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# TRANSFORMATION THROUGH INFRASTRUCTURE



World Bank Group  
Infrastructure Strategy Update FY2012-2015



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**World Bank Group**  
**Infrastructure Strategy Update FY2012-2015**

# FOREWORD

Infrastructure can be a vector of change in addressing some of the most systemic development challenges of today's world: social stability, rapid urbanization, climate change adaptation and mitigation and natural disasters. Without an infrastructure that supports green and inclusive growth, countries will not only find it harder to meet unmet basic needs, they will struggle to improve competitiveness. Today, the infrastructure gap in low and middle-income countries is estimated at US\$1 trillion. More and more, countries need to turn to the private sector as well as the public sector to build and operate their essential infrastructure.

Infrastructure, comprising transport, water, energy and information and communications technology, has become the single largest business line for the World Bank Group, with \$26 billion in commitments and investments in 2011. This is the result of a major scale-up, starting in 2003.

This strategy update lays out a framework for how to transform the Bank Group's engagement in infrastructure across sectors in order to respond to demands for more integrated solutions. This requires us to move away from a "retail" approach and towards a clearer World Bank Group value proposition that combines lending, mobilization of other public and private capital, knowledge and advice. This is the next frontier for World Bank Group engagement and, if we get it right, it has the potential to accelerate growth and shift clients towards sustainable development.

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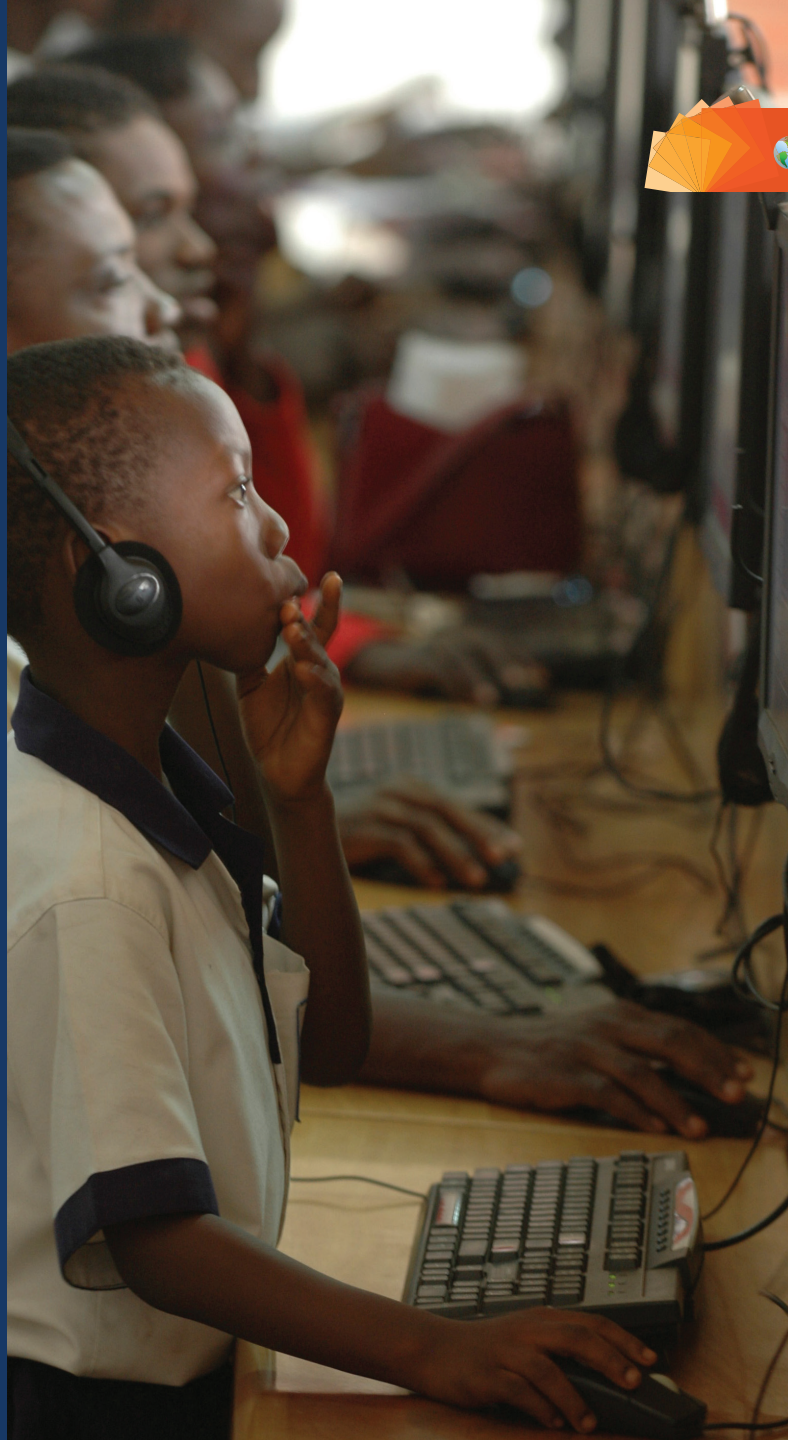
# ABBREVIATIONS AND ACRONYMS

