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The central focus of the Government's policy, set out in the 1997 White Paper on International Development, is a commitment to the internationally agreed target to halve the proportion of people living in extreme poverty by 2015, together with the associated targets including basic health care provision and universal access to primary education by the same date. The second White Paper on International Development, published in December 2000, reaffirmed this commitment, while focusing specifically on how to manage the process of globalisation to benefit poor people.

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MAKING CONNECTIONS

Infrastructure for poverty reduction

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FOREWORD BY THE SECRETARY OF STATE

All member countries of the United Nations have agreed to work together to achieve the Millennium Development Goals, halving the proportion of the world's population living in extreme poverty by 2015, improving access to basic services such as health, education and water supply, and tackling the HIV/AIDS crisis in poor countries.

Adequate infrastructure services are crucial to the achievement of all these goals. But in recent years, many bilateral aid donors, including DFID, have significantly reduced funding for major infrastructure programmes. There are reasons for this. Many of the projects funded in the past, especially where narrow trade interests dominated, failed to meet their objectives. Some projects enriched a minority, or helped buy votes, but provided few benefits for the poor. There were also hopes that the private sector and the development banks would fund more national infrastructure. This has not happened as much as expected, especially in the least developed countries.

The mistakes of the past can be avoided without abandoning national infrastructure. But effort is needed to tackle difficult agendas, such as corruption. There needs to be a 'joined-up' approach, which links national and local services into the overall aim of poverty reduction. This will require new ways of working, new joint ventures with a range of partners, including poor people themselves.

This paper builds on DFID's Target Strategy Papers, published over the last two years and setting out how the Millennium Development Goals might be met, as well as on the two White Papers on International Development. It was written to provoke renewed

discussion, operational strategy development and action, by developing countries themselves, by the donor community in general, by other UK government departments and by those responsible for taking forward DFID's programmes.

The consultation phase for this paper, involving discussions with other government departments, civil society organisations, researchers and the private sector in the UK, as well as an electronic conference that attracted many contributions from developing country participants, has already generated ideas on the way forward. We welcome dialogue with all our partners on the approach set out, and look forward to joint action.



CLARE SHORT

Secretary of State for International Development
September 2002

EXECUTIVE SUMMARY

Developing country governments have long given high priority to infrastructure, both in policy and in investment. This emphasis continues in national poverty reduction strategies. Where there have been consultations with poor people, infrastructure services have been prioritised. Yet many in the international development community – DFID included – now think of the infrastructure sector, especially major infrastructure, as the preserve of old-fashioned and, in some minds, discredited forms of aid.

This paper aims to change that view. Infrastructure services – not simply the ‘hardware’ but also the associated institutions and, most importantly, the outcomes for people – should be given their proper weight in the new poverty agenda where national priorities are central.

A review of a range of national Poverty Reduction Strategy Papers (PRSPs)¹ shows recognition of the link between poverty and infrastructure services in general terms, but a tendency to treat separately, with different strategies and timescales, two levels of infrastructure. Major or national infrastructure (including cross-border infrastructure) is separated from the provision of local services for poor people.

This paper argues that only through a synthesis of these two agendas, and a focused effort to tackle the problems that have undermined them in the past, will the Millennium Development Goals (MDGs) be achieved. Just as there is no sense in developing feeder roads in the absence of trunk roads or building generation facilities where there are no distribution networks, so it will not work to pursue economic

growth that has minimal impact on poverty reduction, or to focus purely on direct benefits for the poor when the wider environment in which they seek to secure a livelihood remains hostile.

Reliable data are hard to obtain, but estimates indicate that approximately 70% of infrastructure investment in developing countries is financed by governments or public utilities from their own resources or from non-concessional borrowing, with less than 5% coming from official development assistance and the remainder from the private sector. (These statistics neither capture the contribution of the local private sector nor of users.) In the least developed countries, however, official development assistance greatly exceeds foreign private capital flows. Since governments are likely to continue to be the main investors, the focus for donors should be on supporting them. It is clear that governments often need to reform their infrastructure policies. Donors can also help make the links with local and international private partners, including the informal sector, and users themselves, to work with government for better services. But the private sector will not always have a role. In many cases, public sector reform will be the most realistic and politically acceptable choice.

For their part, donors need to reverse the decline in assistance. Current investment in infrastructure falls far short of even conservative estimates of what is needed. One billion of the world's population still have no access to safe drinking water, and more than twice that number of people lack appropriate sanitation or access to clean energy sources. Just under one billion people have no access to all-weather roads. Sub-Saharan Africa

Infrastructure – what do we mean?

To cover all the types of ‘economic infrastructure’ that underpin poverty reduction, the term is used here to include energy, flood protection and drainage, irrigation, information and communications technologies (ICT), transport, water and sanitation. It does not include ‘social infrastructure’, such as schools, health centres and shelter. It also deliberately covers infrastructure at all scales, from the very local (household sanitation) to national and cross-border (such as regional transport). The focus is on services, people and institutions, not just on hardware, and infrastructure is sometimes used in this paper as shorthand for infrastructure services, though they are distinguished where necessary. Evidently, not all the points made in this paper will apply equally to every sort of economic infrastructure.

¹This review (Leathes, 2002) was supplemented by World Bank reviews of PRSPs on water (Mehta, 2002) and transport (World Bank, 2002).

Poor people use the private sector for infrastructure services

contains about 10% of the world's population, but only 0.2% of the world's telephone lines.²

Investment alone is not enough. Infrastructure – particularly national infrastructure – has a bad name among many donors because in the past investment did not always deliver the expected benefits. Investment choices were distorted by political or personal interests, without strong systems or procedures to scrutinise them. There was a bias towards large-scale capital projects, and neglect of institutional issues and maintenance. The contribution to growth was sometimes less evident than the damage to the environment and to vulnerable people displaced from homes or livelihoods.

This paper suggests ways of overcoming these problems, focusing on accountability, capacity-building and the environment. These are not strong features of current plans for infrastructure in developing countries, since they often constitute a difficult agenda for

governments (particularly when it comes to tackling corruption). There is, however, no need for undesirable outcomes to dominate in the future. Indeed, improved donor support for infrastructure offers some of the best opportunities for systemic pro-poor change. Even though infrastructure is often seen as the exemplar of corruption, it is a sector in which there is much scope for working with governments to strengthen accountability, encourage environmentally sound policies and increase social mobilisation.

The paper concludes by suggesting what DFID should do if it embraces this new approach to infrastructure services as key to poverty eradication. Among other things, DFID must not denigrate the priority often given to infrastructure by national and multilateral partners. We need to seek opportunities to engage with them, building consensus for dealing with difficult agendas, so as to make infrastructure services work better to eliminate poverty.

²See *Association for Progressive Communications (2002)*.

1 HOW INFRASTRUCTURE CAN BENEFIT POOR PEOPLE

1.1 Much recent research confirms the importance of infrastructure service provision to sustainable development. One landmark study was the World Bank's 1994 *World Development Report*.³ This highlighted infrastructure services, moving the discussion on from a focus on hardware to an emphasis on institutions. It also laid out an emerging agenda of 'public-private partnerships'.

1.2 The evidence in the World Bank report on the vital role of infrastructure services in growth has been reinforced by subsequent research, for example on Africa's economic performance.⁴ Not only does the development of infrastructure services contribute to growth, but growth also contributes to infrastructure development, in a virtuous circle. Moreover, investments in human capital and in infrastructure interact, each increasing the returns to the other.

1.3 Investment in infrastructure services can contribute to sustainable growth by:

- Reducing transaction costs and facilitating trade flows within and across borders.
- Enabling economic actors – individuals, firms, governments – to respond to new types of demand in different places.
- Lowering the costs of inputs used in the production of almost all goods and services.
- Opening up new opportunities for entrepreneurs, or making existing businesses more profitable.
- Creating employment, including in public works

(both as social protection and as a counter-cyclical policy in times of recession).

- Enhancing human capital, for example by improving access to schools and health centres.
- Improving environmental conditions, which link to improved livelihoods, better health and reduced vulnerability of the poor.⁵

1.4 While the evidence is broadly positive, spending on infrastructure has not always contributed to pro-poor growth.⁶ Benefits have often been less than anticipated, especially because of inadequate attention to governance and institutional frameworks. 'White elephant' infrastructure projects are far from unknown. And high levels of personal and political corruption, facilitated by weak systems, have hindered a demand-led approach, distorted public investment choices, diverted benefits from the poor and encouraged neglect of maintenance.

1.5 Too often, indeed, there have been negative rather than positive consequences for poor people, including environmental damage to which the poor are most vulnerable. A variety of barriers has prevented poor people from gaining access to the economic opportunities created by infrastructure. There have also been human rights abuses in the displacement of people from shelter or livelihood opportunities, and measures to mitigate these abuses have often proved too costly to implement.

1.6 Influenced by bad experiences of this kind and by the growing conviction that the private sector was best

Box 1: The macroeconomic impact of infrastructure investment: Mozambique

Research on Mozambique shows that a 15% reduction in trade and transport costs arising from investment in infrastructure led to a 5% increase in national income. This compares very favourably with estimates of the impact of trade policy reform, which typically raises

national income by around 1%. The study also shows positive effects of infrastructure investment on agricultural growth and vice versa.

Source: Arndt et al. (1999)

³ See World Bank (1994).

⁴ See Collier and Gunning (1999).

⁵ This list of contributions is adapted from Hanmer et al. (2000).

⁶ Defined as growth that 'includes the poor by maximising their opportunities and by utilising their skills, time and physical resources. Poor people require improved access to health, education, markets and assets' (DFID, 2000d).

Box 2: Localising the Millennium Development Goals in Vietnam

There has already been recognition of the role of infrastructure in meeting the MDGs at national level. The Vietnamese government, for example, sees lack of access to local infrastructure services as a central feature of poverty. Papers are being prepared by Vietnam's Poverty Task Force, with the aid of external support agencies, which 'localise' the MDGs, using them as the basis for national planning to reduce poverty. One of these papers focuses on infrastructure,

setting out a plan for improving priority infrastructure services in the poorest communes. Proposed quantitative targets cover access to electricity, transport, small-scale irrigation and information. As well as the reliability, financial sustainability and good governance of infrastructure services, emphasis is laid on democratic decision-making at the commune level.

Source: Vietnam Poverty Task Force Paper

placed to provide national infrastructure, DFID and other bilateral donors decided to limit their assistance in the sector to direct poverty reduction. The 1997 UK Government White Paper on International Development, for example, focuses primarily on local services for poor people.⁷ With its focus on policies that create sustainable livelihoods (Section 1) there is reference to the importance of economic growth which

benefits the poor – but infrastructure is not prominent in this.⁸

1.7 More recently, DFID's Target Strategy Papers have set clear directions for achieving the Millennium Development Goals (MDGs). Infrastructure services are a vital element of these strategies, notably those focused on urban poverty, water and the environment. (The inclusion of an urban poverty target in the MDGs is a

Inauguration of community-led slum rehabilitation project, Mumbai, India

⁷ See DFID (1997): Panel 5; Panel 9.

