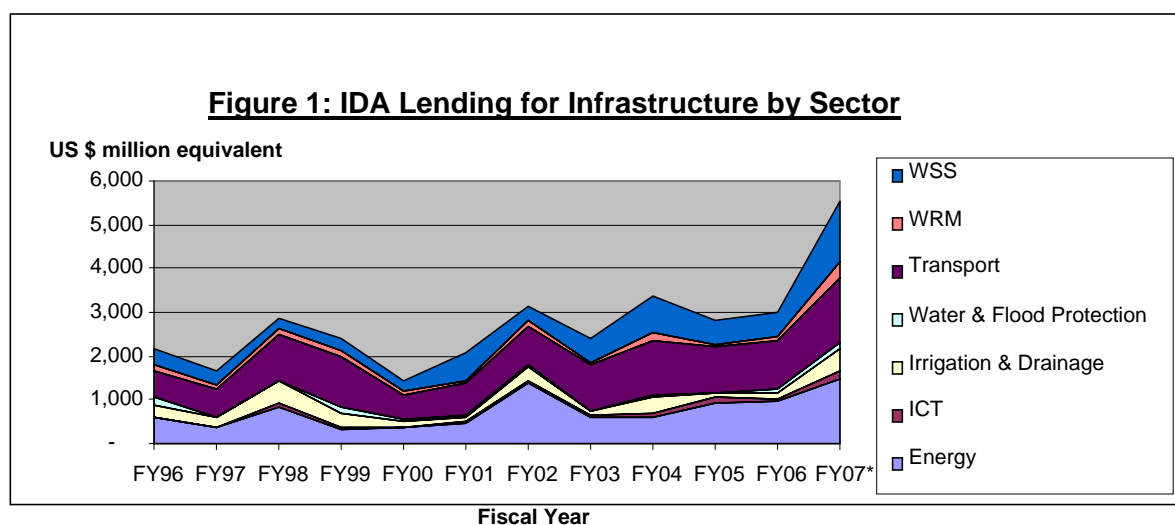


II IDA's ROLE IN ADDRESSING THE INFRASTRUCTURE CHALLENGE

18. **Trends in IDA's Assistance for Infrastructure.** The role of IDA in supporting infrastructure development needs to be placed within the broader context of international assistance to the poorest countries of the world. As mentioned earlier, ODA for infrastructure in low-income countries, especially for Sub-Saharan Africa, declined in relative terms. The share of ODA committed to infrastructure fell from 60% to 30% between the early 1990s through the middle of this decade, whereas the social sectors increased from 29% to 52% in the same period^{12 13}.

19. IDA assistance for infrastructure initially followed a similar path, but to a lesser degree. In the early 1990s there was a push to shift IDA resources away from infrastructure, in favor of the social sectors (health, education and social protection) on the one hand and for structural adjustment programs on the other. It is only in the past four years that IDA's assistance for infrastructure has rebounded, both in absolute terms and as a proportion of overall ODA for infrastructure, increasing from 18% during IDA-11 to an estimated 27% during IDA-14¹⁴.

20. As shown in Figure 1, IDA assistance for infrastructure declined in FY99-00 but significantly increased since the middle of the IDA-13 period. One factor behind the subsequent upturn was the 2003 Infrastructure Action Plan that the WBG executed in response to the requests from recipient countries for expanded assistance to infrastructure. Increased IDA lending has been directed primarily at water supply/sanitation and transport, while assistance for energy has remained strong.



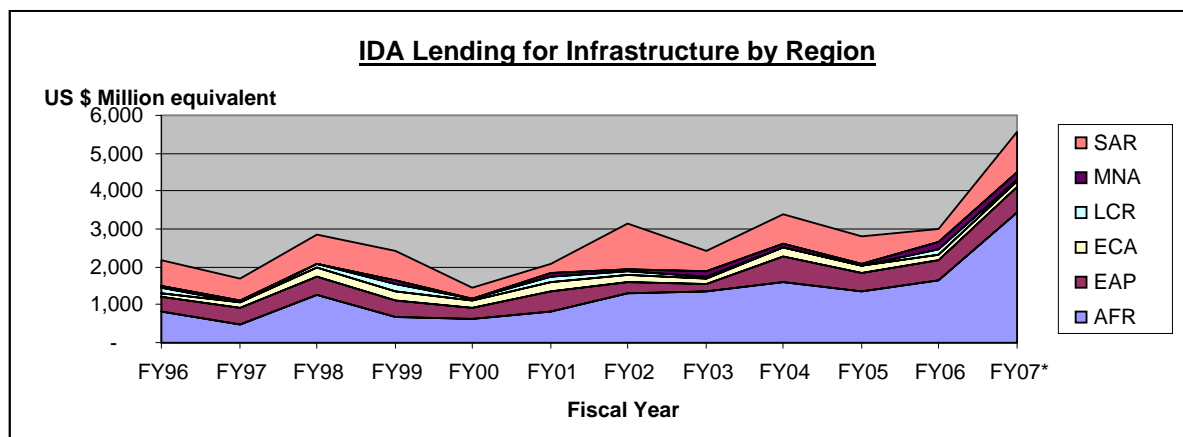
Source: The World Bank Group Data Business Warehouse

¹² Despite a large increase in the overall levels of ODA, IDA countries have experienced a decline in the support to their core development programs due to earmarking of a large share of ODA to debt-relief.

¹³ Aid Architecture: an overview of the main trends in official development assistance flows, IDA, February 2007.

¹⁴ Though much smaller in absolute terms, IFC's support to infrastructure (primarily focused on utilities and on transportation) in the IDA countries has exhibited significant growth, almost quadrupling between 2001-2002 and 2003-2005, and then almost doubling again in 2006-2007.

