. (2005) Speech to the Infrastructure for Poverty Reduction Event, available online from: http://content.undp.org/ [Accessed 17 November 2006]

DFID (1997) *White Paper on International Development: Eliminating World Poverty: A Challenge for the 21st Century*, DFID: London

DFID (2000) *White Paper on International Development: Eliminating World Poverty: Making Globalisation Work for the World's Poor*, DFID: London

DFID (2001a) *Target Strategy Paper: Addressing the water crisis - healthier and more productive lives for poor people*, DFID: London

DFID (2001b) *Target Strategy Paper: Making government work for poor people - building state capability*, DFID: London

DFID (2001c) *Target Strategy Paper: Meeting the challenge of poverty in Urban Areas*, DFID: London

DFID (2002b) *Making Connections: Infrastructure for Poverty Reduction*, DFID: London

DFID (2005b) Internal memo report on Sida's Creative Urban Finance Seminar 14-15 December 2005

DFID (Author unspecified) (2005c) *DRAFT Review of Project Preparation Facilities: Issues and Options, Based on a Report Commissioned by DFID for the Africa Infrastructure Consortium*

DFID Internal Audit Department (2005d) Review of Private Sector Infrastructure Projects, *Internal Audit Report* No. 409

DFID (2006e) Infrastructure and pro-Poor growth, *Pro-Poor Growth Briefing* No. 4

DFID (2006f) *White Paper on International Development: Eliminating World Poverty: Making Governance Work for the Poor*, DFID: London

Harris, C., Hodges, J. Schur, M. and Shukla, P. (2003) *A Review of Cancelled Private Projects, Public Policy for the Private Sector*, Note No. 252, World Bank: Washington, D.C.

Infrastructure Consortium for Africa (ICA) – website available at: http://www.icafrica.org/en/ [Accessed 14 November 2006]

Infrastructure Consortium for Africa (2005) *Outcome Statement from the first ICA Meeting*, London, 6 October 2005, available online at: http://www.icafrica.org/fileadmin/documents/Final-Consortium-outcomes-statement.pdf [Accessed 14 November 2006]

Infrastructure Consortium for Africa (2006) *Outcome Statement from the second ICA Meeting*, Addis Ababa, 20 June 2006, available online at: http://www.icafrica.org/fileadmin/documents/Outcomes-statement-Addis.pdf [Accessed 14 November 2006]

Infrastructure Consortium for Africa (2006) *Guide to Infrastructure Project Preparation Facilities in Africa*, available online at: http://www.icafrica.org/en.resources/ [Accessed 16 February 2007]

International Development Association (2006), *A Review of the Use of Output-Based Aid Approaches*, International Development Association, Sustainable Development Network, IDA/World Bank Group: Washington, D.C.

International Development Committee (July 2006), *Private Sector Development: Fourth Report of Session 2005 – 2006: Vol 1 Report, together with formal minutes*, Great Britain Parliament House of Commons International Development Committee, Stationery Office Limited

International Finance Corporation (IFC) of the World Bank website available at: http://www.ifc.org/ [Accessed 14 November 2006]

Investment Climate Facility for Africa (ICF) – website available at: http://www.investmentclimatefacility.org/ [Accessed 14 November 2006]

Irwin, T., Juan, E.J. and Warlters, M. (2005) Infrastructure Development: The Roles of the Public and Private Sectors, *Work Bank Guidance Note*, World Bank: Washington DC.

Izaguirre, A.K. (2005) Private Infrastructure: Emerging Market Sponsors Dominate Private Flows, *Public Policy Journal*, No. 299, the World Bank

Jahan, S. and McCleery, R. (2005) *Making Infrastructure Work for the Poor: Synthesis Report of Four Country Studies - Bangladesh, Senegal, Thailand and Zambia'*, United Nations Development Programme (UNDP): New York

Jenson, O. and Blanc-Brude, F. (2006) 'The Handshake: Why Do Governments and Firms Sign Private Sector Participation Deals? Evidence from the Water and Sanitation Sector in Developing Countries', *World Bank Policy Research Working Paper* 3937, World Bank: Washington DC.