AAA	Analytical and Advisory Assistance	ICT	Information and Communication Technology
AfDB	African Development Bank	IDA	International Development Association
AFR	Africa Region	IEG	Independent Evaluation Group
AMC	Asset Management Company	IFC	International Financial Corporation
AsDB	Asian Development Bank	IFCOE	Infrastructure Finance Center of Excellence
ASEAN	Association of South East Asian Nations	LCR	Latin America and Caribbean Region
BRT	Bus Rapid Transit	LIC	Low Income Country
CAS	Country Assistance Strategy	MDB	Multilateral Development Bank
CDM	Clean Development Mechanism	MIC	Middle Income Country
CO2	Carbon Dioxide	MIGA	Multilateral Investment Guarantee Agency
CODE	Committee on Development Effectiveness	MNA	Middle East and North Africa Region
CSC	Corporate Score Card	ODA	Official Development Assistance
CTF	Clean Technology Fund	OECD	Organization for Economic Co-operation and Development
DAC	Development Assistance Committee (OECD)	OPCS	Operations Policy and Country Services
DPL	Development Policy Loan	OVP	Operational Vice-President
DPO	Development Policy Operation	PPI	Private Participation in Infrastructure
EAP	East Asia and Pacific Region	PPIAF	Public-Private Infrastructure Advisory Facility
EBRD	European Bank for Reconstruction and Development	PPP	Public-Private Partnership
ECA	Europe and Central Asia Region	RTA	Reimbursable Technical Assistance
EITI	Extractive Industries Transparency Initiative	SAR	South Asia Region
ESW	Economic Sector Work	SDN	Sustainable Development Network
EU	European Union	SIAP	Sustainable Infrastructure Action Plan
FPD	Finance and Private Sector Development	SOE	State Owned Enterprise
FY	Fiscal Year	TA	Technical Assistance
GAC	Governance and Anti-Corruption	TTI	Transformation through Infrastructure
GDP	Gross Domestic Product	WB	World Bank (IBRD/IDA)
GEF	Global Environment Facility	WBG	World Bank Group, or Group
GET	Global Expert Team	WBI	World Bank Institute
GHG	Green House Gas	WSP	Water and Sanitation Program
IBRD	International Bank for Reconstruction and Development	WSS	Water Supply and Sanitation



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# SUMMARY

**Infrastructure development is critical to delivering growth, reducing poverty and addressing broader development goals.** To contribute to these impacts, the World Bank Group (“Group”) has made a sustained effort to scaleup its support for infrastructure since 2003. In FY10, the Group emerged as the largest multilateral financier for infrastructure—transport, water, energy and information and communications technology (ICT). It now represents 43 percent of the Group’s assistance.

**Several external trends are shaping the infrastructure agenda of the future.** Lack of access to basic infrastructure services continues to undermine living standards in low-income countries (LICs) and some middle-income countries (MICs). Aspirations for growth are fuelling the expansion of infrastructure networks across countries. Furthermore, the more systemic development challenges of today’s world—from social stability, to rapid urbanization, climate change, technological changes and globalized issues such as food and energy crises—call for more complex and interconnected infrastructure solutions (Figure 1). Tackling these second-generation issues will require actions by and across sectors. These actions can potentially accelerate growth and shift clients towards a more sustainable development trajectory.

**In 2010, the Group positioned support for infrastructure as a strategic priority in creating growth opportunities and targeting the poor and vulnerable.** Maintaining the Group’s level of engagement in infrastructure in both LICs and MICs and responding to their very diverse needs with Group resources subject to medium-term constraints will require a balanced approach with a significant level of ambition in terms of adaptability, innovation and leverage. In following this approach, the public sector will remain central to the delivery of infrastructure services as a provider or enabler. Transformation through Infrastructure (TTI)—the update to the Sustainable Infrastructure Action Plan, FY08-11—is designed to operationalize this approach, resting on three pillars:

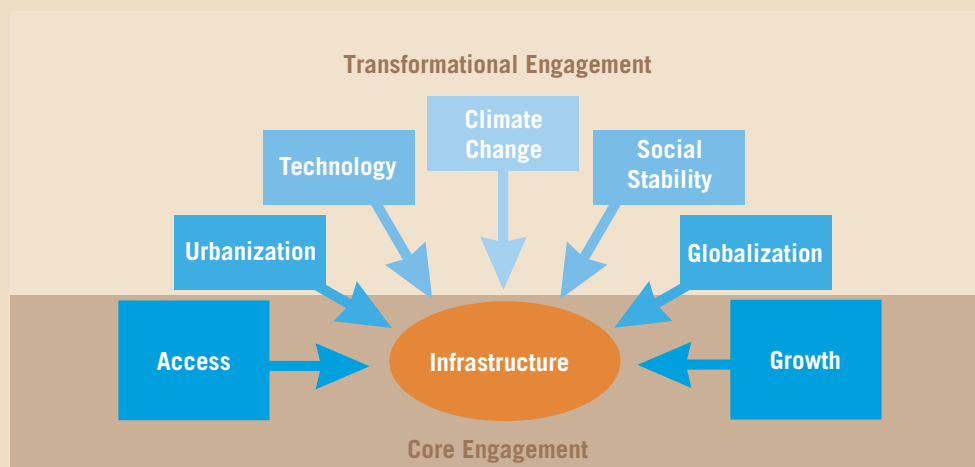
**Pillar 1, the Group will continue to do what it does well—sector based projects in support of the access and growth agenda.** This will continue to represent the core of the Group’s engagement in infrastructure. This engagement, critical for poverty reduction, will continue to be guided by sector strategies of individual sectors. Yet, there is scope for increased selectivity at the country level and increased effectiveness in the areas of poverty, governance, gender and knowledge.