21. Figure 2 shows the evolution of IDA assistance for infrastructure by region. The expanded resources going to Sub-Saharan Africa relative to other regions are noteworthy, increasing from 38% in FY96 to 62% expected for FY07¹⁵. South Asia has been the second largest recipient accounting for 19% followed by East Asia/Pacific at 15%. These trends reflect a concerted effort to address the infrastructure deficit in Africa where lack of access and poverty incidence is most pronounced and where domestic resource mobilization capacity is most constrained.



Source: The World Bank Group Data Business Warehouse.

22. In tandem with the increase in the volumes of assistance and a more demanding approach to project design, the quality of IDA-supported operations in infrastructure has remained strong and indeed has improved. For example, the Independent Evaluation Group (IEG) found that almost 90% of the transport projects supported by IDA in the last ten years had satisfactory outcomes. This was 16% above the average of all IDA operations. Most recently, in FY05-06, as many as 93% of completed IDA transport projects were rated satisfactory or better. Over the last ten years, transport projects were also rated well above IDA average in terms of sustainability (78% likely or better) and institutional development (64% substantial or better). In the energy sector, the effectiveness of IDA lending has improved significantly from an average of around 60% satisfactory outcomes for projects completed in FY99-02 to 85% in FY04-06. At the same time, sustainability of these projects has improved from about 48% to 89% and the quality of IDA operations for water supply and sanitation has also generally been judged favorably. Ex-post evaluations indicate that 80% of the WSS projects completed between 2001 and 2006 achieved at least satisfactory outcomes. This is significantly higher than in previous years. Sustainability of project outcomes has also improved, as has the proportion of completed projects with satisfactorily implemented policy reforms.

23. Today, IDA is one of the three largest sources of development assistance for infrastructure in low-income countries, together with Japan and the EC. As a result of the Infrastructure Action Plan, the proportion of IDA resources dedicated to infrastructure is expected to rebound to the levels it had achieved toward the end of the 1990s. Aid fragmentation¹⁶ remains an important concern and IDA will continue to help address it

¹⁵ Almost US\$1 billion of the planned FY07 lending for Africa will actually take place in FY08 to accommodate country credit ceiling constraints.

¹⁶ The WBG's chief economist has indicated that: "Aid fragmentation is slowing progress on the MDGs. More aid will be good, but a proliferation in donors, global funds, and earmarking aid under new initiatives distorts priorities and strains the capacity of developing countries. We must improve aid coordination if aid is to become more effective."

through its coordinating role, making an important contribution to the effectiveness of international assistance efforts to poor countries.

24. **The scope of IDA support for infrastructure.** Infrastructure comprises several distinct sectors. The transport, energy, and water supply and sanitation sectors account for the largest share of assistance for infrastructure. IDA is also active in information, communications and technology (ICT), water resources, irrigation, and the hydro-carbons sector.

26. IDA combines investment and policy based financing with analytical and advisory work, researching key policy and public finance issues faced in its member countries, which serves to inform the content, sequencing and instrumentation of financial assistance. During the IDA-14 period, there has been an increase in non-lending assistance that covers a broad range of sectoral and cross-cutting issues faced by recipient countries. Infrastructure advisory work focuses on sector specific-issues as well as on broader activities such as Public Expenditure Reviews, Poverty Studies, Strategic Environmental Assessments and, more recently, Investment Climate Assessments (ICAs). This broad-gauged analytical work has been instrumental in appropriately positioning infrastructure concerns within economy-wide policies and government-wide program initiatives.

27. **The focus of IDA assistance.** The over-riding objective of IDA is to reduce poverty in low income countries. Poverty reduction has multiple dimensions: economic, financial, social and environmental, which must be effectively addressed for investments in infrastructure to yield sustained improvements in these basic services and to ensure such gains are widely shared among the populace. IDA assistance, combining investment financing, technical assistance and capacity building, has sought to address these distinct but closely interlinked elements of sustainability in its operations using the following approaches:

- **Expanding access to infrastructure services;**
- **Improving the quality and sustainability of infrastructure services;**
- **Facilitating the development of local industries;**
- **Promoting sound management of natural resources and environmental sustainability;**
- **Promoting social sustainability; and**
- **Providing reconstruction relief and reducing risks of natural hazards.**

These approaches are not mutually exclusive, indeed, most IDA operations have elements of several of them.

Expanding Access

28. Many people in the developing world do not have access to basic infrastructure services, particularly the poor. The degree of access is correlated with country income levels. In regions with a high proportion of low-income countries – Sub-Saharan Africa (SSA) and South Asia – access rates are lowest. Access rates also vary by sector; and sanitation lags most others. Further, access to all infrastructure service is often much lower in rural areas. For example, access to rural transport services, electricity, and telecommunications is far below that found in urban areas. These disparities have narrowed over time, but only gradually. An exception to the slow pace of improvement is telecommunications (ICT) services, where access rates have risen dramatically, including in SSA. However, gains in the absolute numbers of people with access have often been outstripped by population growth, especially in urban areas due to rural-to-urban migration.

29. Within countries and local jurisdictions, poor households tend to be the last served. For example, in Bangladesh, Nicaragua, and Indonesia, more than 90% of richer households have access to improved water sources, whereas in each of these countries, less than 50% of the poorest households have access to improved water sources.¹⁷ In SSA, the lowest income groups are almost entirely excluded from access to modern network services. The information available from household surveys suggests that modern infrastructure services in SSA cater mostly to the richest 40% of the population whereas coverage rates of piped water and grid electricity for the poorest 40% of the population are virtually nil.¹⁸

30. Because traditional infrastructure services often do not reach the poor, lower cost alternatives that meet their preferences and capabilities are required. Where utility services do not reach the poor, they often rely on more costly alternative sources of supply. In the case of water supply, prices charged by alternative suppliers such as tankers can be five to ten times higher than utility tariffs for piped water – restricting the consumption of water to subsistence levels. Poor households also tend to spend a higher proportion of their income on water, sanitation and electricity than higher income groups.¹⁹

¹⁷ World Development Report, 2004.