⁸ It is mentioned in the context of guarantees: *op. cit.*, 3.33

Box 3: The benefits of improved infrastructure services: views from informal settlements in India

Women residents said that the improved infrastructure services provided in ‘slum improvement programmes’ have reduced their work burden and given them more time to engage in home-based economic activity, while lighting and better road coverage increase their mobility and security at night. In addition, with improved roads, hire-purchase vendors, hawkers and collectors for loans and savings can enter the slum and go from door to door. And the provision of electric lights means that people can work for longer, and that children can do homework after dark.

Slum residents linked infrastructure improvements to a

reduction in health-induced crises and debt. Some felt that it was the cleaner environment that was important; others pointed to better access to hospitals, especially during the monsoon – the peak period for illness – and to health extension services.

People also highlighted the importance of the visible demonstration of the legal status of the settlements, and the increase in dignity – the way the image of the slums was improved. They became part of the city.

Source: India Slum Improvement Projects’ Participatory Impact Assessment, DFID (1997)

recognition of the challenges as well as the opportunities posed by urbanisation.) Infrastructure is accorded a key role also in the Target Strategy Paper on halving world poverty by 2015, which highlights its importance in promoting economic growth, reducing the vulnerability of the poor and underpinning livelihood improvements.⁹

1.8 The 2000 UK Government White Paper on International Development recognises the key role of infrastructure services in enabling the poor to benefit from globalisation.¹⁰ It draws particular attention to national infrastructure, such as trunk roads, ports, airports and telecommunications, as well as to local infrastructure.

1.9 Increasingly, then, DFID has acknowledged the indirect contribution of infrastructure services to poverty eradication. We now need to take a ‘joined-up’ approach to infrastructure services, linking the national level to the local level, and recognising that there can be both direct and indirect benefits for the poor. Because of this potential double contribution, infrastructure services have been described as ‘twice-blessed’ elements of a poverty reduction strategy.¹¹ But these blessings will flow only with attention to all the other elements that are needed to make growth pro-poor.

⁹ DFID (2000b, 2000c, 2000d, 2000e, 2000f, 2001a, 2001b, 2001c, 2000d).

¹⁰ See DFID (2000a).

¹¹ See White et al. (2001), pp. 108–9.

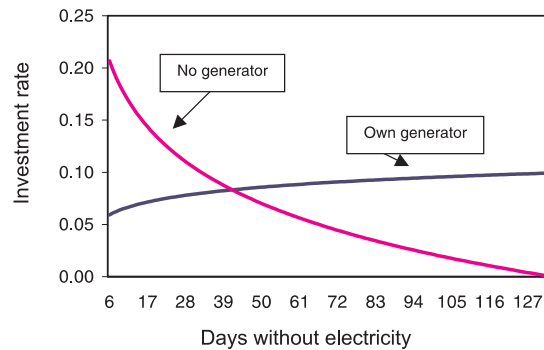


Figure 1 Ugandan firms with unreliable electricity supply invest less.

Source: Reinikka and Svensson (2002) (investment rates are expressed as ratios of existing capital stock).

INFRASTRUCTURE: PERCEPTIONS OF THE POOR

1.10 Many participatory poverty assessments reveal how much the poor value infrastructure services which provide direct benefits to them. For example, an impact assessment of DFID-funded government programmes in informal urban settlements in India, which collated the views of poor people, shows a wide variety of benefits from infrastructure, including improved mobility, security and health (see Box 3). And in a collection of

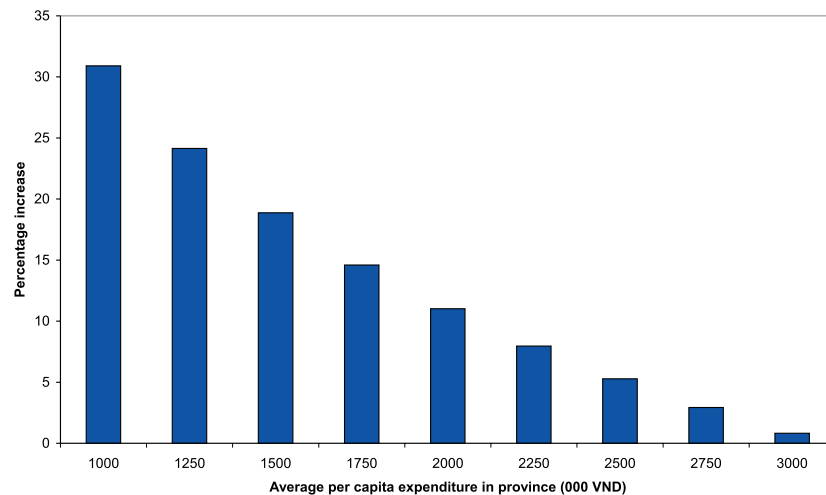


Figure 2 Effect of a new road on living standards in Vietnam (increase in per capita expenditure, 1993–98).

Source: Deolalikar (2001).

the views of poor people from across the world: ‘The lack of basic infrastructure – particularly roads, transportation and water – is seen as a defining characteristic of poverty.’¹²

1.11 There is also direct evidence of the importance of adequate infrastructure services in providing an enabling environment for business. For example, the World Bank reports: ‘A distributor of industrial spare parts and machinery in Nairobi saw his business expand 35% after additional telephone lines were installed. This allowed him to hire six more employees and add three vehicles to his fleet.’¹³ Similarly, a survey of Ugandan entrepreneurs ranked the following as key constraints on their ability to do business: power breakdown, voltage fluctuation, telecommunications failure, quality of roads, land and industrial space, water supply, waste disposal, commercial trucking and waste water disposal.¹⁴ Statistical analysis summarised in Figure 1 shows how the investment rates of Ugandan firms are reduced by unreliable electricity supply. Even firms with their own generators invest less in productive capital than they would with a reliable

supply, because they have to waste investment funds on the generators.

1.12 Obviously, local infrastructure services are the most tangible, but sometimes the poor are aware of the effects of inadequate national infrastructure on their livelihoods. Shocks to the national economy, such as the rationing of electricity brought about by the Kenyan drought in 1999, are very evident to huge numbers of people dependent on employment by small enterprises in the informal sector. Poor people noted the direct benefits of the Jamuna Bridge in Bangladesh, though in the short term greater benefits accrued to the less poor.¹⁵

1.13 Indirect benefits are harder for poor people to perceive, but it is clear that the development and maintenance of national infrastructure are essential if developing countries are to secure the potential gains from globalisation. Working at the local level alone is unlikely to transform an economy. In network infrastructure, potential benefits will not be fully realised without simultaneous improvements at the local and the national level.

‘If we get a road, we would get everything else: community centre, employment, post office, water, telephone’
(Young woman, Little Bay, Jamaica, *Voices of the Poor*¹⁶)

¹² See Narayan (2000) and Narayan and Patesch (2002).

¹³ See World Bank (2001) <http://www.worldbank.org/poverty/strategies/chapters/psi/PSI0531.pdf>.

¹⁴ See Hanmer et al (2000).

¹⁵ The Louis Berger Group (2002b).

¹⁶ See Narayan and Patesch (2002).

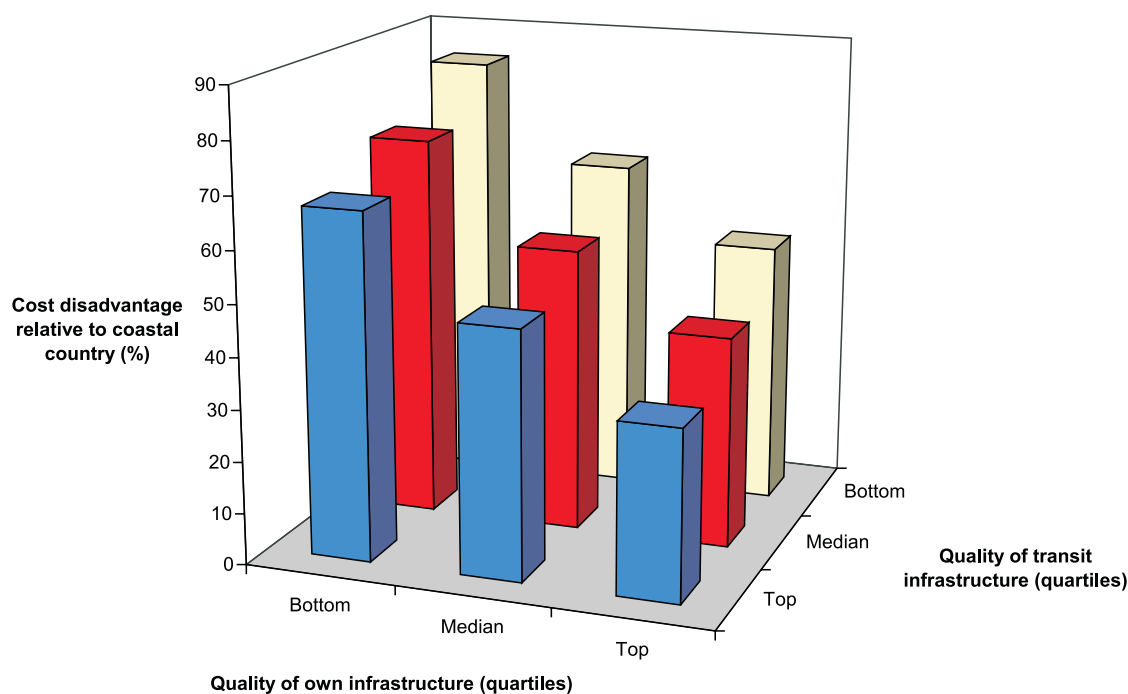


Figure 3 Good infrastructure reduces the cost disadvantage of being land-locked.

Source: Limão and Venables (2000).

INFRASTRUCTURE AND PRO-POOR GROWTH

1.14 Research on economic growth confirms the importance of infrastructure.¹⁷ But since there is considerable variance in the poverty-reducing impact of a given rate of growth, we also need to ask whether investment in infrastructure makes growth more pro-poor. As yet, there has been no comparative cross-country research on this question. There is, however, strong evidence from studies of rural development patterns across China and India – countries that have both made major progress in reducing rural poverty – that a broad range of infrastructure services are crucial and interact positively with agricultural growth.¹⁸ The transport sector has received particular attention, and there are also studies that point to the importance of irrigation infrastructure in promoting pro-poor growth.¹⁹

1.15 In China and India, according to these studies, the growth of non-farm employment was an important factor in the reduction of poverty, and this in turn was heavily dependent on the availability of infrastructure services. Indeed, it seems that even greater investment

would have been economically justified, especially in transport. Other studies also make a convincing case that the returns to incremental infrastructure investments could be higher in backward regions with concentrated poverty than in better-off regions.²⁰ Figure 2 shows that in Vietnam the construction of a new road, controlling for other influences, caused household incomes to rise by more in poor provinces than in richer provinces.