Kariuki, M., Schwartz, J. and Schur, M. (2006) Reaching unserved communities in Africa with basic services Can small-scale private service providers save the day?, *Gridlines*, Note No. 9

Leigland, J. (2006) 'Responding to surging demand for PPIAF assistance in Africa: A response combining traditional and new approaches', *Gridlines*, Note No. 7

Leigland, J. and Butterfield, W. (2006) Reform, private capital needed to develop infrastructure in Africa Problems and prospects for private participation, *Gridlines*, Note No. 8

MIGA (Multilateral Investment Guarantee Agency) of the World Bank, website available at: http://www.miga.org/index.cfm [Accessed 14 November 2006]

Modi, V., McDade, S., Lallement, D., and Saghir, J. (2005) *Energy Services for the Millennium Development Goals*, UNDP, UN Millennium Project and World Bank: New York

OECD, 2006a, *Promoting Pro Poor Growth: Infrastructure*, Paris: OECD, Available online at: http://www.oecd.org/dataoecd/16/46/36301078.pdf [Accessed 9 November 2006]

OECD (2006b) *Promoting Pro Poor Growth: Private sector development*, Paris: OECD, available online at: http://www.oecd.org/dataoecd/43/63/36427804.pdf [Accessed 9 November 2006]

PPIAF/World Bank, nd, *Private Participation in Infrastructure: Trends in Developing Countries in 1990-2001*, World Bank: Washington, D.C., available online at: http://ppi.worldbank.org/resources/ppi_book.aspx [Accessed 16

November 2006]

Schur, M., von Klaudy, S., and Dellacha, G. (2006) 'The role of developing country firms in infrastructure A new class of investors emerges', *Gridlines* Note No.3

Sheppard, R., von Klaudy, S. and Kumar, G. (2006) 'Financing infrastructure in Africa How the region can attract more project finance', *Gridlines*, Note No. 13

UN-HABITAT (2005) *Responding to the Challenges of an Urbanising World: UN-HABITAT Annual Report 2005*, Nairobi: UN-HABITAT

World Bank (1994) World *Development Report 1994: Infrastructure for Development*, Washington DC: World Bank

World Bank (2003) *Infrastructure Action Plan*, available online at: http://siteresources.worldbank.org/INTTRM/Resources/InfrastructureActionPlan.pdf [Accessed 14 November 2006]

World Bank (2004) *Global Development Finance 2004: Harnessing Cyclical Gains for Development*, Washington DC: World Bank

World Bank (2005) *World Development Report 2006: Equity and Development*, Washington DC: World Bank

World Bank (2006a) 'Peru: Rethinking Private Sector Participation in Infrastructure', *Report No. 32674-PE*, Finance, Private Sector and Infrastructure Sector Management Unit: World Bank

World Bank (2006b) *Infrastructure at the Crossroads: Lessons from 20 years of World Bank Experience*, World Bank: Washington, DC

World Bank 2006c Kenya Informality: Poverty, Jobs, Housing and Services in Nairobi's Slums Report No. 36347-KE

World Bank, *Private Participation in Infrastructure Database* available online at: http://ppi.worldbank.org/ [Accessed 22 November 2006]

Wider Literature

ActionAid, 2006, Real Aid II Key Messages, Facts and Statistics, available online at: http://www.actionaid.org/wps/content/documents/Key%20facts%20stats_472006_154925.doc [Accessed 14 November 2006]

Allayannis, G. and Weston, J. P. (2000) 'The Use of Foreign Currency Derivatives and Firm Market Value', Review of Financial Studies 14 (1): 243-76. (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

Amis, P., with Sashi Kumar (2000) "Urban economic growth, infrastructure and poverty in India: lessons from Visakhapatnam" in *Environment and Urbanization* Vol. 12 No. 1: 185-196

Amis, P. (2001) 'Rethinking UK Aid: lessons from an impact assessment study of DFID's Slum Improvement projects', in *Environment and Urbanization* Vol. 13, No. 1: 101-103

Arndt, C., Tarp Jensen, H. Robinson, S, and Tarp, F. (1999) 'Marketing Margins and Agricultural Technology in Mozambique', Discussion Paper 43, Trade and Macro Division, IFPRI, July

Apoyo Opinion y Mercado (2002) Survey. Lima, Peru (cited in Harris *et al*, 2003)

Bartholomew A., Leurs R., McCarty A. (2006) *Joint Evaluation of General Budget Support: Vietnam Country Report.* Glasgow: DFID, May