**Pillar 2, Second, the Group will support client demand for addressing the more complex, second-generation infrastructure issues.** The capacity of the Group to respond to these issues will require transforming how the Group engages with clients and partners—by broadening the range of interlocutors interested in contributing to the solution, including middle-income countries, traditional and non-traditional donors, responsible businesses and local actors; brokering knowledge; using international fora to advance on certain global issues; collaborating more effectively with other multilateral development banks (MDBs) on issues and projects of regional or global relevance; helping align bilateral resources in order to access funding at scale; and delivering transformational projects. In this update, by definition, transformational projects are designed to optimize co-benefits across infrastructure sectors, between infrastructure and the environment (green), between infrastructure and social development (inclusive) and heighten spatial benefits (regional). These projects, which can be large or small scale, all have in common that they can accelerate growth and even shift clients towards more sustainable development trajectories. Evolving the infrastructure portfolio over time towards a critical mass of such projects will depend on many factors, including demand from client countries, client leadership and champions and the alignment of resources from multiple partners.

**Pillar 3, the Group will leverage its capital by bringing more private sector financing into infrastructure.** The IFC will ramp up its infrastructure business, with particular attention to third party resource mobilization, MIGA will scale up its guarantee support and the Bank will reinforce its upstream work on the enabling environment in order to attract the private sector. Additionally, the Bank will begin to focus on “capital enabled” for infrastructure, aiming to double the mobilization from the private sector, MDBs and other sources of financing in IDA/IBRD projects. Together, the Group will pilot a new approach on Public-Private Partnerships (PPPs) in several joint Bank-IFC focus countries, which will involve developing and testing new instruments and coordinating actions across the Group. In all other countries, the Bank and IFC will enhance their support for the enabling environment and expand their engagement with the private sector. Pillar 3 aims to increase the financing envelope for infrastructure.

**The new internal and external environment offers exciting opportunities for the Group.** Implementation will be key. Six regional implementation action plans anchor the corporate vision into country and regional realities. The strategy update presents a results framework to monitor progress over FY12-15, along with a package of instruments to enhance impact (Figure 2). These elements will ensure that the Group continues to serve its diverse clients towards a more sustainable development path.

**Figure 1: Infrastructure Engagement in a Changing World**



**Figure 2: Innovative Tools and Procedures**

Pillar 1: Core Engagement	Pillar 2: Transformational Engagement	Pillar 3: Mobilization of Private Capital
<p><b>Poverty</b></p> <ul style="list-style-type: none"> <li>• SWAT teams for enhanced poverty focus</li> <li>• Enhanced effort on cost recovery</li> </ul> <p><b>Governance</b></p> <ul style="list-style-type: none"> <li>• Project + Sector level engagement</li> </ul> <p><b>Gender</b></p> <ul style="list-style-type: none"> <li>• 100% 'gender informed' CAS target</li> <li>• Gender targets by sector</li> <li>• SDN Companion Piece</li> <li>• Sector-specific guidance notes</li> </ul> <p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Global Expert Teams, Chief Technical Specialists, World Bank Fellows</li> <li>• Green Growth Knowledge Platform</li> <li>• ICT Knowledge Platform</li> <li>• Strategic project upstream review</li> </ul>	<p><b>Knowledge Brokering</b></p> <ul style="list-style-type: none"> <li>• South-south/OECD knowledge transfer</li> </ul> <p><b>Strategic Staffing</b></p> <ul style="list-style-type: none"> <li>• Deep technical expertise+integrative skills</li> <li>• Talent view across silos</li> <li>• Infrastructure Panel</li> <li>• Transitional Sector Board for ICT</li> </ul> <p><b>Partnerships</b></p> <ul style="list-style-type: none"> <li>• International fora positioning (e.g. Task Force)</li> <li>• MDB collaboration on some issues and projects of regional/global relevance</li> <li>• Bilaterals <ul style="list-style-type: none"> <li>– Linking/Leveraging existing funding (e.g. climate-related, project preparation)</li> <li>– Engagement with non-traditional donors</li> </ul> </li> </ul> <p><b>Transformational Projects</b></p> <ul style="list-style-type: none"> <li>• Transformational by design</li> <li>• New indicators and data</li> <li>• Programmatic country-based approach</li> <li>• Procurement</li> </ul>	<p><b>Bank</b></p> <ul style="list-style-type: none"> <li>• Enabling environment support</li> <li>• Focus on capital enabled for infrastructure</li> <li>• Financial instruments</li> </ul> <p><b>IFC</b></p> <ul style="list-style-type: none"> <li>• Investment/advisory scale-up</li> <li>• Third party resource mobilization</li> <li>• Global Equity Fund for Infrastructure (managed by AMC), InfraVentures</li> </ul> <p><b>MIGA</b></p> <ul style="list-style-type: none"> <li>• Guarantees scale-up</li> </ul> <p><b>Group</b></p> <ul style="list-style-type: none"> <li>• Tier 1 countries—Piloting of new instruments and coordinated actions across the Group</li> <li>• Tier 2 countries—Enhanced support for enabling environment and engagement with private sector</li> <li>• Joint Bank-IFC PPP targets (investment/advisory)</li> <li>• Operational incentives</li> </ul>
<p><b>Social and Environmental Impact</b></p> <ul style="list-style-type: none"> <li>• IFC Policy and Performance Standards on Environmental and Social Sustainability (updated) and MIGA Performance Standards</li> <li>• Bank Environmental and Social Safeguard Policies (ongoing updating and modernization)</li> </ul>		



**In May 2011, the Committee on Development Effectiveness endorsed the World Bank Group (WBG, or Group) Infrastructure Strategy—Issues and Concept Note.**<sup>1</sup> The Note took stock of the Group's past performance in infrastructure and proposed pursuing engagement in core infrastructure for basic access and growth and pushing the frontier into two areas: transformational engagement and mobilization of the private sector (including public-private partnerships, PPPs). Transformation through Infrastructure – the World Bank Group Infrastructure Strategy Update, FY12-15 (TTI) updates the Sustainable Infrastructure Action Plan, FY08-11 (SIAP) as the Group's strategy for infrastructure. It specifies what the Group will do in the infrastructure sectors—transport, water, energy and information and communications technology (ICT)—and how it will be implemented and monitored. TTI tackles, head-on, the question of the future relevance of the Group in infrastructure vis-à-vis a diverse group of clients and rapidly changing external and internal contexts.