¹⁸ Foster, Vivien. “Infrastructure in Sub-Saharan Africa: The Role of the World Bank and the Development Community.” World Bank, 2005.

¹⁹ Foster, Vivien. “Infrastructure in Sub-Saharan Africa: The Role of the World Bank and the Development Community.” World Bank, 2005.

31. Projects with a primary focus on expanding access to infrastructure services account for a large share of IDA's lending to the sector. However, even in such projects IDA generally seeks to utilize its interventions to also promote efficiency and management improvements (Box 1).

Box 1: Successful Access Expansion Projects

The Jamuna Bridge project in Bangladesh (Project cost US\$754 million, of which IDA US\$199 million) constructed a 4.8-kilometer bridge with a four-lane carriageway with shoulders and foundations to carry a railway line, an electric power inter-connector, a gas pipeline and telecommunications facilities. The project also included viaducts, guide bunds, flood protection measures, environmental mitigation measures, as well as technical assistance and training. The project connected, for the first time, Northwest Bangladesh with a fixed link to the rest of the country. The bridge has generated a substantial increase in traffic. On opening, total traffic crossing the Jamuna was more than 50% above the prior trend, with more than 80% of vehicles preferring to use the bridge rather than the ferries. There was a particularly sharp increase in the movements of light vehicles and buses. The economic rate of return is an estimated 17%.

The Yemen Social Fund for Development (SFD), set up in 1998, improved the range of services and options available to the poorer segments of the Yemeni population through a combination of community development, capacity building, and micro-finance programs. IDA provided US\$165 million for the project's three phases. As part of the SFD a special program for water harvesting systems was designed in order to increase water supply during the dry season. Water quality was improved through fencing of cisterns and the introduction of sand filters and hand pumps. The project led to a *significantly increased access to water services*, through the implementation of more than 400 subprojects benefiting more than one million people. SFD's non-mechanized water harvesting schemes comprised 76% of these water subprojects, increasing access to services and reducing the risk of water shortages in 312 rural communities. About 15% of these water harvesting subprojects were implemented directly by the communities, resulting in increased community management capacity, better cost-effectiveness and greater sustainability. SFD2 also implemented 65 large environmental sanitation subprojects, providing services to a further 821,000 individuals. By 2005, SFD water supply subprojects benefited around 1.9 million people. Sixty-five large environmental sanitation subprojects provided services to a further 821,000 people.

Source: IDA at Work website and project documents

Improving Quality and Sustainability

32. In addition to expanding access, IDA assistance also helps improve service quality and sustainability. In the transport sector, projects have financed the maintenance and rehabilitation of roads, which in many countries (particularly in the Africa region) suffered as a result of conflicting budget priorities. The Africa region's Road Maintenance Initiative and road funds have been instrumental in increasing funding for critical road maintenance and in establishing institutional and financing mechanisms to ensure continuity of funding. 26 road funds have been established in the IDA countries of Africa. While the majority of assistance has been directed at improving maintenance of main roads, secondary and rural roads are an important and growing element of many countries road maintenance programs. For example, a Road Fund established in Ethiopia in the late 1990s has been instrumental in substantially increasing maintenance funding which in turn resulted in significant improvements in the condition of the road network: The proportion of all roads in poor condition dropped from 53% in 1995 to 45% in 2003 and for regional roads, the decline was from 60% to 37%. These initiatives have also focused on building the capacities of small scale contractors and establishing improved contract management systems.²⁰

Brushett, S. 2005 "Management and Financing of Road Transport Infrastructure in Sub-Saharan Africa" Sub-Saharan Africa Transport Policy Program, Discussion Paper No. 4, Washington, DC

33. IDA has also supported the introduction of new directions in transport policies by assisting with railway privatization, trade facilitation and multi-modal transport development. Additionally, IDA has supported improved cost recovery, which in many countries is an important issue in the roads sector. In the case of water supply and electricity, concerns about quality and sustainability have been at the heart of the dialogue between IDA and its clients on the importance of sound financial management policies and practices. IDA has supported the introduction of more efficient and transparent tariff structures and subsidy policies and programs to ensure that such services are affordable to the poor. In addition to its support to improved cost recovery, IDA has helped the utilities that received its financial assistance to improve their management practices and efficiency, providing technical assistance, promoting twinning arrangements, bringing-in private operators on management contracts and promoting commercialization of utility operations.

34. Gains in operating and investment efficiency can lower unit costs, enabling lower tariffs and strengthening the financial capacity of utilities to improve service and expand access. Increased competition, private sector participation (PSP), performance-based contracts and good regulatory oversight can promote increased efficiency, generating resources for expanding access for the poor, *if* properly designed. Reductions in capital costs have even more powerful potential for reducing costs and for limiting the extent of future price increases as services are expanded and upgraded. Sustained capital cost reductions require ongoing improvements in planning, design, and execution of capital projects, as well as demand-side management. Sharing efficiency gains appropriately between the service provider, existing consumers, and new consumers is critical and government plays a key role through their regulatory oversight. Over the course of the past two decades, IDA has been providing assistance on regulatory matters to its clients, drawing on its extensive experience in this regard across the world, including Middle Income Countries (MICs). The Energy Sector Management Assistance Program (ESMAP), the Water and Sanitation Program (WSP), and the Public-Private-Investment Advisory Facility (PPIAF) have also been source of help in this regard, and training across the world is being provided by the World Bank Institute (Box 2).