Batley, R.A. (2006) 'Engaged or divorced? 'Cross-service findings on government relations with non-state service providers', *Public Administration and Development,* Vol. 26, Number 3: 241-251

Batley, R.A. and Larbi, GA (2004) *The Changing Role of Government: The Reform of Public Services in Developing Countries*, Basingstoke: Palgrave

Benjamin, S. (2000) "Governance, economic settings and poverty in Bangalore", *Environment and Urbanization,* Vol. 12 No 1: 35-56

Benjamin, S. and Bhuvaneswri, R. (2001) *Democracy, Inclusive Governance and Poverty in Bangalore,* Theme paper No 26 Urban Governance, Partnerships and Poverty, IDD, School of Public Policy, The University of Birmingham

Bergara, M. E., Henisz, W. J. and Spiller, P. T. (1998) 'Political Institutions and Electric Utility Investment: A Cross-Nation Analysis', *California Management Review*, 40 (2): 18-35. (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

Brown, E., Cloke, J. and Sohail (2004) 'Key Myths about Corruption: A Briefing paper for a Workshop on Corruption and Development', Development Studies Association Annual Conference, Church House, Westminster, Saturday 6th of November 2004 (Preliminary Version). Available online at: http://wedc.lboro.ac.uk [Accessed 13 November 2006]

Brunetti, A., Kisunko, G. and Weder, B. (1997) 'Institutional Obstacles to Doing Business: Region-by-Region Results from a Worldwide Survey of the Private Sector'. *Policy Research Working Paper* No. 1759, World Bank: Washington, DC. (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

Brunetti, A. and Weder, B. (1997) 'Investment and Institutional Uncertainty: A Comparative Study of Different Uncertainty Measures', Technical Paper No. 4, International Finance Corporation: Washington, DC. (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

Cann, V. and Jones, T. (2006) 'Down the Drain: How aid for water sector reform could be better spent', World

Development Movement: London
http://www.wdm.org.uk/resources/reports/water/downthedrainreport26112006.pdf

Carrera, J., Checchi, D. and Florio, M. (2004) 'Privatisation Discontent and its Determinants: Evidence from Latin America', Working Paper No. 23, American University of Paris: Paris

Citizens' Network on Essential Services (CNES) (2003) The Expansion of the World Bank Group's Infrastructure Agenda, available online at:
http://www.servicesforall.org/html/worldbank/infrastructure_agenda.shtml [Accessed 14 November 2006]

Clarke, G. and C. Xhu (2004) 'Privatization, Competition and Corruption: How characteristics of Bribe takers and Payers Affect Bribes to Utilities', *Journal of Public Economics*, Vol. (9-10), pp 2067-2097

Collier, P and Gunning, J.W. (1999) 'Explaining African Economic Performance', *Journal of Economic Literature*, Vol XXXVII, (64-111)

Collignon, B. and Vezina, M. (2000) 'Independent Water and Sanitation Providers in Africa Cities. Full Report of a Ten City Study'. Water and Sanitation Program, World Bank Institute, GTZ, BADC.

Collignon, B. and Plummer J. (2005) '*Supporting the market that serves the urban poor: Emerging responses to enhance the role of local private sector providers'* Water and Sanitation Program background paper for workshop on Domestic Private Sector Participation Initiative, Nairobi, June

Da Silva, I. L. (2003) 'The Programme for Land Tenure Legalization on Public Land in São Paulo, Brazil', *Environment and Urbanization* Vol. 15, No 2: 191-199

De Soto, H. (2000) *The Mystery of Capital*. Basic Books: New York (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

Devas, C.N., with Amis, P., Beall, J., Grant, U., Nunan, F., Rakodi, C. (2004) *Urban Governance, Voice and Poverty in the Developing World*, Earthscan: London

Estache, A. et al. (2001) 'Utilities privatization and the poor: Lessons and evidence from Latin America', *World Development*, Vol. 29, No.7, pp. 1179-1198.