**Infrastructure investments have fuelled the acceleration of growth and reduced income disparities.**<sup>2</sup> Recent work shows that a ten percent increase in infrastructure development contributes to one percent growth<sup>4</sup> in the long-term.<sup>3</sup> In Sub-Saharan Africa, infrastructure development has contributed about half of the recent acceleration in growth. Between 1990 and 2005, China invested approximately US\$600 billion to upgrade its road system and connect all of its larger cities. It is estimated that aggregate Chinese real income is approximately 6 percent higher than it would have been in 2007 if the expressway network had not been built. India is planning about US\$1 trillion in infrastructure spending over the next five years. Infrastructure also featured prominently in the global response to the financial and economic crisis in 2008. Some argue that increased public spending in infrastructure in developed countries can generate growth both in developed and developing countries.<sup>5</sup>

**Demand for infrastructure continues to grow not only in low-income countries, but also in middle-income countries.** In LICs, there is a strong demand for infrastructure services to meet basic access needs, such as access to networked electricity, roads, improved water sources and sanitation and

telecommunication and internet services. There is still a large unmet access agenda; even in MICs, where there is a large endowment of infrastructure, there continues to be a demand for infrastructure to support access and growth. Aspiration for growth is fuelling the expansion of infrastructure networks across countries. Availability and reliability of infrastructure services are viewed as critical to private sector growth and competition on domestic and international markets. Yet, in East Asia and the Pacific (EAP), for example, a quarter of the urban population lack improved water, sanitation and durable housing.

**In addition to access and growth, the infrastructure agenda is increasingly shaped by second-generation variables.** Social stability calls for the creation of jobs and broadened opportunities for social outcomes, including gender equality, to which infrastructure can contribute, as well as the continued engagement of citizens, with mechanisms in place for accountability and transparency in public sector service delivery (Box 1). As the world becomes increasingly connected, issues which used to be local, such as food, water and energy security, are now becoming issues of regional or global relevance. Rapid urbanization from Asia to Africa is fuelling an increasing demand for more integrated infrastructure solutions. By 2030, 95 percent of the population growth in the developing world will be located in cities, with urban centers contributing up to 70 percent of global GDP. Adaptation to climate change is feeding demand for infrastructure that is more resilient to natural disasters, while mitigation calls for an infrastructure that is less environmentally damaging. Technological advances are offering new opportunities to leap-frog, while supporting a demand for more sophisticated infrastructure solutions. Resolving these issues through infrastructure has the potential to accelerate growth and even shift clients towards more sustainable development trajectories.

**Responding to these increasingly complex and interconnected issues may require a different approach.** In many cases, the enormous needs—whether physical infrastructure or institutional strengthening—are currently being met by single sector interventions (e.g., building a road or expanding electricity or water connections to provide access to markets, electricity and safe

## ■ Box 1: Infrastructure for Better Growth – Achieving Gender Equality through Infrastructure Access

The provision of basic services to expectant mothers and improving the availability of clean water and sanitation to households, has been shown to substantially close the gender gaps in excess mortality. Especially in infancy and early childhood, excess mortality of girls is rooted in the failure of institutions to provide clean water, sanitation, waste disposal and drainage. For example, in Argentina, improvements in the water supply have contributed to decreasing child mortality between 5 and 7 percent, with even greater impact in the poorest areas.

Infrastructure can lessen women's time constraints and free them for greater economic participation or leisure time. For example, South Africa's rural electrification program helped increase women's labor force participation by nearly 10 percent in 5 years and yet had no effect on male employment. Investments in the other infrastructure sectors can also be influential. In urban settings, long commutes resulting from poor transport infrastructure can greatly limit women's ability to participate in the workforce because of the time constraints associated with child-care. In rural Pakistan and Guatemala, the expansion of rural road networks contributed to increased female mobility and schooling.

Source: World Development Report, 2012

drinking water). This approach may not be enough to tackle some of the more complex issues. For example, traditional, centralized water systems may not allow cities to cope with urban needs. Expanding irrigation to ensure food security is simply not sustainable when water competes for other uses, including the production of electricity. Providing hard infrastructure is not sufficient to improve sanitation goals if not combined with support for behavior change and usage instruction. Providing infrastructure without the supportive institutional framework to deliver and maintain assets and services is not sustainable. Addressing the range of issues that clients face through infrastructure may require looking at synergies and strategic complementarities among sectors (e.g., multipurpose hydraulic infrastructure which can support irrigated agriculture and thus agricultural productivity and food security goals; green infrastructure, which looks at infrastructure which can be sustained over time by integrating environmental considerations into the decision-making framework; and urban design, which can promote citizen security and social cohesion). The private sector is already leading the way, with some firms adjusting their business models to create and exploit synergies among sectors. In sum, energy, transport, water and ICT all have the potential to provide solutions to challenges at the global, regional and local levels; their value together may be more than the sum of their individual parts.