1.16 This suggests the importance for pro-poor growth of investment in improving cross-border connections for regions or countries disadvantaged by geography. Compared with coastal countries, land-locked countries tend to have higher transport costs.²¹ This reduces the ability of their businesses to operate effectively and to participate in trade, which is an important contributor to growth. In Uganda, even after liberalisation of trade policy, transport costs amount to about two-thirds of value added for exporters, and half of value added for producers for the home market.²² However, this disadvantage can be reduced by improving transport infrastructure. Figure 3

¹⁷ This section draws on the review commissioned for this paper (Willoughby, 2001).

¹⁸ See Fan et al. (1999, 2000).

¹⁹ See Hazell and Haggblade (1990) and Chambers (1989).

²⁰ See Fan and Hazell (1999) and Deolalikar (2001).

²¹ See Limão and Venables (2000).

²² See Milner et al. (2000).

Box 4: Making infrastructure investment more pro-poor: investment appraisal in Bangladesh, the Kyrgyz Republic and Metro Manila

Quantitative tools for prioritising choices for investment need to be combined with qualitative information to achieve outcomes that are more pro-poor. For example, a study for the Asian Development Bank ranked capital road projects in terms of which would have the most impact on poverty reduction in Bangladesh. First were bridges and culverts on feeder roads, which give the rural poor access to markets and services, and allow escape from floods. Second was a major labour-based earth road maintenance programme, which would keep roads open during the monsoon and provide employment. And third was improving the arterial road and bridge to increase access to Mongla port.²⁵

A study for the Kyrgyz Republic used such tools to determine which feeder roads would provide the best

returns in terms of poverty reduction. The study also recommended complementary actions, including removing the roadside checkpoints of three different ministries and the Islamic Development Bank, which were charging informal tolls.²⁶

These are now new methods of valuing people's time, which can be factored in.²⁷ All these studies illustrate the kinds of issues that can emerge. But for findings to be embedded in government systems, a process must be developed, with a transparent appraisal system according to agreed criteria, as was done in the Manila Capital Investment Folio process.²⁸

Sources: *The Louis Berger Group; Halcrow Group Ltd; IT Transport (2002)*

shows that with bad internal and transit infrastructure, the transport costs of a landlocked country are 84% higher than for a coastal country, but that good infrastructure reduces this cost disadvantage to 33%. Because so much of its population is far from the coast and generally sparsely distributed, Sub-Saharan Africa will need to invest more in infrastructure to achieve the same level of development as other regions such as South Asia.²³

1.17 There is evidence that countries which pursue broad-based access to infrastructure services will find that economic growth is distributed relatively equally among the various groups in society, hence reducing poverty more effectively. This implies the importance for pro-poor growth of reducing the large subsidies still often provided to non-poor users of infrastructure services. Steady reduction would substantially ease the

constraints on provision of infrastructure services to the poor, as well as on other poverty-reducing programmes.

1.18 Research also indicates that the degree of efficiency in the organisation of infrastructure investment, in its maintenance, and in service provision from it, matters a lot for pro-poor growth outcomes.²⁴ This points to large gains from reform, and indeed from efforts to build capacity in the management of infrastructure. Recent analyses show the importance of tackling personal and political corruption. This is particularly important in shifting priorities towards maintenance.

1.19 The evidence suggests that, to make growth more pro-poor, support for infrastructure must be complemented by interventions in other sectors. This accords with increasing acceptance that interventions to reduce poverty must be planned and co-ordinated across sectors. One study examines how the sectoral

'Government departments work in isolation – for example, the Department of Works would construct a road where there is nothing else, while Education establishes a school where there is no road.'

(Comment from a participatory poverty assessment in South Africa)

²³ See Wood (2002).

²⁴ See section V of Willoughby (2001).

²⁵ The Louis Berger Group (2002a).

²⁶ Asian Development Bank (2001).

²⁷ IT Transport (2002).

²⁸ See Allport and von Einsiedel (1986).

Box 5: Pro-poor growth through employment: labour-based road-building technologies

In capital-intensive road technology options, equipment typically represents 80% of the total cost, while labour costs are only 10–12%. With labour-intensive options, equipment would be 30–40% of the total cost, while labour costs would be 50–60%. Labour would be mainly unskilled or semi-skilled, often providing jobs for women.

An International Labour Organisation (ILO) review of labour-based road construction in countries as different as Cambodia, Ghana, Laos, Lesotho, Madagascar, Rwanda, Thailand and Zimbabwe showed that the

labour-based option is typically 10–30% cheaper than the capital-intensive equivalent, while creating between three and five times the amount of employment for the same investment.

It has been estimated that if 20% of public investment and 10% of private investment in infrastructure in Ghana were in labour-based projects, this would create 50,000 direct and 75,000 indirect jobs more than with conventional construction.

Source: Islam and Majeres (2001)

composition of economic growth and initial conditions interact to influence the extent to which growth is pro-poor.²⁹ For example, better rural infrastructure and human development programmes for poor people (which encourage higher literacy) clearly promote higher rates of poverty reduction at a given rate of agricultural growth. Conversely, high initial inequality, including between urban and rural areas, can explain why the same rate of economic growth is less effective in reducing poverty in one setting than another.

Local people involved in the construction of a new dam, Chunga, Zimbabwe

1.20 At the micro-level, a joined-up approach to infrastructure development, using poverty impact analysis, can make it more beneficial to the poor. This may result in the choice of different technological options and designs, as well as complementary actions (see Box 4).

INFRASTRUCTURE AND EMPLOYMENT

1.21 Infrastructure can also contribute to poverty reduction through the opportunities it creates for

²⁹ See Ravallion and Datt (2002).

Box 6: Mitigating vulnerability and building physical capital: drought relief in India and Kenya

Following two successive years of drought in Madhya Pradesh, the state government instigated the Pani Roko Abhiyan, a drive to create water harvesting and conservation structures using labour-based methods, providing employment for those worst affected, and reducing vulnerability to future droughts. DFID provided a rapid response to this government initiative, channelling £5 million through the UNICEF state office. Over a period of six months, approximately 6.5 million person days of employment were generated across 32 drought-affected districts. Payment for labour was both in cash and in food. The final review of the project highlighted the effectiveness of this approach both in providing temporary livelihood opportunities (albeit not always to the most vulnerable), and in creating appropriate infrastructure assets. Those employed under the project, particularly women,

placed a high value on the food grains provided at a time when crops had failed.

Maintenance is usually highlighted as a concern for public works created in relief programmes. This can be a problem when the poor, who are expected to carry out the maintenance, fail to develop a sense of ownership. But a rare *ex post* impact assessment of infrastructure created under European Community-funded Food For Work programmes in Turkana, Kenya, from 1985, found vulnerability among marginal pastoralists reduced up to 12 years later by rainwater harvesting structures for sorghum gardens being well-maintained. This success may have been influenced by the early support role of non-governmental organisations and their continuing, albeit low-key activity.

Sources: DFID India; and Watson and Ndung'u (1997)

increasing the employment intensity of economic growth. The importance of employment-generating activities, especially for women, was noted in the 1997 White Paper; and a number of Poverty Reduction Strategy Papers (PRSPs) highlight these opportunities.³⁰ Many are in construction – especially with appropriate standards and choice of surface – but even more employment should result from service provision and maintenance. For example, the Bangladesh Rural Roads project, which provided significant employment for women in construction and maintenance, also provided employment for small enterprises such as rickshaws and cycle repair workshops.³¹

1.22 Infrastructure can also provide forms of social protection that move people beyond safety nets, especially when employment concerns are linked into mainstream investment policy. Even where the policy environment is poor, such initiatives can reduce poverty. With careful attention to trade-offs, the physical capital accessible to poor people can be enhanced at the same time as employment is provided.³² Choosing sectors and technologies where it is technically feasible and economically cost-effective to use labour-based technologies is crucial. They have

been most often used in roads (usually involving private contractors), but are also relevant to irrigation, drainage and sanitation, erosion control and water supply. All are sectors that can directly benefit the poor.

1.23 To benefit the poor, it is important not only to look for opportunities to create additional employment, but also to ensure that it is decent work which meets the core labour standards set out by the International Labour Organisation (ILO). DFID's Social Aspects of Construction study, which aims to show how infrastructure can make a major contribution to poverty reduction and labour rights, is being conducted in four pilot countries: Bangladesh, Ghana, India and Zambia. In Ghana, the Department of Feeder Roads has focused on the ILO's four core standards – elimination of child labour, forced labour and discrimination, and the right to freedom of association – together with five others from Ghanaian law – relating to wages, hours of work, health and safety, casualisation and social security. Standards are then included as far as possible in the contract, and form part of the pre-bidding briefing, so that costs are on a level playing field, and are carefully monitored by supervising engineers and unions. Experience shows that all can gain.

³⁰ Kenya, Uganda and Mozambique of the ten reviewed by Leathes (2002).

³¹ See International Fund for Agriculture and Development (2001) and Hanmer et al. (2000), p. 43.

³² See Ravallion (1990) and Taylor (2000).

2 LEARNING FROM PAST MISTAKES

2.1 Although governments and donors generally accept the link between the provision of infrastructure services and the elimination of poverty, current investment in the sector falls far short of even conservative estimates of what is needed. One billion of the world's population have no access to safe drinking water and more than twice that number of people lack appropriate sanitation or access to clean, safe energy sources.³³ 900 million people have no access to all-weather roads, nor 300 million to any road transport. And while Sub-Saharan Africa has about 10% of the world's population, the continent contains only 0.2% of the world's telephone lines.³⁴ At the same time, official development assistance has been in steady decline, and private capital flows, which had been increasing during the 1990s, have declined steeply since the Asian and Russian financial crises of 1997/8.³⁵

2.2 But even the challenge of increasing investment seems easy in comparison with the difficulties of

ensuring that the investment is used in ways that avoid the mistakes of the past. These mistakes include lack of attention to maintaining infrastructure once it has been built, inadequate institutions and systems of accountability to prevent the use of infrastructure for political and personal gain and to encourage efficient operation, and failure to assess the effects of investment in infrastructure on the environment, poverty and livelihoods.