Box 2: Improving Quality and Sustainability

Under the *Yerevan Water Sector Utility Reform Project in Armenia* IDA funded three investment projects to improve the efficiency, management, operation and delivery of water and wastewater services for the Yerevan service area, while supporting regulatory improvements through policy-based lending. The investment projects also helped make emergency short-term improvements in the water supply system to Yerevan, in particular to ensure supply to the poorer and most affected elements of the population while laying the groundwork for sustainable management improvements. IDA helped to bring in private international operators to manage the utility and supported measures to reduce environmental pollution. IDA financed most of the three projects' total cost of US\$83.6 million. (Counterpart contributions amounted to US\$10.5 million). As a result of the projects, the quality, reliability, and efficiency of water supply services improved dramatically for the Yerevan area 1.3 million people. Water services have also begun to improve outside the capital. In Yerevan, water supply has increased from about 7 hours to about 18.5 hours a day and more than 70 % of Yerevan now has 24-hour service. Bill collections have increased from 20 % to 79 % over the past ten years. The water quality is better monitored, with modern chlorination equipment and improved security at all water sources. Energy consumption decreased by about 48 % as a result of using gravity-powered water sources, increased efficiency and reduction in the number of booster pumps for high rise apartments. A project component supported by the Japan Social Development Fund (JSDF) renovated internal plumbing in 1,808 residences in Yerevan, resulting in a reduction in water losses of some 35 %. In addition, metering is now near universal in Yerevan, resulting in a significant reduction in water wastage. Due to the projects' success, IDA managed to attract other donors to the water sector, and currently KfW, the German development bank, is financing water supply investments in the municipal water utility in northern Armenia.

The Ethiopia Road Sector Development Program (Project cost US\$534 million, of which IDA US\$306 million) improved 1,334 kilometers of trunk and regional roads, helped build institutional capacity for sustainable road development and maintenance, provided employment for the poor in rural road works, and helped develop appropriate and affordable means of transport. The project helped reduce vehicle operating costs by 16% and travel time by 25-30 %. In addition freight rates were reduced by 25% on the main import export route and by 47% on trunk roads.

Source: IDA at Work website and project documents

Developing Local Industries

35. Expanding the involvement of small-scale local private providers and artisans can enhance access by the poor to infrastructure services. In many cases these providers help to fill a gap that the public network monopolies ignore. For example, in Dar es Salaam, Tanzania, a cholera outbreak in 1996 forced the sewerage and sanitation department to loosen its monopoly on cesspit cleaning to permit private providers. There is now an emerging market for cesspit cleaning – households can choose a provider based on price and easy-to-monitor performance. Ad-hoc transport services, such as the pedal rickshaws of Dakha, Bangladesh, and other South Asian cities and the bicycle and motorcycle 'boda-boda' services which have emerged in East Africa, meet an important need in local transport services and provide substantial employment for members of poor households.

36. A reliable supply chain of goods and services is essential for sustaining infrastructure investments. For example, in Sri Lanka transport service innovations like cycle trailers together with the training local blacksmiths to make and repair them, have been successful. For rural water supply systems, having spare pump parts available on the local market and trained mechanics to make repairs and installations is important for realizing the benefits these investments are intended to generate.

37. Most IDA-supported projects have positive spillover effects in developing local industries, particularly in countries where the availability and reliability of infrastructure services had become a bottleneck for growth (Box 3).

Box 3: Facilitating the Development of Local Industries

The Energy Services Delivery Project in Sri Lanka created an enabling environment for private sector participation in grid-connected renewable energy projects. In parallel, private sector participation in *off-grid* renewable energy development was stimulated by the participation of micro-finance institutions, which was instrumental in achieving increased prevalence of solar home systems. The private sector renewable energy projects have created a vibrant industry of suppliers, developers, consultants and trainers. When the project closed there were 11 mini-hydro developers (compared to one before project implementation), four major solar companies (up from 2-3 fledgling ones) and about 12-15 village hydro developers (versus 1-2 earlier). In addition, there were nearly 80 functioning electricity consumer societies at the village level.

The Agence Burundaise de Réalisation des Travaux d'Intérêt Public (ABUTIP) project in Burundi aimed at developing local industries started in August 2001. Three years later, 72 sub-projects covering the entire country were realized. They include 17 new markets, a rehabilitated market, two slaughterhouses, 32 kilometers of cobble stone-paved urban roads, a 7 hectares site and services development, 17 primary schools, two health centers, four drainage systems totaling 4 kilometers and two 50 kilometers-long gravity water supply systems directly and indirectly benefiting to more than 2.5 million people. More than 2 million person-days of temporary employment were created and US\$3 million were distributed as incomes to unskilled workers. Overall, the project was able to generate an average annual turnover of US\$10 million for the Burundian consulting and construction industries over the last three years. The project played a key role in rejuvenating the consulting and constructing industries in Burundi as well as providing timely quality infrastructure to partially reduce the heavy gap that was affecting living conditions of poor people and constraining economic opportunities in Burundi.

Source: IDA at Work website and project documents

Promoting Environmental Sustainability

38. In line with growing concerns about the environmental and social impacts of infrastructure projects, IDA has progressively tightened its safeguards since the mid 1990s. This was followed by tighter fiduciary controls designed to deter misuse of funds and corrupt practices. It must be acknowledged that IDA's record through the 1980s was uneven in this regard, but by the mid 1990s environmental sustainability had become central to IDA's development assistance. IDA's set of operational policies on environmental issues were brought under the rubric "safeguard policies" in 1997 and all projects were – and still are – required to address each one of these policies explicitly. In addition, oversight on how these policies were applied increased through an internal system of controls. The result of these changes was a significant improvement in the treatment of these concerns in project design implementation, and evaluation.

39. IDA has increasingly supported greater country ownership and responsibility for environmental and social policies and programs, promoting a country-driven approach and seeking to ensure meaningful participation by civil society in the design and oversight of many operations. Moreover, IDA assistance goes beyond the "do no harm" precepts that previously governed its interventions in infrastructure to proactively seeking to promote environmental and social goals.