Estache, A. (2006) *Infrastructure: A Survey of Recent and Upcoming Issues*, Infrastructure Vice-Presidency, and Poverty Reduction and Economic Management Vice-Presidency, World Bank: Washington DC

Estache, A. Goicoechea A. and Trujillo L. (2006) "Have reforms improved infrastructure performance in developing countries?", The World Bank, mimeo (cited in Estache, 2006)

Gilbert, A. (2007) 'Water for all: How to combine public management with commercial practice for the benefit of the poor', *Urban Studies,* Vol. 44, Issue 8, July

Ghosh Banerjee, S., Oetzel, J.M. & Ranganathan, R. (2006) 'Private Provision of Infrastructure in Emerging Markets: Do Institutions Matter?' *Development Policy Review*, Vol. 24, No. 2, pp. 175-202, March 2006

Ghura, D. and Hadjimichael, M. T. (1995) *Growth in Sub-Saharan Africa*, *IMF Working Paper* 95/136, International Monetary Fund: Washington, DC (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

Guasch, L.J. (2003) *Granting and Renegotiating Infrastructure Concessions—Avoiding the Pitfalls*, Draft, World Bank: Washington (cited in Harris, 2003)

Hall, D. and Lobina, E. (2006) 'Pipe dreams: The failure of the private sector to invest in water services in developing countries', Public Services International Research Unit and World Development Movement: London http://www.wdm.org.uk/resources/reports/water/pipedreamsreport01032006.pdf

Hanmer, L., Booth, D., and Lovell, F. (2000) 'Poverty and Transport', report prepared for the World Bank in collaboration with DFID, Overseas Development Institute

Harris, C. (2003) 'Private Participation in Infrastructure in Developing Countries Trends, Impacts, and Policy Lessons', *Working Paper* No. 5, World Bank: Washington, D.C

Haselip, J. (2004) 'The globalisation of utilities liberalisation: Impacts upon the poor in Latin America', *CSGR Working Paper* No. 138/04

Henisz, W.J. and Zelner, B.A. (2004) *Resistance to Illegitimate Multilateral Influence on Reform: The Political Backlash Against Private Infrastructure Investments,* available online at: http://w4.stern.nyu.edu/emplibrary/Witold_Heinsz_paper.pdf [Accessed 17 November 2006]

Howell, L. D. (ed.) (1998) *The Handbook of Country Risk Analysis*. New York: The PRS Group (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

Jordan, M. (2004) *Assessment of the Availability of Political Risk Insurance for Infrastructure Investments*, Report Prepared for Private Infrastructure Development Group

Kayaga, S.M., Calvert, J. and Sansom, K.R., (2003) 'Paying for Water: Effects of Household Characteristics', *Utilities Policy*, 11(3): 123-132, September

Kessler, T. (2004) *Who's Taking Risks? How the World Bank pushes private infrastructure - and finds resistance in some surprising places*, Citizen's Network on Essential Services (CNES)

Kindleberger, C. P. (1969) *Six Lectures on Direct Investment.* New Haven, CT: Yale University Press (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006).

Kirkpatrick, C. and Parker, D. (2005) Poverty and Regulation: How Regulation can Contribute to Poverty Reduction in Developing Countries, Paper presented at the CRC Annual conference *Regulation, Competition and*

Poverty: Policy and Practice, Manchester, UK, June 2005, available online from: http://www.competition-regulation.org.uk/conferences/ [Accessed 14 November 2006]

Laffont, J.J., (2005) *Regulation and Development*, Cambridge University Press (cited in Estache, 2006)

Laffont, J.J. and Meleu, M. (1999) 'A positive theory of privatisation for sub-Saharan Africa', *Journal of African Economies*, 8: 30-67 (cited in Estache, 2006).

Mathews, P. and Lynch, M. (Engineers Against Poverty) (2006) 'An Economic & Social Performance Framework For Engineering Consultants & Contractors Operating in Developing Countries', Paper presented at the *Development Studies Association Conference*, University of Reading, 11 November 2006

Mauro, P. (1995) 'Corruption and Growth', *Quarterly Journal of Economics* 110 (3): 681-712. (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

McIntosh, A.C. (2003) *Asian Water Supplies – Reaching the Poor*, Asian Development Bank, Manila and IWA Publishing, London

McKenzie, D. and Mookherjee, D. (2002) 'Distributive Impact of Privatization in Latin America: An Overview of Evidence from Four Countries' *Economía, Journal of the Latin American and Caribbean Economic Association*, Vol. 3 (2): 161-218

Mills, G. (2006) *Bricks, Mortar, Policy and Development: Aid and Building African Infrastructure*, The Brenthurst Foundation, available online at: www.thebrenthurstfoundation.org [Accessed 23 November 2006]