JOINING UP THE LOCAL AND NATIONAL AGENDAS

2.3 Too often, improvements in national infrastructure services have had negative effects on the livelihoods of local poor people. Take the people of Asukawkaw, Ghana, who were displaced during the construction of the Upper Volta hydroelectric dam in the 1960s. Of all the negative features of their resettlement, they feel particularly bitter that 37 years on, they alone are not

Box 7: Investing in infrastructure: how to avoid repeating the mistakes of the past

In the past, investment in major transport, energy, irrigation and telecommunications infrastructure paid undue attention to the export and overseas investment needs of companies based in donor countries. While projects largely succeeded in their immediate engineering objectives, evaluations by DFID and other donors reveal a range of common problems and their solutions:

- A clear and accountable process of prioritisation and transparent procurement systems are needed to minimise corrupt practices. Perverse incentives can skew choices towards large-scale and technologically sophisticated projects rather than more appropriate alternatives.
- Institutional capacity-building with a focus on maintenance is crucial to avoid deterioration of the assets created. For example, in parts of Africa in

the 1990s, the road network was deteriorating faster than it was being constructed.

- Planning has to minimise environmental damage, such as land use changes, deforestation, loss of bio-diversity, and migration to and from project areas.
- Attention is needed to service delivery as the purpose of infrastructure, to the existing role of the private sector and to the contribution users must make to obtain benefits.
- Gender and livelihoods issues need to be addressed in detail, in planning and in evaluation. Too many large-scale infrastructure projects had unanticipated negative consequences for the poor, especially where displacement was involved.

Source: review of DFID and other donor evaluation material, with staff comments

³³ See DFID (2001b) and United Nations Development Program (2000).

³⁴ See Association for Progressive Communications (2002).

³⁵ See World Bank PPI database (2001) and OECD IDS Database (2001).

'Water is life, and because we have no water, life is miserable'
(Kenyan villager, participatory poverty assessment)

connected to an electricity supply. At the same time, the river continues to overflow seasonally, causing loss of livestock and property.³⁶ An integrated approach to such developments would seek solutions where local poor people do not lose out in this way.³⁷

2.4 DFID's work on local infrastructure has highlighted the importance of looking at services for the poor and not simply at the hardware, understanding social difference (including gender), employment issues, and the importance of multi-disciplinary partnerships and promoting accountability. On gender, for example, the South African Treasury's review of its 1998 budget noted the greater benefits for women from improvements in infrastructure: a higher percentage of women than men use public transport, and so improvements in the accessibility and safety of public transport contribute more to the quality of life of women and to their access to employment and service facilities.

2.5 New approaches to aid are being adopted. DFID has promoted orientation towards internationally agreed poverty eradication targets and nationally owned processes, and towards new aid instruments such as budgetary support to underpin this approach. In this context, the fact that infrastructure is typically a priority for national governments provides a strong basis for working together.³⁸ It also allows a systemic approach and a new focus on the longer term and on maintenance.

2.6 But this agenda will not succeed unless there is complementary support to the agenda of improving accountability and transparency. For this reason, DFID has also brought a new emphasis to its support for civil society, aiming to strengthen its capacity to render governments accountable.

2.7 Above all, if development agencies are to avoid the mistakes of the past, they must ensure integration of the perspectives of poor people into a more rigorous process for setting priorities. Technical co-operation, financial aid or simply advice to governments in improving their national transport infrastructure (for example) should ensure that planning, design and

management take account of the interests of the poor. Appropriate priority should be given to routes and modes of transport used by poor people. The safety of pedestrians, cyclists and intermediate modes of transport should be addressed by such measures as safe crossing points or separate lanes. For example, in the 1990s the renovation of the Bamako bridge in Mali made it safer for pedestrians and cyclists to cross by widening and separating lanes.

ACCOUNTABILITY

2.8 Accountability is vital in ensuring that the mistakes of past investment in infrastructure are not repeated. Following the 2000 White Paper, the UK government has taken important steps in legislation, both to untie aid and to enable punishment of UK citizens involved in corrupt practices. There is no doubt

Mass meeting of railway slum-dwellers affected by the Mumbai Urban Transport Project to discuss resettlement options

³⁶ See Narayan and Patesch (2002), p. 32.

³⁷ A good example of such solutions is the work of the NGO SPARC/Mahila Milan with the Mumbai Urban Transport Project II: voluntary resettlement organised for community development (see photograph p. 15).

³⁸ See World Bank (2000a, 2001, Box 6), in which the Bank's Operations Evaluation Department identifies inadequate borrower commitment as the most important reason for poor policy or project implementation.

Box 8: Making decentralisation concrete: infrastructure for fishing in Uganda

A DFID-funded project in Uganda, working with local government officials and an NGO, CARE Uganda, is aiming to demonstrate that decentralisation can work for the poor. The project has begun with ten villages on Lake George, with the intention of expanding to 200 villages on Lake Kyoga, facilitating joint planning between villagers and local government. Uganda is starting on fiscal decentralisation, making resources available to local government. In 2000, money was made available only in the last four days of the financial year. Those communities in the pilot villages that had worked to produce their plans and choices of investment were in a position to draw down the funds. Infrastructure was a high priority.

Fishing communities depend critically on the services

provided by strategically placed landing sites. Access to these are often controlled by local elites or local administrations, so that revenues generated are often invested outside the community and rarely in the maintenance of fishery resources. Participatory planning has prioritised the provision of community-controlled landing sites and has set out policies to apply the revenues generated from these to the improved management of fishery resources. In these cases, infrastructure provides a focus for transparent and equitable governance of resources that form the basis of poor people's livelihoods.

Source: CARE Uganda/Marine Resources Assessment Group

that many of the past anti-poor and anti-growth distortions in infrastructure services were linked to the opportunities to siphon off funds for private or political gain. Recent research also shows that corruption lowers private investment because of its cost and the reduction in quality of the end product.³⁹ Some estimates put the cost of corruption as high as 30–50% of the cost of public works.⁴⁰ Similarly, as a result of petty corruption, the Bangladeshi power utility is able to collect only 55% of the payments it is owed by customers.⁴¹

2.9 Private sector involvement can help, by bringing in more commercial practice. But without counter-measures, this may just shift the corruption to higher levels of officials. Accordingly, a key starting point is the use of more transparent processes of investment appraisal, employing standard economic techniques for which government capacity can be built, but with stakeholder involvement. To test assumptions and to use active citizenship to render governments accountable, poor people's perspectives need to be integrated, either through official representation, as with parliamentary oversight committees, or through independent, direct external monitoring.

2.10 Political and administrative failings mean that a

direct approach from outside government is often needed. In a number of countries, there are experiments with citizen involvement in investment planning at the national level, including for infrastructure service provision. A forum on PRSPs in Dakar in September 2001 stressed the importance of having an infrastructure group, involving civil society, to integrate the views of poor people with those of other stakeholders.⁴² In Uganda, it was because of the role of civil society in organising participatory poverty assessments that the importance of rural water supply for poor women emerged to inform the PRSP.

2.11 Despite its past associations with corruption, infrastructure is a sector in which there are many opportunities to foster accountability. Bringing projects on to the budget is essential. There can then often be 'information symmetry' to enable scrutiny,⁴³ because of infrastructure's tangibility, especially at the local level. In Brazil, for example, participatory budgeting in municipalities has been extended nation-wide. Infrastructure is a key focus, with citizens voting on infrastructure investments. For example, they decide on the building of a bridge: if the contract goes to the mayor's brother-in-law and delivery is slow, the mayor will be put under pressure. Helvetas Nepal has

³⁹ See *International Finance Corporation (2001)*.

⁴⁰ See *Lovei and McKechnie (2000)*.

⁴¹ According to an issue paper at the *Third United Nations Conference on the Least Developed Countries (LDCIII), Infrastructure Development Session, 2001*.

⁴² <http://www.worldbank.org/wbi/attackingpoverty/activities/dakargd13summ.html>.

⁴³ *Information asymmetry occurs when the quality of service delivery is not equally clear to purchasers, producers and users – see section 3.13.*

designed a community-based monitoring system for the World Bank-funded Rural Infrastructure Project along similar lines.

2.12 Even where poor people have not been involved in the planning of infrastructure, an active civil society provides opportunities to reduce corruption. Ideally, there will be a strong legal basis for this already. But sometimes, more needs to be done. For example, Transparency International, an international NGO, has been supporting ‘integrity pacts’ (voluntary anti-corruption agreements between the parties involved in public service contracts) in Colombia, Nepal and Argentina. It is estimated that a recent pact in relation to the Karachi Greater Water Supply Scheme will save \$3.1m.⁴⁴ These types of arrangement build capacity and experience, in both public and private sectors, in tendering and bidding for public service contracts, mainly for infrastructure. In this way, a level playing field is created for bidders, making public commitments to stamp out corruption more effective.

2.13 In more and more countries, decentralisation is under way. While this has often increased corruption in the short term, decentralised budgeting in the longer term provides opportunities to address corruption and to focus outputs more effectively on the poor. The ideal is that social mobilisation should increase in tandem with decentralisation. Where decentralisation of central budgets is happening, it is easier to mobilise community planning and budgeting around

infrastructure. But in all countries, accountability at national level will also remain important.

2.14 Poor people need to have their stake in infrastructure service provision recognised. The World Commission on Dams (which DFID supported) provides an example of a process for bringing together stakeholders (including representatives of developing country governments and the private sector) to agree guidelines on infrastructure planning. It attempted to ensure that the rights of different stakeholders, including future generations, were assessed in as balanced a way as possible.

CAPACITY-BUILDING

2.15 Capacity to deliver infrastructure services for pro-poor growth requires careful and long-term nurturing, which should be a key emphasis for development agencies. Governments need support to develop capacity for investment appraisal, for transparent procurement, for bringing in the private sector, for working with users and intermediaries (see section 3), and for regulation to protect the poor and to promote competition. The capacity of the private sector also needs building as part of a pro-poor agenda: it needs to learn to work with the poor and their representatives, building a sense of social responsibility into its policy and practice. Users and their representatives, too, need to learn their own responsibilities in relation to infrastructure services.

Box 9: Capacity-building: road maintenance in Ethiopia

The road sector in Ethiopia has undergone a fundamental series of changes since 1996, when a multi-donor partnership agreed to fund the country's \$3.5 billion Road Sector Development Programme. The World Bank, the European Union and the African Development Bank are contributing most of the capital. Other donors, including DFID, have focused their support on the capacity-building required to ensure that the investment programme and subsequent maintenance activities are managed efficiently and sustainably by the Ethiopian Roads Authority.

Since its inception, the programme has passed a number of milestones, including the introduction of a Roads Board, which manages a road fund, financed

directly from a fuel levy; an increase in the use of both large and small private contractors; and delegation of authority to local managers, who now operate on a performance-based contract system.