**Addressing these challenges has implications in the scale of the financing needed.** Many estimates exist on the scale of global infrastructure needs, from US\$1 trillion to support basic infrastructure services with a normal growth trajectory,<sup>6</sup> to broader estimates which include climate change adaptation and mitigation. While varying in scale, these estimates all point in the same direction: the public sector alone cannot provide funding volumes which are large enough. The private sector must be involved. It is now clear, for example, that the promised investment flows on the order of US\$100 billion per annum for the Green Climate Fund can only be achieved with private sector involvement.

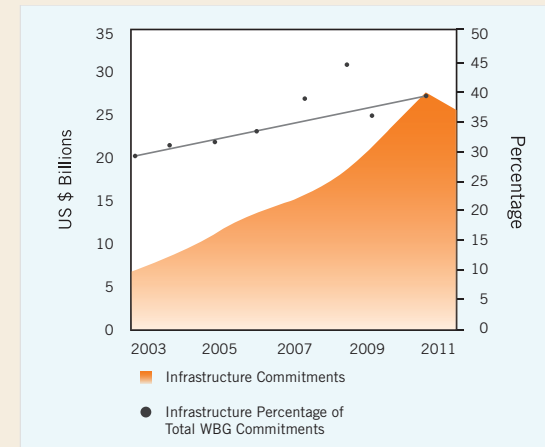
**Throughout the 2000's, private participation in infrastructure (PPI) has proved a game changer in infrastructure financing.** The global investment industry, even after the financial crisis and recent market turbulence, sits on assets worth over US\$100 trillion in the form of pension funds, mutual funds, exchange-trade funds, insurance funds, private equity funds, hedge funds and sovereign wealth funds. PPI reached an all-time high of US\$160 billion in FY10 (compared to US\$100 billion in FY05). However, the disparity between MICs and LICs has grown: MICs can mobilize huge flows of private money, not only from global infrastructure funds, but also from domestic markets.<sup>7</sup> While investors from these MICs, supported by quasi-private banks, are also investing in LICs,<sup>8</sup> such LICs are largely left behind, with the share of private flows to LICs (excluding ICT) falling to virtually zero in FY10. While private sector financing has great potential, it remains highly volatile to financial crises and is concentrated in a few sectors and countries. MICs that have experienced the fastest economic growth in recent years were also the most capable of attracting private capital and other sources of financing; the LICs with the greatest investment needs also have the greatest difficulty attracting private capital.

Even if the private sector has become a sizeable source of financing, experience from the 1990s shows that it cannot substitute for the public sector. The public sector remains central to the delivery of infrastructure services, either as a provider or enabler. In China and Brazil, for example, a great deal of infrastructure is financed by national development banks. In other countries, private investment funds operate with extensive public guarantees. Across the globe, the public sector remains a critical actor—meeting basic access needs and enabling regional infrastructure solutions in Sub-Saharan Africa, creating jobs in the Middle East and North Africa (MNA), spurring growth in South Asia (SAR), and rebalancing economic development in East Asia (EAP), Latin American and the Caribbean (LCR) and Europe and Central Asia (ECA). However, while there may be large expectations for what the public sector can do single-handedly, they will have to be adjusted within a restricted fiscal space.

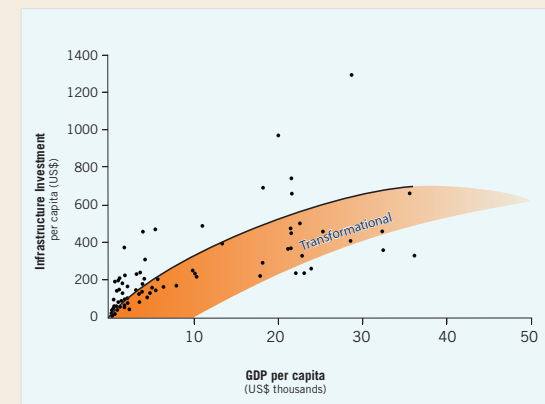
**For the Group, infrastructure is at the core of its mandate of growth, poverty reduction and broader development.** In FY10, the Post-crisis Directions paper<sup>9</sup> identified support for infrastructure as the Group's Strategic Priority with regard to creating opportunities for growth and targeting the poor and vulnerable. Infrastructure spills over into many sectors, including urban development, environment, trade, private and financial sector development and education. It now represents 43 per cent of the Group's assistance in client countries (Figure 3). This high level of support results from efforts sustained since 2003 by the Group to scale up and transform infrastructure into a core business line.

**New internal variables are shaping the Group's agenda in infrastructure.** This update to the SIAP is being developed in a very different internal context than its predecessors, the Infrastructure Action Plan and SIAP,<sup>10</sup> which were both characterized by lending volume scale-up and growing resources. The overall resource envelope within the Group is projected to remain constrained over the medium term horizon, with expected repercussions in the infrastructure portfolio.<sup>11</sup> Projections suggest that the infrastructure envelope may return to a "normal level" relative to the US\$29 billion in FY10 (US\$30 billion if irrigation and drainage is included) at the end of the global crisis.<sup>12</sup> In addition, flat budgets are placing additional pressures on project preparation and supervision.