Narayan, D. Chambers, R. Shah. M.K. Patesch, P. (2000) *Voices of the Poor,* Oxford University Press

Narayan, D. and Patesch, P. (2002) *Vocies of the Poor: From many lands,* Oxford University Press

Nellis, J. (2003) 'Privatization in Africa: What has happened? What is to be done?', Center for Global Development, *Working Paper* No. 25

Nickson, R.A. and Franceys, R. (2003) *Tapping the Market: The challenge of institutional reform in the urban water supply sector*, Basingstoke: Palgrave

Nickson, RA and Vargas, C. (2002) 'The limitations of water regulation: the Cochabamba concession in Bolivia', *Bulletin of Latin American research,* Vol. 21 No. 1 pp 128-149

Nkhoma-Mbawa, F. (2006) Creating an Enabling Environment for Private Sector Participation: Perceptions of the Private and Public Sectors in Malawi, Paper presented at the *Development Studies Association Conference*, University of Reading, 11 November 2006

North, D. N. (1990) *Institutions, Institutional Change and Economic Performance,* Cambridge University Press: New

York. (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006)

Panggabean, A. (2005) 'Using Market Mechanisms to Expand Access to Basic Services in Asia Pacific: Public-Private Partnerships for Poverty Reduction', Paper presented at the *Making Markets Work Better for the Poor* Workshop, ADB, ADBI & DFID: Manila

Plummer, J. (2002a) 'Inclusive partnerships: Redefining public-private partnerships to focus delivery of water and sanitation services on the poor, Paper for the DFID Governance Advisers' Retreat, Improving Service Delivery in Developing Countries, Eynsham Hall, Oxfordshire, 24-30 November 2002

Plummer, J. (2002b) Focusing partnerships: a sourcebook for municipal capacity-building in public-private partnerships, London, Earthscan

Powell, J. (2005) How much trust should we put in the funds? available online at: www.brettonwoodsproject.org [Accessed 23 November 2006]

Prud'homme, R. (2004) 'Infrastructure and Development', Paper prepared for the Annual World Bank Conference on Development Economics, 3-5 May (cited in Ghosh Banerjee, Oetzel and Ranganathan, 2006).

Raj, M. (1993) 'Urbanisation, infrastructure and besieged growth potential', *Third World Planning Review*, 15, 2: 159-174

Ravallion, M. and Datt, G. (2002) 'Why has economic growth been more pro-poor in some states of India than others?' *Journal of Development Economics*, 69, 381-4000

Rives Argeñal, A. (2004) *Private Sector Participation in Municipal Water Systems in Latin America*, Available online at: http://www.american.edu/sis/idp/resources/Rives%20SRP.pdf [Accessed 13 November 2006]

Rock, M.T. and Bonnett, H. (2004) 'The comparative politics of corruption: Accounting for the East Asian paradox in empirical studies of corruption, growth and investment', *World Development,* 32(6): 999-1017 (cited in Estache, 2006)

Sader, F. (2000) 'Attracting Foreign Direct Investment into Infrastructure: Why is it so difficult?' *Foreign Investment Advisory Service Occasional Paper* 12, IFC and World Bank: Washington, D.C.

Sansom, K.R. (2006) 'Government engagement with non-state service providers of water and sanitation services', *Public Administration and Development*, Vol. 26, Number 3: 207-217

UNDP (2006) Human Development Report 2006, New York: United Nations development Programme

WaterAid and Tearfund (2003), *New Rules, New Roles: Does PSP Benefit the Poor?*, London, WaterAid and Tearfund.

Willoughby, C. (2004) Infrastructure and the Millennium Development Goals, presentation to session on

Complementarity of Infrastructure for Achieving the MDGs, Berlin 27 Oct, available online at: http://www.oecd.org/dataoecd/22/31/36567911.pdf [Accessed 24 November 2006]

Winpenny, J T (1997) Demand Management for efficient and equitable use. In Kay, M,Franks, T, Smith, L, (eds) (1997) *Water: Economics, Management and Demand*, E & FN Spon, Suffolk

World Development Movement (WDM) (2005) Dirty Aid, Dirty Water Campaign, available online at: http://www.wdm.org.uk/campaigns/aid/summary.htm [Accessed 14 November 2006]