DFID's initial phase of support was devoted to improving both technical and financial capabilities at the headquarters of the Ethiopian Roads Authority, particularly in respect of contracting works and services. But the focus is now on improving management capabilities at the district level, while other donors concentrate on such areas as road safety, axle load control and equipment training.

Source: DFID staff

⁴⁴ Transparency International Press Release, Karachi/Berlin, 27 February 2002.

Box 10: Developing sustainable infrastructure: bio-engineering in Nepal

Road construction can often lead to serious erosion and loss of productive land, especially where there are problems of steep topography, unstable geology and high rainfall. An alternative to conventional engineering solutions is bio-engineering, which uses selected plant species to stabilise the soil. These techniques have been used extensively in Nepal since 1984. A bio-engineering adviser works with the Nepal Department of Roads and a training manual has recently been developed. Bio-engineering solutions provide a number of social, economic and environmental benefits:

- Costs are lower than with conventional building systems.
- Maintenance requirements are greater, but can be carried out using low cost, locally available labour, providing employment for local communities.

- Slope stability increases with time as the plants grow and bind together.
- The natural environment – biodiversity, ecology and scenic beauty – is maintained.
- Locally found plant species are often selected for specific sites, which works better than letting vegetation recolonise naturally.
- Schemes are more acceptable to local people, who can participate in design and construction.
- Sites can offer benefits after completion, providing fruit, fodder, building materials and fuel wood for local communities.

Source: DFID staff and Helvetas Nepal

2.16 Another lesson from the World Commission on Dams is that as part of the process of investment appraisal, there needs to be a thorough assessment of options before project design. Cost considerations, as well as poverty reduction goals, make it important to select from a range of alternatives, rather than just tinkering within existing design frameworks.

2.17 Infrastructure services must be promoted in the context of PRSPs (see Box 13) and of new aid instruments such as direct funding to government budgets (budgetary support). But without specific support for capacity-building, provision of budgetary support will fall foul of old problems. Technical co-operation is important, and it should not stop at the Ministry of Finance. There needs to be space for line ministries to use technical assistance to plug gaps, especially but by no means only in countries where ministry personnel have been ravaged by AIDS. DFID's work with the Ethiopian Roads Authority is an example of this kind of capacity-building (see Box 9).

2.18 Given the need to hold government and private sector service providers to account, it is also important to enhance the ability of civil society groups to participate actively in decisions about service provision, whether managing their own services or through active

monitoring. Measures to enhance economic literacy will be increasingly important in this monitoring of planning and budgeting. DFID's Latin America Department is already providing support to economic literacy initiatives, while its Civil Society Department is considering support for civil society budget monitoring.⁴⁵

THE ENVIRONMENT

2.19 A key lesson from evaluation is that, though 'environmental impact assessments' are routinely completed, there is still inadequate attention paid to the impact of infrastructure projects on the environment. Nor, in the absence of national income data adjusted for environmental damage, is it possible to assess the true contribution of such investment to growth. Yet increased attention to environmental management in infrastructure service provision, at all levels, can make a significant contribution to poverty reduction. There are often 'win-win' options, saving time, reducing costs and increasing sustainability. This applies locally, nationally and to broader international environmental conditions.

2.20 Participatory poverty assessments reveal the importance of the environment to poor people.⁴⁶ With attention to the environment in infrastructure

⁴⁵See <http://www.internationalbudget.org>.

development, the poor can benefit from improved livelihood opportunities, better health and reduced vulnerability. In terms of livelihoods, environmentally sound design and maintenance is often compatible with labour-intensive methods.

2.21 Health problems are of paramount importance for the poor, affecting their ability to work and imposing care burdens, especially on women. Environmental factors related to lack of infrastructure contribute to these problems in various ways. Indoor air pollution from burning biomass fuels contributes to acute respiratory infections that kill four million infants and children each year and decrease the overall life expectancy of millions more women and children. Another major killer of young children is faecal contamination of water and food.⁴⁷

2.22 While the development of infrastructure services thus offers the potential for major improvements in environmental health, it can also introduce new health risks. For example, expanding transport services are associated with the spread of HIV/AIDS, and major dams have been linked with new disease risks. Particular problems can be posed for the vulnerable indigenous populations of environmentally sensitive areas such as the Amazon rainforest.⁴⁸

2.23 Effective integration of environmental issues into planning reduces the vulnerability of the poor, mitigating the impact of disasters such as floods and landslides. It is an important component of adaptation to short-term climate variability as well as to long-term

Safer provision for pedestrians, Papua New Guinea

climate change. Improved infrastructure design and maintenance, as well as cleaner energy, contribute to reducing 'greenhouse gases'.

2.24 At a national (and sometimes a regional) level, there are also policies in infrastructure sectors that need reform, such as the subsidies to ground water pumping for irrigation in India, which too often put poor people's water supply at risk.

2.25 While there can continue to be specific environmental initiatives, it is even more important that environmental assessment should be at the heart of any pro-poor approach. This implies using cleaner forms of energy, building less environmentally damaging roads and paying more attention to the rights of vulnerable people.

⁴⁶ See Brocklesby and Hinshelwood (2001).

⁴⁷ While risk reduction can be achieved by changes in hygiene behaviour alone, this places an unacceptable burden on the poor in a context of inadequate or non-existent waste management systems and limited access to safe domestic water supplies.

⁴⁸ The Polonoroeste Roads programme in Brazil was clearly associated with the devastation of the Nambikwara and Yamnomu peoples. Resettlement guidelines, such as those provided by the Development Assistance Committee and the World Bank, take special account of the interests of indigenous people.

3 OPTIONS FOR FINANCING AND MANAGING INFRASTRUCTURE

3.1 In 1994, the World Bank estimated that investment in new infrastructure in developing countries was of the order of \$200 billion a year. It is probable that the figure is now nearer to \$250 billion a year. Reliable data are hard to find, but based on what is available, official development assistance now seems to constitute less than 5% of total spending, and has been in decline. (While overall aid remained at \$50–60 billion a year, donor investment in infrastructure declined consistently through the 1990s and now stands at around 10% of this figure.⁴⁹) Around 70% of investment in infrastructure comes from developing country government revenues, utility charges or non-concessional borrowing, and the remainder from private investment.⁵⁰ (These statistics do not capture the contributions of the local private sector or of users. Conversely, the contribution of the private sector may be overstated to the extent that it is backed by public sector funds.)

3.2 Clearly, governments are the key players: they are large enough to absorb big risks, and set the framework of service provision. But government services can certainly be improved in terms of efficiency, equity and environmental impact. Moreover, to increase the finance available, it is important for governments and

donors to leverage contributions from the international and local private sectors, and from users. Since all parties will be taking a degree of risk, their work in partnership could be described as joint ventures. This section looks at ways of improving services, including options involving other parties.

3.3 The 1994 *World Development Report* outlines four main options for the ownership and provision of infrastructure: public ownership and public operation; public ownership and private operation; private ownership and private operation; and user involvement.⁵¹ This section describes recent experiences and the future potential of these options and adds a fifth option: working with the informal private sector.

PUBLIC OWNERSHIP AND PUBLIC OPERATION

3.4 In most developing countries, ownership of utilities remains in the public sector. Typically, these organisations operate as centrally managed public enterprises or government departments under 'single service provider' monopoly arrangements. The management teams are often given little, if any, financial autonomy, nor any real incentives to improve service

Box 11: A more efficient and environmentally benign public utility in Brazil

SABESP, the state-owned company that provides water to most of the 22 million inhabitants of São Paulo state in Brazil, is the world's largest water utility. Since 1995, it has undergone extensive restructuring to improve its operating efficiency by both increasing revenue and cutting costs. In the course of 1995 alone, the proportion of the population in the service area that was supplied with treated water increased from 84% to 91%, the proportion receiving sewerage services increased from 64% to 73%, and non-functioning accounts plunged to 8%. Operating costs were reduced by 45%, partly by outsourcing.

SABESP was then able to finance its investment programmes through loans and its own funds (though its finances were adversely affected by the currency devaluation of 1999, which increased the cost of foreign debt). SABESP also began to carry out its environmental responsibilities, including a major clean-up of the Tieté River, considered to be the largest environmental scheme in Latin America, completed in 1998.

Source: 'Brazil looks for Foreign Investors', *Global Water Report*, *Financial Times Business Report*: 8 May 1997; update – www.psiru.org

⁴⁹ See World Bank (2000b).

⁵⁰ The private sector figures include debt and non-debt.

⁵¹ In the report (World Bank, 1994), the fourth option is described as 'Community and User Provision'.

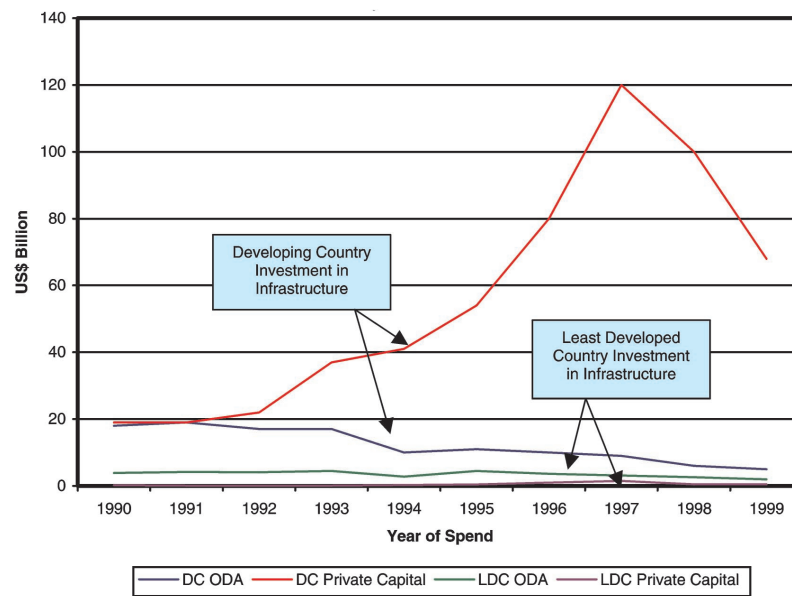


Figure 4 ODA and private capital flows to infrastructure in developing and least developed countries.

Source: World Bank PPI Database, OECD IDS Database, cited in Third United Nations Conference on the Least Developed Countries (LDC III), Infrastructure Development Session, May 2001.⁵²

delivery. More often than not, they are under political pressure to deliver services at prices below cost and hence lack finance both for maintaining the existing infrastructure (which gradually declines) and for expansion and improvement. Again for political reasons, they are frequently over-staffed at all levels, with employees being ill paid and poorly motivated. This means that corruption is rife, priorities are skewed and services are diverted away from the poor.