**Figure 3: World Bank Group Infrastructure Commitments, FY03-FY11**



**Figure 4: Infrastructure and Economic Development**



This environment triggers new challenges, but also new opportunities for the Group:

- **The composition of the Group's infrastructure portfolio will reflect an increase in the share of IDA projects and that IBRD lending may likely return to pre-crisis levels.** In FY10, IBRD accounted for 74 percent of the Bank's infrastructure response to the global crisis. Going forward, with the head-room from IBRD subject to capital constraints and the IDA16 resource envelope fixed until FY15 (although significantly higher than under IDA15), the share of IBRD infrastructure commitments in total Bank commitments may fall to fifty percent. Within IFC, the share of infrastructure investments located in IDA countries is expected to range between 30-40 percent by financing volume and 40-50 percent by number of projects financed over FY12-15.
- **The Group faces an increasing demand for more complex and riskier infrastructure programs that address second-generation issues.** To engage effectively on those issues, given the medium-term resource constraints, will require a different type of engagement by the Group—such as adopting more flexibility in terms of length and thematic areas, leveraging knowledge through a large systematic program, or enabling co-financing of projects the Group funds. Strengthened engagement in MICs will be critical to provide financing and knowledge to support LICs.
- **More attention will need to be devoted to leveraging resources.** Recently, budget constraints have been driving decisions towards consolidating resources into fewer, but larger, projects and towards pushing the preparation costs down to clients (often through super-vision). As a result, the size of infrastructure projects has doubled since FY08 (average Bank infrastructure project size in FY11= US\$70 million). To maintain the Group's engagement in the largest number of countries possible, it will be critical to increase the effectiveness of its existing resources and to mobilize the private sector, MDBs and others, whenever possible.

**The Group's ability to maintain the same level of engagement within a resource-constrained environment with more complex issues to resolve is at the heart of this strategy update.** The Group will build on what it has achieved over the past ten years in general and under SIAP over FY08-11 in particular, taking into account new external and internal realities. This will

require: (a) getting more mileage from what the Group already does well in support of the access and growth agenda by applying increased selectivity and effectiveness in specific areas; (b) supporting client demand for second-generation issues by transforming how the Group engages with clients and partners—through brokering of knowledge, broadening the range of interlocutors, using international fora to advance on some issues of global relevance, collaborating more effectively with other multilateral development banks (MDBs) on issues and projects of regional or global relevance; helping to align bilateral resources behind localized and global issues and delivering transformational projects (i.e., projects which, by design, focus on the nexus between sectors and maximize green, regional and inclusive/broader development benefits); and (c) leveraging the Group's capital to bring more private sector financing into infrastructure.

**This strategy update articulates a new vision in which infrastructure can help accelerate growth and shift clients towards a more sustainable development trajectory.** Sustainable development rests on integration and a balanced consideration of social, environmental and economic goals in public and private decision-making.<sup>13</sup> Delivering on this vision will require actions by and across sectors. This strategy update rests on core principles, which were elaborated under SIAP and remain valid today, including the centrality of infrastructure for growth, the need to ensure financial, environmental and social sustainability and address governance risks in projects and the importance of leveraging further Group support. As was the SIAP, TTI is an umbrella strategy that ties together the sector strategies of individual sectors—transport, water, ICT and energy.<sup>14</sup> It validates and strengthens individual sector strategies by highlighting their connections. TTI also focuses on implementation, including six regional action plans that demonstrate how the corporate vision will be operationalized, taking into account the demand from the wide range of client countries.

**TTI aligns with many of the principles on infrastructure reaffirmed at the G20 Summit in Cannes in 2011.** In particular, TTI concurs with the importance of infrastructure for growth and job creation in developing countries; leveraging resources for infrastructure projects, including from the private sector, in an increasingly fiscally constrained environment of developed and developing countries; scaling up of regional projects; and establishing new mechanisms to unlock the public and private sector financing in LICs.





# VISION

**Infrastructure has always been used to transform nature to meet the goals of human societies.** Prosperity and success of various societies throughout history have depended on their infrastructure services. Around the world and across centuries, bridges, highways and ports have been built to facilitate the pace of human progress. In today's world, access to information and communication technologies is opening up a range of new opportunities which have the power to transform societies.

**Infrastructure and growth are closely connected.** Figure 4 shows the positive correlation between estimated infrastructure investments (per capita) and the level of development (proxied by GDP per capita) of 104 countries.<sup>15</sup> The economic literature shows that infrastructure investments can accelerate growth,<sup>16</sup> while growth causes greater demand for (and usually supply of) infrastructure. The figure shows that infrastructure investments continue to grow with the level of income, beyond just meeting access needs. Two new factors call for broadening this vision of infrastructure: rapid changes in the external environment and the complexity and interconnectivity of issues that infrastructure solutions aim to address.