50 Years is enough, website available at: http://www.50years.org/index.html [Accessed 17 November 2006]

PART 2: REFERENCES ON CROSS-CUTTING ISSUES

Strategic Environmental Assessment

ADB, 2004, 'Summary Environmental and Social Impact Assessment', Nam Theun 2 Hydroelectric Project, Manila: Asian Development Bank,

Biswas, A. and Geping, Q., (eds.), 1987, *Environmental Impact Assessment for Developing Countries*, London: Tycooly

Dalal-Clayton, B. and Sadler, B., 2005, *Strategic Environmental Assessment: A Sourcebook and Reference Guide to International Experience*, London: Earthscan,

DFID, 2002, *Making Connections. Infrastructure for Poverty Reduction*, DFID

DFID, 2003, *Environment Guide: A guide to environmental screening*, London: DFID

DFID, 2006a, *DFID's Approach to the Environment*, London: DFID, London

DFID, 2006b, 'Review of DFID Environmental Screening', *DFID Evaluation Working Paper 21,* London: DFID,

EBRD website: *http://www.ebrd.com/enviro/tools/fi.htm.*

Environment Audit Committee (House of Commons), *Development, Trade and the Environment: The Role of DFID,* London, Stationary Office Limited

Environmental Resources Ltd. 1988, *Environmental Guidelines Survey* - Update 1988, London: ERL,

IFC, 2006, *Policy and Performance Standards on Social and Environmental Sustainability*, Washington: International Finance Corporation

International Institute for Environment and Development, 1995, *A Directory of Impact Assessment Guidelines*, London: IIED

Horberry, J., 1984, *Status and Application of Environmental Impact Assessment for Development*, Gland, IUCN

OECD, 2006a, *Promoting Pro-Poor growth – Infrastructure*, Paris: OECD DAC

OECD, 2006b, *Good Practice Guidance on Applying Strategic Environmental Assessment (SEA) in Development Cooperation*, Paris: OECD DAC

OED, 1996, The World Bank's Experience with Large Dams: A Preliminary Review of Impacts, Washington DC, World Bank.

Stein, R and Johnson, B, 1978, *Banking on the Biosphere?,* Lexington: Lexington Books

Wandesforde-Smith, G. et al., 1985, 'EIA in developing countries: An introduction', *Environmental Impact Assessment Review*, Vol. 5, No 3.

World Bank, 2000, *Fuel for Thought: An environmental strategy for the energy sector*, Washington DC: World Bank

World Bank, 1995, *Mainstreaming the Environment*, Washington DC: World Bank

World Commission on Dams, 2000, *Dams and Development, A New Framework for Decision Making, London,* Earthscan.

Gender

Australian Agency for International Development (AusAid, 1997), *Tip Sheet on Infrastructure prepared for the OECD, DAC Working Party on Gender Equality, Paris: OECD*, available online at http://www.oecd.org/dataoecd/2/49/186520.pdf [Accessed 16 February 2007]

DFID (1997) *Eliminating World Poverty: A Challenge for the 21st Century*, UK Government White Paper on International Development, November

DFID (2000) *Poverty Elimination and the Empowerment of Women*, http://www.dfid.gov.uk/pubs/files/tspgender.pdf

DFID (2002a) *Gender Manual,* http://www.dfid.gov.uk/pubs/files/gendermanual.pdf

DFID (2002b*) Making Connections: Infrastructure for Poverty Reduction*, http://www.dfid.gov.uk/pubs/files/makingconnections.pdf

DFID (2006a) *Eliminating World Poverty: Making Governance Work for the Poor*, http://www.dfid.gov.uk/wp2006/

DFID (2006b) *Evaluation of DFID's Policy and Practice in Support of Gender Equality and Women's Empowerment, Volume 1: Synthesis Report (EV669)*, COWI Evaluation Team, DFID

Gaynor, Cathy & Jennings, Mary (2004a) *Gender and Infrastructure: Background Paper*

Gaynor, Cathy & Jennings, Mary (2004b) *Public Private Partnerships, Infrastructure, Gender and Poverty*, Prepared for World Bank Training Programme on Public-Private Partnerships, Infrastructure, Gender and Poverty, June 2005