3.5 But bringing in the private sector is often politically controversial. In many countries, it is not likely to be possible for some time, if ever, to ensure that all services are provided commercially in a pro-poor way. Moreover, many areas are so unattractive to the private sector that it may be hard to find ways of involving it. There are, however, options for improving the efficiency and cost effectiveness of utilities that remain public. As the performance improvement of the state-owned water company in Sao Paulo suggests, managers must be motivated to deliver, and both they and their staff should be appropriately remunerated (see Box 11). They also need to operate under legislation that limits the opportunities for political interference.

3.6 For a publicly owned, publicly operated utility to function successfully, it is essential to allow it to operate on commercial lines, generally as a public corporation,

which, wherever possible, recovers the full financial costs of its operations through charges. In principle, where they are needed, subsidies should be provided direct to users, but in practice this approach poses serious administrative challenges and can lead to considerable errors of both exclusion and inclusion.

3.7 A 'commercial' approach is possible even where no direct charge for services is appropriate, for example with roads. A roads agency can be formed, which is financed through a set levy on fuels and given the freedom to undertake operations against access targets negotiated with the line ministry.

PRIVATE SECTOR PARTICIPATION IN INFRASTRUCTURE SERVICES

3.8 Reform of public infrastructure service provision without bringing in other players has proved challenging. As a result, there are increasing efforts to encourage participation of private firms, either as operators of publicly owned utilities or as both owners and operators. Donors want to use their limited funds for infrastructure to leverage more from other sources and to facilitate reform. In many cases, this will involve measures to reduce risks that would otherwise discourage private involvement in these new joint ventures. Many donors, seeing substantial sums being invested by foreign private companies in developing

⁵² The figure for private investment includes equity and debt both with and without government guarantees.

Box 12: Multi-purpose community telecentres

Access to telecommunications and ICT facilities can provide benefits if linked to cross-sectoral community development programmes. Services at such 'telecentres' range from a 'telekiosk' providing public telephone and fax services to facilities with computers, e-mail and internet access, and even opportunities to produce and broadcast local TV and radio programmes.

The benefits include better access to government data, market and price information, networking with local organisations, 'teletraining' and 'telemedicine'. In Senegal, the state-owned telecommunications operator, Sonatel, is establishing a network of telecentres in rural communities, by installing

equipment free of charge in the house of the *chef du village*, who is then responsible for the management of the installation. Larger facilities are also being set up, offering photocopying, fax and telex services, and occasionally word-processing and printing services. During 1993–6, the number of telecentres mushroomed from 541 to 2,934, with employment in the centres rising from 1,100 to 6,000. The policy has shown that even if telephone density is as low as one line per 100 persons, telecommunication services can be made accessible to a large proportion of the population.

Source: DFID 2001e (Box 4.20, p. 87)

country infrastructure, saw an opportunity to draw in more. But while there have been successes, investment flows have so far been limited in the poorest countries, and have dried up quickly in response to negative economic shocks (see Figure 4).

3.9 Private companies are necessarily motivated by commercial considerations. Appropriate incentives are thus essential if joint ventures are to benefit the poor (see Box 13). Moreover, some types of infrastructure are inherently more attractive than others to large-scale private sector investment. For example, there has been greater private participation in sectors with reasonably rapid and easily captured returns such as telecommunications and energy, with much less in transport and water, and much more in national than in local services.

3.10 There are also regional differences, reflecting perceptions of risk. Companies, whether local or foreign, have natural concerns about political commitment. Typically, there is no legislative framework to reassure potential investors, the utilities are not structured in a way conducive for investment, long-term loans are hard to negotiate with banks (or are simply not available) and insurance against political default on agreements is expensive. For foreign investors, there are also currency exchange problems. All of these factors, in addition to the high up-front cost of project preparation, cause such investments to remain the exception in the poorest countries.

3.11 But there have been successes. In some sectors – those particularly attractive to international capital – the introduction of competition has brought increasingly widespread benefits. For example, technological change has enabled the break-up of former natural monopolies, attracting new private entrants. Liberalising telecommunications in Kenya has dramatically lowered its cost. And cellular telephony has increased coverage substantially: in Uganda, mobiles grew to twice the number of fixed lines within two years. These developments have a big impact on a wide range of activities, and indirectly on poverty. There can also be direct benefits to the poor. With communal access to telecommunications and the internet, even poor people can be empowered with the knowledge they need on prices, weather forecasts, education, bus services, government schemes, oral rehydration or agricultural techniques.⁵³

3.12 At an international level, there is a need for technical assistance to ensure that developing countries negotiating under the World Trade Organisation's (WTO) General Agreement on Trade in Services (GATS) are able to assess the impact of liberalisation of services. This in turn will allow them to make well-informed decisions on the extent to which they should involve foreign companies in the delivery of services, if at all.

3.13 Services can be categorised by their degrees of 'contestability' and 'information asymmetry'. Highly contestable markets are ones which are easy for new

⁵³ See Marker et al. (2002) and World Bank PRSP Sourcebook, www.worldbank.org/poverty/strategies/sourctoc.htm.

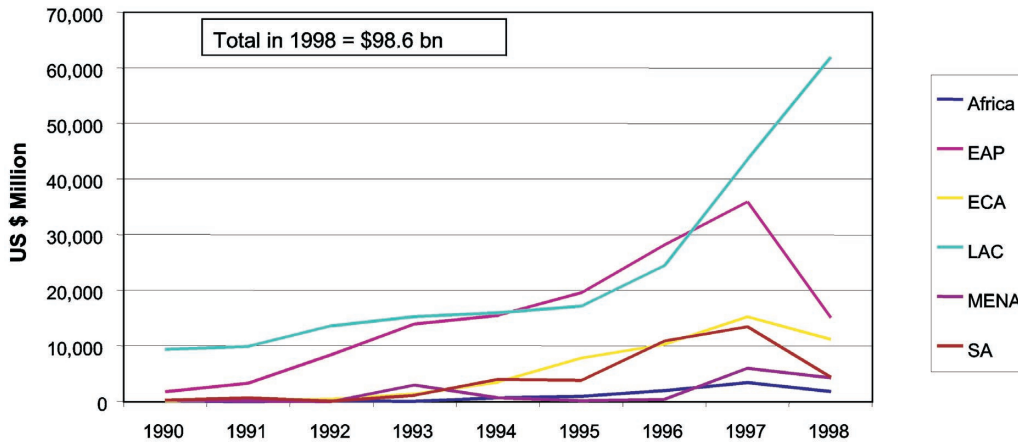


Figure 5 Private infrastructure investments by region, 1990–98. Africa, (Sub-Saharan) Africa; EAP, East Asia and the Pacific; ECA, Europe and Central Asia; LAC, Latin America and the Caribbean; MENA, Middle East and North Africa; SA, South Asia.

Source: Multilateral Finance Initiative Working Group on Support for Private Infrastructure: Trends in Private Infrastructure, Warwick Smith, 2001.

suppliers to enter and can thus be opened up to competition, as for example in power generation. Information asymmetry occurs when the quality of service is not equally clear to purchasers, producers and users, requiring regulation of private providers or public sector provision, as for example with the quality of water.⁵⁴ These characteristics also determine the available options for reform. Government's role is to concentrate on effective delivery of the many services that it alone can provide, and to ensure pro-poor regulation of private, commercial and user delivery of other services. Donors can help enable this: specific measures are described in Section 4.

3.14 Private operation of a state-owned utility is a model increasingly used in developing countries, since the risk is seen by the private sector as generally being lower than for full privatisation. There are many versions of the approach, the most common being contract management and franchising.⁵⁵

3.15 Operation and hence increased knowledge of a utility can sometimes make a private operator willing to invest in its equity in the longer term. Operating contracts should ideally be split between different contractors to facilitate competition in the event of full privatisation. Even where wholesale liberalisation of

Box 13: Private sector participation is not a magic bullet

Private sector participation is unlikely to work for the poor without:

- Political and stakeholder commitment to maximise pro-poor benefits, which often requires a communication and consultation strategy, and a long timeframe.
- 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.

Sources: adapted from Loewenthal (2002) and Evans (2002)

⁵⁴ See Consultation Draft of WDR 2000, Box 7.4 and DFID (forthcoming): The Role of the Private Sector in Service Delivery.

⁵⁵ Contract management is where a contractor operates a facility on behalf of government for a fixed fee, while franchising delivers a service for a set period, including providing finance for any expansion of the system.

The introduction of telephone services to several small towns and villages in Sri Lanka has allowed farmers to obtain first hand information on wholesale and retail prices of fruit in Colombo, the capital. Before they had the telephone service, they used to sell their crops at 50–60% of the Colombo price. Now they regularly get 80–90% of that price.⁵⁷

operation is inappropriate, performance in specific areas such as billing and collection can improve dramatically when contracted out to the private sector.

3.16 In a few countries and sectors, full privatisation is an option. Encouraged by donors, some governments are reducing strains on public sector budgets through divestiture of state-owned enterprises, including utilities. DFID has begun helping the South African government to ensure that this is done in a way that maximises benefits for the poor – requiring new thought about appropriate legislation.⁵⁶ The private sector is also increasingly entering the utilities market through investment in new infrastructure, but in most developing countries, such investment is still largely confined to sectors that offer a fast return on capital with minimum risk.

3.17 Led by the World Bank, new approaches are being developed for working with the private sector

through both franchising arrangements and full privatisation under the heading of ‘output-based aid’. In such an arrangement, a government subsidy is offered to attract investment and ensure service delivery to disadvantaged groups in the form of an agreed level of payment for an agreed level of service.

WORKING WITH THE INFORMAL PRIVATE SECTOR

3.18 It is not just large-scale formal private enterprise that can provide infrastructure services. The poor often rely on small-scale private infrastructure service providers – for example, for their transport (lorries and shared vehicles) and sanitation (latrine construction and emptying) – while the non-poor benefit from cheaper, subsidised formal or public sector provision. There are many instances of illegal private sector suppliers of energy or water services, who operate

Box 14: Pro-poor regulation within a Poverty Reduction Strategy: water in Guyana

The Guyana Water Sector Programme (GUYWASP) is a sector-wide programme, supported by multiple donors (including the World Bank, the InterAmerican Development Bank, the European Union and the Caribbean Development Bank). DFID is providing the technical assistance (£13m), while the bulk of the £65m capital is contributed by others.