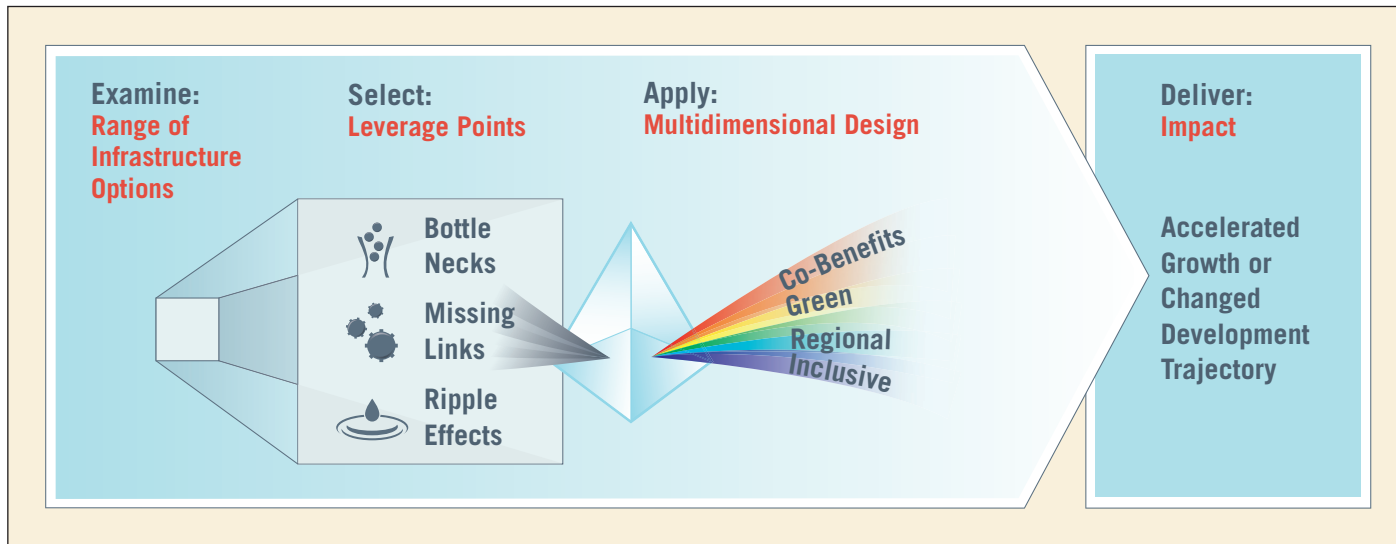
**The pace of change in the world has radically shifted over the centuries; with new expectations emerging about the pace at which infrastructure should generate benefits.** The physical structures and facilities needed for the operation of a society and its firms have evolved significantly. In recent years, the transformations expected from infrastructure investment have changed substantially. Infrastructure solutions must not only support economic growth, but have the flexibility to adjust to a rapidly changing environment:

- **Spaces are transforming faster.** The pace and scale at which urbanization is taking place has risen dramatically, from Asia to Africa. In East Asia and the Pacific, for example, cities absorb two million new urban residents every month and these cities are projected to triple their built areas in the coming two decades. In the past, main urban areas remained vibrant for over a century while recent examples have lasted

for less than a decade. For instance, sizeable areas of China's coastal cities are decaying rapidly after only a decade due to better infrastructure and lower labor costs in China's interior cities. For China's cities, as well as for cities elsewhere, the speed at which they are able to adapt to this new dynamism will determine their future.

- **Supply chains are playing an ever bigger role in a country's growth.** In today's world, products may routinely be assembled from components transported from across the world, with implications not only for transport and ICT, but also energy and water. Therefore, while the infrastructure requirements may not necessarily be as large as they were in the past, they must be synchronized to feed the world supply chain. Integration into this supply chain is joining quality and quantity of production as a determinant of a country's growth opportunities.
- **Demand for products is becoming global.** Today's consumers are better informed and less loyal to specific brands, with suppliers around the world competing for the same customers. During the twentieth century, companies were able to use marketing to position their brands within disconnected domestic markets. With the rise of modern communication tools, the Internet at the forefront, products can be marketed to consumers around the world. Consumer tastes are converging into a globalized demand, eroding the market share of historically dominant brands within many countries. Even in AFR, a region of the world which has historically lagged behind in terms of globalizing markets and Internet connectivity, online shopping is growing rapidly. As suppliers must be able to compete world-wide, transportation and communication networks are becoming instrumental to competitiveness.
- **Uncertainty is increasing.** Client countries' prospects for development are subject to numerous uncertainties which need to be integrated into infrastructure planning and design. Major uncertainties include demographic changes, technological innovations, policy performance,

**Figure 5: Optimizing the “What” and “How to do” for infrastructure investments**



and the environment (e.g., climate change amplitude and patterns, risks from biodiversity losses and natural disasters). For example, increased uncertainty due to climate risk will affect the planning and design of many infrastructure projects. Projects will have to be designed to prioritize robustness and resiliency to a greater degree than before.

**In addition, infrastructure solutions are increasingly targeted at resolving second-generation issues, with the potential of changing the development trajectory of clients towards more sustainability.** Infrastructure is at the intersection of most regional and global issues in today's world, such as rapid urbanization, climate change, natural disasters and food security. Finding solutions to these issues goes beyond the access and growth agenda; it requires tackling the complexity and inter-connectivity among sectors. For example, responding to rapid urbanization requires coordinated planning in transport, water, ICT and many other sectors, including social development. Mitigating the effects of greenhouse gas emissions requires a certain type of investment in transport and energy. Investment decisions in the energy sector have implications on water use and therefore on agriculture and the environment. Meeting environmental goals and adapting to climate change

will require an infrastructure that is less damaging to the environment, more resilient to natural disasters and other climate risks. Although more complex, the potential benefits of resolving these second-generation issues are tremendous: they can help accelerate growth and place a country on a more sustainable development trajectory.

**What type of infrastructure and how to optimize interventions?** The strategy update seeks to identify infrastructure investments that will ultimately contribute to accelerated growth and even shift clients towards a more sustainable development trajectory. More specifically, the strategy update posits that this can be achieved in part through projects that seek to optimize co-benefits across infrastructure sectors, between infrastructure and environment (green), between infrastructure and social development (inclusive) and spatial benefits (regional). More broadly, these projects will result from an optimization process involving the selection of points of leverage from among the whole (soft and hard) potential infrastructure universe of a country and design of the resulting intervention by opening it up to a range of possibilities (Figure 5).