40. An important focus of WBG assistance for improving environmental management at the local, country and global levels has been “Clean Energy and Climate Change,” an area where IDA is expected to continue to play a major role. Between 2000 and 2006, IDA dedicated US\$401 million to renewable energy and energy efficiency projects, averaging more than US\$66 million in clean energy projects per year. The bulk of these projects were in Sub-Saharan Africa and South Asia; US\$172 million and US\$141 million respectively. IDA support for Clean Energy spans the full range of sectors, applications, and technologies. Projects incorporate grid and off-grid technologies and use a variety of wind, solar PV, biomass cogeneration, hydropower, and geothermal projects. Examples include the Bangladesh Rural Electrification Renewable Energy Development project, which financed electric cooperative-led solar home system programs, and the Nigeria Renewable Energy project.

41. This support is set to expand markedly in the coming years with the launch of the action plan for the Clean Energy for Development Investment Framework, endorsed by the World Bank’s governing board in March, 2007. Under the Action Plan, total support from all sources is expected to be more than US\$10 billion in the period FY 06-08, up from US\$7 billion in the preceding three years. The Plan supports the Africa energy access agenda, the transition to a low-carbon economy and supports countries’ adaptation to climate variability and change.

42. The WBG leverages its support to clean energy initiatives through its access to the carbon fund and GEF facilities. As of FY 06 the combined IBRD/IDA portfolio for energy amounted to US\$ 3,030 million, to which Carbon Offset and GEF added US\$88 million and US\$50 million respectively²¹. This area of activity has been receiving increased attention by IDA and covers a broad range of interventions, including projects to address deforestation, to treat water discharges, and to reduce reliance on non-renewable energy resources (Box 4).

²¹ “Clean Energy for Development Investment Framework: the World Bank Group Action Plan”, March 5, 2007, page 5.

Box 4: Promoting Sustainable Management of Natural Resources

The Senegal River Basin Multi-Purpose Water Resources Development (APL) Project for Mali, Mauritania, Senegal and Guinea aims to enhance regional integration among the riparian countries of the Senegal River Basin Organization (OMVS) for multi-purpose water resources development to foster growth and improve community livelihoods. The project follows two previous projects that focused on water resources and dam/hydropower investments and environmental quality, respectively. There are three components to the current phase. Component 1 supports regional institutional development for water resources; it modernizes the OMVS and enhances institutional capacities and adapts OMVS institutions and legal frameworks to include Guinea. Component 2 supports local level multi-purpose water resources development; it develops small hydraulic infrastructure and related activities, improves traditional fisheries, protects water resources through planning and management, and reduces waterborne diseases. Component 3 supports regional multi-purpose and multi-sectoral master planning through preparing the Comprehensive Master Plan for the Senegal River Basin, pre-investment support for the OMVS Gouina Hydroelectric Project and the OMVS multi-purpose dams, and ensuring stakeholder participation in the design of those projects and in master planning.

The **Karnataka Watershed Project in India** promotes soil and water conservation to raise farm productivity in selected watershed areas in five drought-prone districts in Karnataka. It covers 432,000 hectares of arable and non-arable lands with a population of one million people whose average annual income is some US\$222. Reversing the decades-old top down approach, the project focuses on strengthening the capacity of local communities to better manage their natural resources.

Outcomes from the projects include greater water retention of wells and ponds now retain water for longer periods – from only 3 months to 4-6 months presently. Groundwater yields have increased by nearly 1,000 liters per hour. The project has supported the establishment of 4,300 farmer groups to sustain participatory watershed management across 7,000 communities in 742 micro-watersheds. Communities now have greater ownership and commitment and are preparing integrated micro-watershed plans. The project has resulted in a new government policy for co-management of common lands in watersheds that will have long-term impacts on improved natural resource conservation and rural livelihoods.

Source: IDA at Work website and project documents

Promoting Social Sustainability

43. Many of the changes in IDA's approach to environmental issues also apply to social concerns. One of the most important challenges facing most poor countries is how to balance two conflicting goals: achieving cost recovery for the provision of infrastructure services while ensuring that these services remain affordable to the poor and that access is expanded. In many instances Governments have sought to resolve this dilemma through widespread subsidies that benefit not only the few fortunate poor that have access to service but also richer households. This however has not worked as the financial repercussions of the failure to target subsidies are that utilities lack the funds needed to expand access to services by the poor. At present, the average prices charged by many utilities in low-income countries are often well below costs, preventing them from reaching cash-generation levels that enable expansion.

44. To ensure affordability and access, subsidies need to be specifically designed to reach the poor. For example, subsidies could be targeted to services the poor are more likely to use, such as public water standpipes, improved latrines, electricity ready boards, and buses/mini-vans. Subsidies could also be targeted to areas where the poor are concentrated – for example, slums or rural areas. Connection (or access) subsidies are likely to be a more efficient means to reach the poor, as a higher proportion of the unconnected are likely to be poor. For example, in the ICT industry universal access funds often help reduce the largest barrier to serving

rural and isolated communities, i.e. the upfront investment and start-up costs. Such schemes are widespread in Latin America, and are also being devised in Nepal and Uganda.²² In regions with low access rates, especially SSA, connection subsidies have the potential be more effective in reaching the poor than consumption subsidies.

45. Past infrastructure programs were often developed on the assumption that infrastructure services could be planned, administered and executed centrally without the active participation of local communities. The outcome, however, was that often investment decisions were not responsive to community priorities or were unduly influenced by political considerations. An important lesson learned by IDA is that community participation can engender voice, responsibility and ownership of local infrastructure services, and therefore improve sustainability. Effective community participation can improve the voice of the poor in decision making processes that determine what services they receive and how they are managed and paid for. Making service providers more accountable to the poor – for example, through user fees – is one way to ensure greater voice. Other approaches, particularly in rural settings, that place the community at the center of decision-making processes have proven effective and sustainable. Such approaches are highly relevant to poverty stricken areas where government-provided services often fail, especially in post conflict situations (Box 5).