GUYWASP forms part of Guyana’s PRSP, reflecting the priority poor people gave to accessible and good quality water and sanitation services during PRSP consultation processes. Studies undertaken in an initial diagnostic phase were used to build donor consensus in the sector and focus Government attention on necessary policy, legal and regulatory reforms. A phased approach is enabling key issues, such as tariff reform, to be addressed in a systematic and targeted

way. The sector is being restructured around a single new public utility that will benefit from international private sector skills and expertise through a five-year management contract. The restructuring is intended to improve accountability and transparency, thereby increasing efficiency and reducing corruption

The development of a National Water Council, and measures to improve the responsiveness of the utility to consumers, are intended to enable poor people’s priorities and perspectives to influence both policy and day to day operations. Particular attention is being paid to service provision in the hinterland area where the poorest live.

Source: DFID Guyana

⁵⁶ Initial work was done on divestiture of state forests, and support in the energy, telecommunications and transport sectors is now being considered.

⁵⁷ See World Bank PRSP Sourcebook, *op.cit.*

Water vending: a water kiosk in Tanzania

without paying the public supplier, while charging residents in informal settlements.

3.19 While some of this private provision exploits its clientele, there are opportunities to make the informal private sector work better for the poor. Water vendors are often reviled, but research shows that their provision of water in affordable amounts, at the convenience of the poor, is often valued. Yet at present, such operators are harassed, subject to arbitrary seizure of assets by utility staff. They operate outside the law, and abuses such as damage of utility pipes to extract water do occur. Where utilities struggle to operate existing systems in rapidly expanding cities, water vendors arguably could provide the best service for poor people. Linking them to the public utilities, and to the large-scale private sector where it is involved, as a means of distribution, with appropriate tariff and

payment options to lower barriers to entry, and providing business development support, is likely to provide a sustainable solution.⁵⁸

USER INVOLVEMENT

3.20 The figures on investment in infrastructure quoted earlier do not include, for lack of data, poor people's own investment, often in labour.⁵⁹ Recognising how much poor people already pay for private supply of services, or the time they spend on self-supply (of water, sanitation, fuel, transport), where public supply is absent, the World Bank and other aid agencies have been promoting approaches that at least ensure services meet demand. These demand-responsive approaches aim to ensure that there are incentives for maintenance because of high levels of collective user investment in labour, materials, finance and time for management.

Enterprise development in water does work, according to World Bank research: 'Small-scale operators (in water and sanitation) tend to be customer-driven, financially viable, and ready to apply innovative technologies and marketing methods. They provide appropriate solutions in appropriate places, assume all investment risks, and reach the poor. They charge market prices, cover costs and respect willingness to pay.'⁶⁰

⁵⁸ See Collignon and Vezina (2000) and Forrest (1998). A DFID Knowledge and Research project is piloting such partnerships in Africa (Project No. R8060: www.lboro.ac.uk/departments/cv/wedc/projects/batw/index.htm).

⁵⁹ Hernando de Soto's attempts to quantify poor people's assets are an interesting start – see de Soto (2000).

⁶⁰ See Solo (1998).

Self-provision: women in an informal settlement organise their own solid waste management service, Kenya

3.21 Governments are also driven by budget considerations to encourage involvement of users. There have been some remarkable successes, both in financial and broader development terms, especially in urban settings. An example is the Ahmedabad Slum Networking pilot, where the costs of roads, underground sewers, water connections and drainage were split equally between the residents, the municipal corporation and a private company, Arvind Mills. The skills and capital of residents were developed by their own labour on this work. In another instance, the Cities

Alliance is developing an innovative financing mechanism, initially in India, to mobilise credit from the private sector, and leverage user capital: the Community Led Infrastructure Financing Facility.

3.22 While there have been substantial improvements in efficiency, in many cases with user involvement,⁶¹ there remain questions about equity, because subsidies remain concentrated on the non-poor and yet the poor have to pay so much. For example, those not served by electricity utilities in Guatemala pay 50 times more per kilowatt-hour than those connected.⁶² This is where

Box 15: Financing the transition to cost recovery: water tariffs in Guinea

In 1989, Guinea entered into a lease contract for water services in its major towns and cities. The government was committed to cost recovery for the services but wanted to avoid a major tariff rise at the beginning of the contract – the projected increase was from \$0.12/m³ to \$0.67/m³ to ensure sustainable services to the poor. This required a \$16.9m World Bank credit to finance an output-based subsidy to allow user rates to be raised gradually over the subsequent six years.

The subsidy was designed to achieve two objectives: first, to preserve incentives to improve performance by linking support to the operator's outputs; and second, to protect the operator against foreign exchange risks, which are often a disincentive to private investors in developing countries.

Source: Brook and Smith (2001)

⁶¹ See, e.g., Narayan (1995).

⁶² Clarke and Wallsten (2002).

Box 16: User involvement: village-managed billing in India

Since 1995, the electricity supply in Orissa has been restructured and privatised. Most of the state's 39,000 villages are electrified, with tariffs for domestic consumers and for irrigation pumps set well below the cost of power to the distribution companies. Losses are theoretically offset by profits on power provided to industrial users.

Some problems inherited from pre-privatisation remain but one positive feature has been the decentralisation of responsibilities. It was found that in a few villages, community members were collaborating with local linesmen to control unauthorised power use and facilitate meter reading and bill collection in return for

an improved supply. So one of the companies responsible for distribution funded an organisation to pilot similar arrangements in 100 more villages.

The results are impressive. With the committees given full powers of reading meters, billing, connection and disconnection, and bonuses given for collection of debts, collections have increased by over 100% in the first six months and, in some cases, power deficits were converted to surpluses. This scheme now works in 3,100 villages and demonstrates successful partnership between village organisations and the private sector.

Sources: DFID (2001f), and Dubash and Rajan (2001)

joined-up, integrated planning from national to local levels is vital. Few governments have been willing to define minimum standards as a human right, as in South Africa (in the water sector). In addition, the limited material and human resources on which the poor draw mean that, without continuing partnership with the voluntary sector and government, sustainability may be compromised.

3.23 On the positive side, because of the high priority given to infrastructure services by the poor and the tangible achievements that are possible in the sector, the poor can (and do) benefit from social mobilisation around infrastructure. Whether it is mobilisation to contribute directly, or to voice demand for their entitlements, infrastructure can be the entry-point for empowerment.

3.24 It is essential to disseminate experience from joint infrastructure ventures involving governments,

NGOs and the private sector.⁶³ Work in this area has highlighted the need for capacity-building for state, private sector, non-profit, and community-based organisations. In particular, the ability of the poor to monitor the efficiency and equity of public investments in infrastructure needs developing. At present, the NGO sector, which is best placed to build this capacity, is still too focused on service delivery. But in many developing countries, the most valuable role NGOs can play is to strengthen the capacity of the poor, whether to manage their own services or to render providers accountable. This is the emphasis of DFID's rights-based approach, which stresses the importance of poor people's participation in decision-making about what affects them, inclusion (disadvantaged groups should not be excluded from infrastructure services), and governments fulfilling their obligations to enable service provision.

⁶³ The Business Partners for Development initiatives, hosted by the World Bank, and supported by DFID, include a number of successful examples.

4 WAYS FORWARD FOR DONORS

4.1 The analysis in this paper implies a clear agenda for developing country governments and their partners, including DFID. Central to this agenda is recognition of the potential of infrastructure services to contribute to pro-poor growth. But realising this potential requires a joined-up approach, linking national and local levels. It also requires an effort to learn from the past, overcoming corruption and short-term political pressures and moving to accountable and environmentally sound policies.

4.2 This paper has argued that support to infrastructure, which has lately been viewed as a discredited hardware-focused agenda, less appropriate for bilateral donors such as DFID, actually offers some of the best opportunities for systemic pro-poor change. In particular, it can facilitate the emergence of accountability, transparency and social mobilisation, and can make a substantial contribution to pro-poor economic growth.

WORKING WITH GOVERNMENTS THROUGH POVERTY REDUCTION STRATEGIES (PRSs)

4.3 The increasing emphasis on the development of government-led national poverty reduction strategies, backed wherever possible by budgetary support from donors, provides new opportunities for collaboration between governments and donors on an agenda of shared priority – the delivery of improved infrastructure services. Wherever poverty reduction strategies tackle growth, particularly growth that includes poor people, they need to tackle investment in, and the management of, infrastructure services. And since in most low-income countries governments and public utilities are responsible for major investments in infrastructure, it is important to ensure best use of public funds, with appropriate priorities. The better PRS processes have stimulated civil society participation, and could increase accountability. These processes need to be further encouraged.

4.4 Medium Term Expenditure Frameworks (MTEFs) can be used to plan the level and allocation of expenditure for infrastructure. Public Expenditure Reviews (PERs) provide opportunities to consider the role and responsibilities of the state, locally and nationally; they can also evaluate the potential contribution of new partnerships between the public, private and non-profit sectors. In many cases,

governments will want to adopt and strengthen sector-wide approaches to policy and institutional development, as well as providing resources for investment in hardware and for asset management (notably maintenance).

4.5 While much government and donor work will be at national and sub-national levels, planning and delivering infrastructure services often needs to transcend national boundaries. A focus only on national solutions, to the exclusion of regional approaches, can miss the potential for achieving important economies of scale. Consideration of regional approaches should be encouraged in PERs and similar processes.

4.6 The need to eschew a donor-driven project approach to development assistance reinforces the need for countries themselves to develop a systemic approach to infrastructure, as to other services. They must explore specific approaches to improving integrity in the management and operation of infrastructure investments and the delivery of related services. This should include better systems of accreditation for technical and professional staff, improving accountability for performance by service providers, and giving voice to users of services, including the development of processes for obtaining redress for complaints.

4.7 Opportunities to support constructive relationships between governments, the private sector (including the informal sector), non-profit providers and users of infrastructure services also need to be explored.

HOW CAN DONORS HELP?

4.8 No one should underestimate the complexity or the magnitude of the agenda set out above. Donors have a key role in:

- Supporting debate that can build consensus on the need for reform.
- Helping disseminate best practice in integrating infrastructure provision into PRSPs, MTEFs, PERs and sector-wide approaches.
- Supporting institutional development and capacity-building to deliver more effective legal, administrative and regulatory systems.
- Offering guidance on appraisal, procurement and

anti-corruption measures, and supporting the development of appropriate professional and technical standards (including environmental and social standards).

- Seeking to make governments and utility operators accountable for improved, transparent expenditure management.

4.9 Donors can also encourage and participate in innovative approaches to financing and managing infrastructure involving the public, private, informal and non-profit sectors and users. Examples include:

- Providing financial aid to support the transitional costs of privatising potentially profitable public utilities, such as telecommunications.
- Assisting the mobilisation of capital, either in the form of equity (such as that available from the Commonwealth Development Corporation, CDC) or as long-term loans (for example, from the Emerging Africa Infrastructure Fund).
- Supporting mechanisms to encourage private investment such as the World Bank's Multilateral Investment Guarantee Agency and country-level credit guarantees to tap local sources of capital such as savings and pension funds.
- Developing institutions to protect intellectual

property rights and hence to encourage more technology transfer.