Gaynor, Cathy & Jennings, Mary (2005a) Annex on Gender & Infrastructure*, Annex to PPPI, Gender and Poverty Report*, World Bank

Gaynor, Cathy & Jennings, Mary (2005b) *Public Private Partnerships, Infrastructure, Gender and Poverty,* Report Prepared for World Bank Training Programme on Public-Private Partnerships, Infrastructure, Gender and Poverty, World Bank

Gaynor, Cathy (2006) *Gender-Responsive Indicators Related to Infrastructure Evaluation,* EvD Gender Training: Establishing Gender Relevance in Evaluation Themes

Hansen, Stein (2006) *State of the Art Study: The long-term Effects of Assistance to the Power Sector - Final Report*, Norad

House, Sarah (2003) *Easier To Say, Harder To Do – Gender, Equity and Water*, Paper submitted to the Alternative Water Forum, 1st and 2nd May 2003, Bradford Centre for International Development, University of Bradford

Hunt, J. (1997) *Gender Issues in Social Analysis Course Notes*, AusAid Training Course, 24 – 25 February 1997

Klasen, Stephan (2005) *Pro Poor Growth and Gender: What can we learn from the Literature and the OPPG Case Studies?,* Discussion paper, University of Göttingen to the Operationalizing Pro-Poor Growth (OPPG) Working Group of AFD, DFID, BMZ (GTZ/KfW) and the World Bank

IFC (2005) *PEP MENA Gender Entrepreneurship Markets Analysis Tool*, http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/art_GEMTools_PEPMENATool/$FILE/GEM-Manual+GLOw+24+July+05.pdf

IFC (2006a) *Gender Resources on Infrastructure*, http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/art_GEMTools_GenderResourcesonInfrastructure/$FILE/Gender+Resources+on+Infrastructure.pdf

IFC (2006b) *Guidance Note 1: Social and Environmental Assessment and Management Systems*, http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/pol_GuidanceNote_intro/$FILE/GuidanceNote_intro.pdf

OECD (2006) *Promoting Pro-Poor Growth: Key Policy Messages*, OECD Publications, Paris

UNDP (2006) *Human Development Report 2006*, UNDP, New York

Watkins, Francis (2004) *Evaluation of DFID Development Assistance: Gender Equality and Women's Empowerment - DFID's Experience of Gender Mainstreaming: 1995 to 2004*, DFID, London

World Bank (2001) *Engendering Development: Through Gender Equality in Rights, Resources, and Voice,* Policy Research Report, Oxford University Press

World Bank (2004) *World Development Report 2004*, World Bank

World Bank (2006a) *Gender Equality as Smart Economics: A World Bank Group Gender Action Plan (Fiscal Years 2007 - 2010),* The World Bank

World Bank (2006b) Mainstreaming Gender in Infrastructure, Informal Discussion with Executive Directors' Advisors, World Bank, May 2006

WSP International (2004) *Social Assessment in the Transport Sector*

Zuckerman, Elaine & Qing, Wu (2005) *Reforming the World Bank: Will the Gender Strategy Make a Difference? A Study With China Case Examples,* Heinrich Böll Foundation

Zuckerman, E (2007) Huge Gaps in the World Bank's Gender Action Plan, available online at; http://brettonwoodsproject.org/art.shtml?x=549094 [Accessed 16 February 2007]

DEPARTMENT FOR INTERNATIONAL DEVELOPMENT

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SUMMARY

This literature review is concerned with the rationale used by the PSI infrastructure investment facilities supported by DFID to inform their work and the support or lack of it for this rationale in the wider literature. It aims to inform the development of a causality map by identifying possible barriers to private sector investment, and causal links in the chain from programme inputs, to outcomes in terms of an improved environment for private sector investment in infrastructure, to the final intended impacts – poverty reduction and economic growth. The purpose of this literature review is to establish what is understood or described in the literature and to order this; it is not intended to offer judgement or to superimpose the writers' own understanding. The review is in two parts. Part 1 covers the literature relating to the general rationale for the promotion of private sector investment in infrastructure; it offers an historical overview, and analyses of the literature generated by the infrastructure facilities, of the literature of donors and development agencies and of the wider academic literature. Part 2 of the review covers the relationship between infrastructure and two cross-cutting issues - gender and environment. It examines how the literature on environment and gender have considered infrastructure and how these considerations have been brought to bear on policy.

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