Box 5: Promoting Social Improvements

An Output-Based Aid (OBA) scheme in Uganda helps deliver telecommunications services to the rural poor. Telecommunications services in urban areas are generally profitable ventures. Even in Sub-Saharan Africa, subsidies are not required to ensure financially sustainable service delivery. But extending services to reach rural areas is costly, and the inhabitants in rural areas tend to be poorer than their urban counterparts – and very poor in the case in Uganda. The IDA-assisted Energy for Rural Transformation Project includes an information and communication technology (ICT) component which provides partial financing for rural ICT services the poor are most likely to use: public payphones, internet points of presence, and public telecenters. A subsidy is provided for the initial capital investment gap which is the difference between the total project cost and the maximum private investment available to obtain a normal rate of return, while operating and maintenance costs are to be covered by service charges to consumers. The operators – selected under least-cost subsidy bidding – are assured payment for connecting the poor and for the most part are paid only *after* service delivery. The subsidies are financed out of a fund which is replenished by a universal service levy imposed on turnover of the telecommunications and postal sectors, though the fund may also receive contributions from bilateral and multilateral agencies. After two years of careful preparation, an operator was selected through an international competitive tender in 2006. The total project costs for all three regions under the telephony component was estimated at close to \$11.7 million, and the total subsidy awarded was \$5.2 million, thus leveraging close to 55% in private investment. The subsidy had initially been estimated at \$8.6 million, but the competitive process produced virtual savings of almost 40%. In two of the three regions, the operator has delivered most of the agreed outputs, resulting in at least one public telephone per 2,500 inhabitants (which equates to an average distance of about 3 kilometers to a public pay phone) and internet access in 32 of the total 56 district capitals. Over 3 million rural Ugandans have better access to basic ICT services as a result of this program.

Source: IDA at Work website and project documents

²² Sabater, Juan Navas. Universal Access and Output-based Aid in Telecommunications and ICT. CITPO, World Bank, June, 2005.

Providing Reconstruction Relief and Reducing the Risks of Natural Hazards

46. IDA is one of the largest donors for disaster reconstruction and recovery. Whereas other donors tend to focus on the provision of humanitarian aid immediately after a natural disaster and conflict situations, IDA is the primary source of support for reconstructing infrastructure. IDA support is critical to low-income countries because the economic impact that they experience is much larger, in relation to their domestic-resource mobilization capacity, than for richer countries. For example, in 2002 Afghanistan's communications network was barely functioning and less than 1% of the population had access. The Government was limited in its ability to coordinate across agencies, there was hardly any access to the internet and the postal system was in shambles. The impact of IDA's involvement since then has been dramatic. More than US\$300 million in private investments have been attracted, there are four licensed private mobile operators, a unified service provider and seven internet providers. The number of telephones has increased from 57,000 to more than 2 million, long distance rates have dropped to 1/20 of their prior level and 8 out of 100 Afghans have access to a telephone. All provinces are now connected and the Government has a source of revenues that represents 20% of its total revenues.

47. In recent years, the social impacts of civil conflict and natural disasters have received increased attention. The Pakistan Poverty Alleviation Fund enabled an immediate response to the October 2005 earthquake by funding the reconstruction of affected houses in remote areas of the country.

48. IDA is increasingly supporting preventive measures to mitigate the potential consequences of natural disasters, for example by helping to strengthen schools and hospitals so that they will withstand an earthquake, developing building codes that take seismic risks into account, and promoting insurance schemes that spread economic risks more widely. An example of the approach is given by Grenada, where IDA supported retrofitting of emergency shelters and an education sector project included the retrofitting of schools. In September 2004, the island was hit hard by Hurricane Ivan. The damage assessment revealed that the retrofitted shelters operated effectively and the two schools retrofitted by the IDA-supported education program not only survived without significant damage but were also used as shelters.

49. Two recent initiatives in this area are the "Natural Disaster Risk Hotspots" study (2005) which identifies risks and promotes sound risk mitigation investments and the recently launched "Global Facility for Disaster Reduction and Recovery (GFDRR)" that aims to mainstream hazard risk reduction into the development plans (including Country Assistance Strategies and Poverty Reduction Strategies) of WBG borrower countries.

50. The following sections illustrates how these approaches come together at the country level, describing IDA assistance efforts in three regions (Sub-Saharan Africa, South Asia, and East Asia and the Pacific) which account for about 85% of IDA funding.²³

A Regional Perspective – Sub-Saharan Africa

51. I During the 1980s and 1990s, many countries in Africa evidenced a disappointing economic growth record and many social and economic indicators actually declined. However, by 2005 there were encouraging signs of a reversal of these trends. At the Gleneagles Summit in 2005, donor governments agreed to place high

²³ The "IDA at Work" website provides a comprehensive review of achievements at the country, sector and project levels

priority on scaling-up financing for infrastructure development. At that time, it was estimated that investments would need to double from US\$11 billion to around US\$22 billion per year. Under the Africa Action Plan, the World Bank committed to scale-up IDA-14 funding for infrastructure from around US\$1.4 billion in the IDA-13 period to US\$1.8 billion by FY06, US\$2.0 billion by FY07, and US\$2.4 billion by FY08, and to work through the Infrastructure Consortium for Africa (ICA) to mobilize an additional US\$2.5 billion by FY08. In addition, there was a commitment to leverage World Bank Group support for regional projects (including infrastructure) up to a level of US\$1 billion by FY08.

52. As of FY07, IDA is already close to delivering on the full commitments of the IDA-14 period. Lending for FY07 is expected to reach US\$2.5 billion, already exceeding the target of US\$2.4 billion for FY08. Indeed, due to IDA constraints, an additional US\$0.9 billion infrastructure projects already in an advanced stage of preparation have had to be deferred to early FY08. It is particularly important to note that this scale-up has been accompanied by improvements across a range of portfolio quality indicators as well as ex post project evaluations.

53. Regional lending by IDA (most of it for infrastructure) increased from US\$490 million in 2006 to US\$900 million in 2007. The results indicators show that in the region more than 22,000 kilometers of roads have been constructed or rehabilitated and 1,000 MW of generation capacity have been added. By the end of IDA-14, it is estimated that 2.5 million people will benefit from improved water supply²⁴.