- Supporting the development of an appropriate legal and regulatory framework.
- Brokering joint working between new partners, as in the Business Partners for Development model.
- Capacity-building for new roles, especially where institutions are small, as with user organisations or informal sector associations.

4.10 In addition, the donor community should continue to play a part in financing direct public sector investment in infrastructure, particularly in countries and sectors unable to attract private finance. Much of this support should come in the form of loans from the international financial institutions (the World Bank and the regional development banks) and other bilateral and multilateral institutions. Grant funding from development agencies such as the European Community (EC) and bilateral donors is appropriate in poor, aid-dependent countries. Many donors will wish to channel most of their capital support through government budgets while providing supporting technical assistance; others, such as the EC, may wish to provide a mix of support, including project investments. Budget and sector support offer new opportunities to promote maintenance.

A ROLE FOR DFID – AT COUNTRY LEVEL

4.11 In its dialogue with partners, DFID should seek to ensure that infrastructure constraints on sustainable pro-poor development are given appropriate weight in national poverty reduction strategies and plans, alongside other constraints.

4.12 In line with general policy, most resource transfer should be through national government systems. A systemic approach will allow a greater focus on the long term and on maintenance. There will, however, be instances where investment at a project level is justified, especially in poor policy environments. Four areas merit particular consideration within national poverty reduction strategies: capacity-building, accountability, new joint ventures and use of subsidies. The environment and employment are also important areas, where DFID has experience to contribute.

4.13 Capacity-building is an area where DFID should be active, whether via its partners or directly. In particular, DFID, with others, can help governments to strengthen their own project design, investment appraisal and management capacities. The UK has a comparative advantage in supporting transparent procurement procedures, and DFID should use this experience to help develop systems to fight corruption. In addition, and where appropriate, DFID should promote integrity pacts as a tool for increasing transparency and accountability. The UK has considerable experience of public-private partnerships, and can contribute to capacity-building also in this area.

4.14 DFID should also support other ways of making governments and utility operators more accountable for expenditure and for the delivery of specified levels of service. This could include support to an independent media, or the strengthening of advocacy groups and oversight bodies. Reinforcing external advocates of reform, and ensuring access to information, will assist constituencies for reform within government to press for change.

4.15 Where there is potential for new joint ventures with the private sector (formal and informal), with the non-profit sector or with users themselves, DFID should consider support, and in the absence of such potential, should explore opportunities for reform of public services.

4.16 DFID should pay more attention to the volume and targeting of subsidies, both implicit and explicit.

Many subsidies distort the market, encourage excessive consumption of resources, and work against the interests of the poor.⁶⁴ Nevertheless, on occasions, direct government subsidies can be appropriate, even for fully privatised utilities, both to ensure equity of service provision and to maintain the viability of the operation. Where such subsidies are justified, they should be transparent. The ideal is provision directly to users, but there are practical problems in doing this. Where donors are providing budgetary support, they will be supporting such subsidies: in the absence of budgetary aid, there is a case for considering such support.

A ROLE FOR DFID – AT INTERNATIONAL LEVEL

4.17 At international level, DFID will continue to encourage a rational division of labour, for example where donors, such as the Asian Development Bank or the European Development Fund, have a comparative advantage in infrastructure projects. DFID will also help developing country partners to ensure that the General Agreement on Trade in Services (GATS) works in support of the pro-poor infrastructure agenda. In addition, DFID should continue to address the constraints on the effective use of private finance, using international instruments to help create the conditions for resources to flow to difficult markets. The main areas for action for this agenda are the enabling environment, equity and loan finance, and mobilising local capital. The main vehicles are as follows:

- DFID played a key role in establishing the Public-Private Infrastructure Facility (PPIAF), a multi-donor technical assistance facility to help developing countries improve the quality of their infrastructure through the use of private resources. It has been in operation for over two years and, although it has attracted support from eleven other donors, current demands exceed resources. DFID will continue support to PPIAF for at least a further three years, while encouraging other donors to join.
- In its new form as a public-private partnership, the CDC will be encouraged to help increase equity investment in infrastructure.
- The Emerging Africa Infrastructure Fund was launched in January 2002 with an initial capital of \$300m. The fund will provide medium- and long-term loans to private investors for infrastructure initiatives in developing countries. DFID will seek to expand this fund by encouraging

⁶⁴ Clarke and Wallsten (2002).

Making a connection: water pipe installation, Guinea

both other donors and private sector partners to subscribe.

- DFID will continue to work with other donors to seek ways of mobilising more local capital for infrastructure.

4.18 DFID will seek opportunities to support the international transfer of experience of involving poor people in investment appraisal, as for example in the International Budget Project.⁶⁵

4.19 In addition, DFID will continue to provide support for international research and knowledge generation, which is regarded as an important resource by others in the international development community.

There will remain a need for technical contributions for particular sectors, such as the project appraisal tools developed to support decision-making on road investments.⁶⁶ The review carried out for this paper also suggests a need for further, more general, research on how best to use investment in infrastructure to promote sustainable pro-poor growth. Questions about the most effective ways to eliminate serious corruption, or to target subsidies on poor people, require a better understanding of the social and political contexts in which resource allocation decisions are taken. Much research should be country-specific, but should build on positive experiences in other countries.

⁶⁵ <http://www.internationalbudget.org>

⁶⁶ *Highway Development and Management Tools*, research originally started with support from DFID's previous incarnation (the Overseas Development Administration) to the Transport Research Laboratory, developed with the support of many donors and now with the World Roads Association. This tool resulted in savings of 25% when used in Tanzania.

5 CONCLUSION

5.1 This paper recognises the need to keep infrastructure service provision firmly within international, national and local policy frameworks and processes for poverty reduction, and to ensure that assistance to national infrastructure works in synergy with local infrastructure. Donor support for investment in infrastructure will continue to be important, especially where it can be used to generate pro-poor change.

5.2 The paper highlights the need to improve in areas that in the past have undermined the potential contribution of investment in infrastructure to poverty reduction: accountability, the environment and institutional development. It suggests that joint working between governments and other providers of infrastructure services can contribute to efficiency and effectiveness and to achieving pro-poor growth. It does

not prescribe particular solutions, but outlines options. Since many infrastructure services can earn commercial returns, the paper envisages a continuing role for private finance and for development agencies providing loans.

5.3 Many bilateral agencies will increasingly want to provide financial support through government budgets, even if this support is subsequently passed on to commercial parastatal organisations or utilities. But only the grant funding agencies are likely to be able to deliver significant support for policy development, for institutional strengthening, for human resource development and for piloting new approaches in the provision of infrastructure services. Within this framework, DFID will aim to use its resources strategically, to promote change that works for the poor.

Connected: Bihar, India

'Life has changed for the better during the last five years. Step-by-step we have bought cattle, a motorbike, tractor, shop and now we have a vehicle repair shop. People will soon need to have repairs done. I wait for them. Sooner or later they will come.

(Villager in Laos, talking about his reaction to the upgrading of a major road nearby⁶⁷)

⁶⁷Håkengård (1992), cited in Rigg (1997).

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ACRONYMS AND GLOSSARY

ACRONYMS

CDC	Commonwealth Development Corporation
EC	European Commission
EDF	European Development Fund (the main route for funds committed under the Lomé Convention).
GATS	General Agreement in Trade in Services
ICT	information and communication technologies
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
ILO	International Labour Organisation
MDG	Millennium Development Goal
MTEF	Medium Term Expenditure Framework
NGO	Non-Governmental Organisation (see Glossary below)
ODA	Official Development Assistance (see Glossary below)
PER	Public Expenditure Review
PPIAF	Public–Private Infrastructure Advisory Facility
PRSP	Poverty Reduction Strategy Paper
SPARC	Society for Promotion of Area Resource Centres (India-based NGO)
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WTO	World Trade Organisation

GLOSSARY

Budgetary aid/support Financial assistance to the government of a developing country paid directly to its annual recurrent budget. DFID's policy is to provide

funds in support of government programmes focusing on growth and poverty reduction and transforming institutions. Governments use their own financial management and accountability systems. This contrasts with financial assistance to specific projects with their own accountability requirements.

Environmental Impact Assessment Commonly abbreviated to EIA, this is the process of assessing and managing the environmental impacts arising from a new or substantially modified development throughout the project cycle. A full EIA is usually carried out for major infrastructure and development projects, projects requiring a major change of land use and projects located in particularly sensitive areas. A key determining factor in deciding whether an EIA is required is the extent to which the environmental impacts of a project can be readily identified, assessed and mitigated. An EIA is a standard procedure for all bilateral and multilateral donors.

Human Capital In economic terms, human capital is a factor of the amount and quality of labour available, quality including skills, knowledge, ability to work and good health.

Non-Governmental Organisations (NGOs)

Sometimes called the voluntary agencies: private independent, non-profit organisations of a charitable, research or educational nature.

Official Development Assistance (ODA) Flows to developing countries and multilateral institutions provided by official agencies, each transaction of which is administered with the promotion of the economic development and welfare of developing countries as its main objective, and is concessional in character, conveying a grant element of at least 25%. Only aid to countries on Part 1 of the DAC list is eligible to be recorded as ODA.

Parastatal An organisation established by the state, but which, through its constitution and budgetary arrangements, is semi-autonomous of government.

Participatory Poverty Assessment An iterative research process in which poor people's views are at the centre, seeking to understand poverty in its local social, institutional and political contexts, incorporating a

range of stakeholders, ideally involving them directly in planning follow-up action.

Rights-based Approach DFID's approach to the realisation of human rights is set out in the Human Rights Target Strategy Paper (see bibliography). This emphasises an approach to eliminating poverty that gives due weight to the views of poor people in policy-making, draws attention to inequality and moves beyond an understanding of development as charity. It promotes the principles of participation and inclusion for poor people and the fulfilment of obligation by States and other duty-bearers.

Sustainable Development There are many different

definitions, but in sum this is the concept whereby improvements in quality of life through economic development are not gained at the expense of the environment or of future generations.

Sustainable Livelihoods In the definition of the school of development most closely associated with these approaches at the University of Sussex: 'A livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets'. One of DFID's three objectives to help achieve poverty elimination is: 'Policies and actions which promote sustainable livelihoods'.

PICTURE CREDITS

Homeless International: pages 7 and 15

Panos Pictures: front cover (Guy Mansfield), pages 2, 3, 12, 26, 29, 31 and 32

TRL Ltd: pages 3, 5 and 19

WEDC: page 25 (Cyrus Njiru)

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