54. The following two projects illustrate the direction of the region's efforts and the expected achievements. The East Africa Trade and Transit Facilitation Project is a regional project that aims to create an efficient and functioning East African Trade Area (Kenya, Tanzania, Uganda and Rwanda). This project will reduce transport costs by improving road infrastructure, reducing transit time, and by supporting the concessioning of Kenya and Uganda railways. This project is an excellent example of using innovation, multi-sectoral approaches, and leveraging partnerships to support export-led growth and competitiveness. The project team has put in intensive effort to bring all four countries to the table as well as enlisting the cooperation of AfDB, US AID, and JICA to maximize the impact of IDA.

55. An earlier example is the Senegal Water Sector Project, an \$84 million project approved in FY95 and closed with highly satisfactory ratings from IEG in June 2004. The project supported important changes in policy, service delivery and oversight and employed public-private partnerships to manage urban water supply. Today, it is considered a model in Sub-Saharan Africa. As a result of the project, the access and quality of potable water to the urban poor has improved, unaccounted for water decreased from 32% to 20% between 1998 and 2003, while access to water supply services was extended to approximately one million people. Approximately 81,000 water connections, 400 standpipes and 13,000 new sewerage connections were completed, are fully operational and benefit primarily lower income households. This contributed to closing the urban access gap in water supply by 75%. An on-site sanitation component has been implemented in 30 districts in the peri-urban areas of Dakar whose population exceeds half of the capital city. More than 13,000 sanitation facilities have been constructed and are providing services to 90,000 inhabitants. The financing mechanism for the sanitation component is particularly noteworthy as much of the payments for local contractors and the private operator are only disbursed after outputs have been delivered and use is demonstrated. Community based organi-

²⁴ A Results Framework has been established to track progress on the IDA-14 and related infrastructure indicators. The indicators reflect the results of project disbursements, which necessarily lag somewhat behind financing commitments, but nonetheless reached record levels of US\$1 billion in 2007.

zations have been instrumental in stimulating demand for basic sanitation and the Global Partnership on Output Based Aid (GPOBA), a World Bank administered trust fund, is providing resources to scale up its subsidy scheme which is expected to serve another 130,000 inhabitants who live in marginal areas. At the same time, the urban utility has become financially autonomous and is able to cover operational and capital expenditures without direct Government subsidies, and effective monitoring and regulatory tools were put in place which include an extensive performance tracking system to monitor progress in the water sector. This model is being adopted by neighboring countries, such as Niger.

A Regional Perspective – South Asia

56. In South Asia, of the total IDA-14 envelope of \$11 billion for the region, around \$4.2 billion will support infrastructure investments, in particular in rural areas to improve services and expand access. The region's achievements under IDA have been substantial, as the examples here illustrate.

57. Support from IDA to the power sector in Bangladesh, via the Rural Energy for Rural Economic Development Project, has reduced losses and helped to connect 400,000 rural households to the network, plus another 100,000 households via solar home systems.

58. IDA funding of rural water projects has increased access to safe and sustainable water supply to households in project areas from a low of 56% in Kerala and 16% in Karnataka as the pre-project situation, to 84% households in Kerala and 71% households in Karnataka as per project status in November 2006. About 120,000 additional households in rural Kerala now have access to safe water supply through taps in their homes and 80,000 additional households have access to household level sanitation facilities. About 560,000 additional households in rural northern Karnataka now have access to safe water supply and a third of those have private connections within their homes. In addition about half of such Karnataka rural households have improved environmental sanitation facilities with "healthy homes," including sanitary latrines, drains and roads, smokeless chullas (cooking stoves), and improved hygiene practices. The Maharashtra project has so far covered 50,000 additional households with safe and sustainable water supply and 58,000 additional households with sanitation facilities. Besides the physical impacts, these projects have pioneered the piloting of several alternative community-driven development (CDD) based decentralized service delivery approaches, with Gram Panchayats (local self government) as the focal point.

59. Rural water projects in Sri Lanka have so far benefited about 46,000 households with access to clean water mostly in the form of either house connections or yard taps. About 94% of households in the project villages have not experienced water-borne diseases, such as diarrhea, since the completion of their sub-projects.

60. IDA is also financing much-needed rural connectivity in India, Bhutan, Bangladesh and Sri Lanka by expanding and improving rural roads networks. IDA is also leveraging important policy reforms to Bangladesh Railways and will finance improvement in the operation of the country's main transport corridor from Chittagong to Dhaka.

A Regional Perspective – East Asia and the Pacific

61. In the past eight years, lending for infrastructure to the low-income countries of the region has averaged about US\$300 million/year. Under IDA 14, infrastructure commitments amount to about US\$1.5 billion. The

priorities in the region have been: access to basic services, particularly in disadvantaged regions in relatively well-managed poor countries; integration of the Greater Mekong region; vulnerable states (Pacific Islands, Papua New Guinea, and Timor-Leste); and disaster recovery and risk management.

62. IDA's support since 1990 has enabled some important physical achievements, as reflected in some of the following quantitative outcomes: 3443 kilometers of new roads constructed; 55,320 kilometers of existing roads maintained; 6,624 of existing roads rehabilitated; 108,435 piped water connections made; 687,000 m³/day of sanitation treatment capacity added. These achievements have helped the region improve the proportion of the population with access to infrastructure services, which has generally increased by a significant margin. For example, in Cambodia the proportion of the population with access to water increased from 35% to 41% between 2000 and 2004, in Myanmar the proportion of the population with access to sanitation increased from 58% to 77% during the same period, and in Lao PDR the proportion of households with access to electricity rose from 36% to 41%.

63. In East Asia and the Pacific, the lending program has been complemented by a significant advisory and analytic activities (AAA) program. A major report completed in 2005²⁵ brought together the Asian Development Bank, JBIC, and the WBG in the identification of challenges and priorities, paving the way for enhanced donor cooperation in the region.

64. IDA provided its first Partial Risk Guarantee (PRG) of US\$75 million for Vietnam in support of the Phu My 2 Phase 2 Power Project. The Phu My 2.2 is a 715-MW gas-fired power plant that was financed by the private sector with an IDA guarantee. The total project cost was US\$480 million. The project achieved financial closure in December 2002. The IDA guarantee helped Vietnam to mobilize private financing for infrastructure development to supplement limited public resources. The successful financial closure of Phu My 2.2 was an important milestone for attracting further private capital flows to the country, establishing an accepted framework for future private financing of infrastructure projects in Vietnam. In addition, it helped mobilize long-term debt substantially beyond prevailing market terms for the country which in turn lowered power generation costs below what they would otherwise have prevailed.

Monitoring and Evaluation of Results

65. Enhancing the effectiveness of infrastructure development programs requires timely, reliable information on performance. IDA was among the first international financial institutions to introduce a results measurement system to systematically track key country outcomes as well as IDA's contributions to those outcomes. Under IDA-13 and -14, real progress has been made in strengthening IDA capacities as well as those of its clients to better measure progress of sectoral policies and programs and their impact on the population. These efforts have strengthened the results focus of country wide programs and individual projects; collected a wider range of performance information in project monitoring; and begun to mainstream the application of impact evaluation methodologies.

66. **Project-Level Monitoring & Evaluation.** The use of results frameworks (monitoring and evaluation systems) and performance indicators has been strengthened across IDA's infrastructure operations. Supporting this has been a major capacity-building effort that includes learning events for each sector, clinics for project teams, advisory helpdesks, toolkits, model results chains, websites, and lists of frequently used or recom-

²⁵ Connecting East Asia: a new framework for Infrastructure.

mended indicators. In this context, progress has been made on specific commitments under IDA-14: (i) more than 75% of all IDA credits approved in FY06 included satisfactory baselines for at least one output or outcome indicator in their first supervision report²⁶; (ii) completion reports in WSS and Transport demonstrate more systematically on project outputs²⁷; (iii) roughly 75% of credits approved for WSS and rural transport in FY06 reported on standard key outcome indicators.²⁸ The impact of IDA operations is increasingly scrutinized through the use of methodologically rigorous Impact Evaluations (IE). More than 40 such IEs are under preparation or underway in infrastructure, including coordinated sets of IEs in selected sub-sectors.²⁹ Infrastructure impacts are also subject of sectoral research³⁰ and several regional infrastructure studies. Finally, the development of projects is informed by sector strategies³¹, country assistance strategies, and economic work that are increasingly anchored in results frameworks and performance metrics.

67. **Sector Results Metrics.** With regard to country-level indicators that can be utilized for cross country comparisons and benchmarking, good progress has been made in indicator prioritization and standardization as well as data collection, processing, and dissemination. The progress varies across sectors depending on the technical ease of data collection, private sector demand for the data, and the mandates of international institutions in the sector (see Box 6).

²⁶ Moreover, of those IDA credits whose first ISR lacked baselines, 83% did include baselines in their second ISR.

²⁷ This has allowed to establish, for instance, that 54 IDA credits completed in FY04-06 have helped, *inter alia*, construct 6,250 km, rehabilitate more than 10,700 km, and maintain more than 46,000 km of roads.

²⁸ Such as access to a safe water source and to a rural all-season road.

²⁹ Slum upgrading, rural electrification, and rural transport.

³⁰ E.g.: impact of transport on health; effects of private participation in electricity and water supply.

³¹ E.g.: strategy implementation updates for WSS and Transport (forthcoming). In the latter sector, a new strategy document has been structured around a set of impacts.

Box 6: Measuring Sector Performance

Water Supply & Sanitation (WSS): In collaboration with the Joint Monitoring Program (WHO/UNICEF), data coverage for the WSS access indicators has been widened and the underlying survey questions further standardized. These metrics measure not just access but actual usage and address quality by considering only certain types of ‘improved’ facilities. Comparable information on tariffs and operational performance is increasingly available from the Bank-managed International Benchmarking Network database of water utilities, whose coverage has grown to some 2,100 utilities and which now generates country-wide information.

Transportation: The Bank has developed a set of key transport indicators including access to all-season rural roads, availability of urban transport services (“Urban Mobility”), road quality/condition, usage of different transport modes, and the contribution of transport to trade costs, and is now looking also into metrics on safety, affordability and emissions of traffic. The first of these indicators (Rural Access Index) is by now available for some 177 countries, with the WBG leading in extracting data from multiple sources and disseminating the data.

Energy: An initiative to extract data on electricity access from household surveys has started and is being accelerated under the Africa Action Plan.

Information & Communication Technology (ICT): With a prominent role in the Partnership on Measuring ICT for Development, the Bank has assembled data on several hundred ICT indicators from a variety of sources. They cover access, quality, affordability, institutional efficiency & sustainability, and ICT applications, often for many countries and frequent points in time. A core set of some 20 indicators has been disseminated widely.

Urban Development: In collaboration with UN-HABITAT and the University of Toronto, the Bank is supporting a City Indicators Initiative to develop, pilot, and promote the use of an extensive set of performance indicators on service delivery and management at the local level.

68. **Strengthening Country-Level Capacity to Manage for Results.** Many infrastructure projects and AAA activities help build client capacity for data collection and statistics, managing the conduct of monitoring and evaluation, using performance information in sectoral and project planning and other decision making, benchmarking, and disseminating and discussing results with key stakeholders, including civil society and the public at large. Bank-administered global programs such as WSP, ESMAP, BNWPP, Cities Alliance, and In-fodev are providing extensive technical support in these areas as well. In several sectors, guidance notes on monitoring and evaluation have been issued to help clients worldwide. Examples include M&E toolkits for e-strategies, ICT pilots, RWSS and design of sectoral modules for household surveys covering WSS, transport and energy.