**Among the universe of possible infrastructure choices, it is possible to identify and prioritize points of leverage that can unlock the country's growth and development potential.** In general, infrastructure investment opportunities are selected out of a pipeline of projects developed by line Ministries. Each line Ministry identifies its own sector pipeline, with a primary focus on physical infrastructure. It is proposed here to look at the whole universe of infrastructure investment opportunities, not only physical infrastructure but also institutional strengthening, and select among them the “points of leverage”. These points are defined as interventions such that “a small investment in one aspect can produce big changes in all aspects”. At the aggregate level, a review of the literature suggests three key points of leverage: (a) infrastructure investments that inter-connect two markets/areas (missing links); (b) investments that unlock the volume, cost and quality of economic activity (bottlenecks); and (c) investments that create ripple effects into the broader economy (ripple effects).

**What are the points of leverage?** A missing link could be a bridge within a region or a cross-border power inter-connector, international road corridors, or fiber optic links in a region. A bottleneck could be a law on competition that unlocks the potential of private sector investments, inexistent capital markets, a trunk investment that opens a new development corridor or a source of clean water that unlocks women's time to participate in economic activity. Examples of ripple effects include an ICT-application that generates data on sector performance with ripple effects in sector accountability and governance, a regional power project that has ripple effects beyond the host country or a rural infrastructure package that boosts agricultural productivity, with ripple effects on rural income and development.

**Once a leverage point is identified, project design can be enhanced by opening it to a range of new possibilities.** How can their design be enhanced to generate additional impact? Within infrastructure sectors, there is a range of opportunities to connect sectors and countries and exploit synergies—such as systems which talk to each other, common spaces created to converge with different solutions, or interventions that require proper coordination. For example, the civil works of ICT projects (ducts, poles, dark fiber) which account for 65 percent of project costs can be coordinated and included in transport infrastructure projects such as roads or rail lines. Similarly, telecom operators are developing renewable power supply options for their equipment which can also be used to extend electricity services to under

served areas. There are also many opportunities outside the narrowly defined infrastructure boundaries. Enhanced impact can be achieved by design (not necessarily by scale) as follows:

- **Projects to generate co-benefits across infrastructure sectors (or focus on the nexus between sectors).** Examples include: a water project intervention that is enhanced with ICT solutions to reduce water leakages; infrastructure works involving drainage pipes, terracing and retrofitting of bridges, which are combined with land-use planning and disaster risk preparedness assessment tools and strategies, to enhance the resilience to natural disasters; ICT-enabled intelligent transportation systems, which can be utilized in urban transport planning to reduce congestion; a sanitation project enhanced with behavioral change through a hand-washing component to generate improved health outcomes; and a smart grid which can help better integrate renewable energy into the distribution network and thereby optimize power generation.
- **Projects to generate co-benefits between infrastructure and environment in support of “Green Growth” (green projects).** For example, when designing buildings in urban centers, one may look at the transport of materials, green supplies, electricity, heating and materials recycling. Environmental considerations may also be used as an entry point to design projects, expanding the range of options which can be used to support energy, transport and water choices. Work is under way through the Green Growth platform and the new environment strategy to redefine and operationalize the “green” concept for infrastructure that is less damaging to the environment (in terms of local costs of environmental degradation and long-term costs of global warming). Examples of green infrastructure project include: green buildings which incorporate energy and water-efficiency features and use green materials; integrated utility management, which reuses sludge and organic waste as biogas and fertilizer; and renewable energy which reduces greenhouse gas emissions through displacement of more polluting forms of energy.
- **Projects to generate co-benefits between inclusive development (including gender equality) and infrastructure.** Social considerations can be used as an entry point to design a project with end-users in mind (disaggregated by gender). For example, large infrastructure

**What are transformational projects?** In this update, by definition, transformational projects are designed to optimize co-benefits across infrastructure sectors, between infrastructure and the environment (green), between infrastructure and social development (inclusive) and heighten spatial benefits (regional). For example, a hydropower project will be a transformational project in a given country to the extent that: (i) access to electricity and power generation represent bottlenecks (the point of leverage) in a country and (ii) it is chosen among a range of technically feasible options over a more polluting form of energy with the view of maximizing green benefits (green project). According to this narrowly defined view of what a transformational project is, building a hydropower dam may have large impact, but not always be transformational. For example, in a country with many large hydro dams already built, the transformational intervention may be to increase the efficiency of the existing system (bottleneck), rather than building another dam. As another example, a bus-rapid transit system will be transformational to the extent that: (i) it is the missing link (the point of leverage) in a well-established transport system; and (ii) it is chosen over a range of other technical options (including building a highway) and is combined with measures to support a behavioral change in modal shift among users, with the view of maximizing co-benefits across infrastructure sectors and with the environment. Transformational projects, which can be large or small scale, have all in common that they can accelerate growth and even shift clients towards more sustainable development trajectories.

projects have often been successful in making displaced people the beneficiaries of the project displacing them, as well as achieving development objectives, like the benefit sharing arrangements in hydropower. Consultations with users, such as trucking companies and individual vehicle owners and small communities along the right of way, including residents, women, schools, farms, industrial sites and local Governments, can enhance the final design of a transport project (e.g., change the alignment, drainage facilities, construction of bus stops, pedestrian bridges and horizontal and vertical signals). Infrastructure can be designed with universal access in mind by, for example, taking into account the needs of people with disabilities (e.g., disability conscious bus rapid transit system). Urban infrastructure projects can also be designed as part of violence prevention programs (citizen satisfaction and liveability of urban centers); and ICT can be used to support real-time implementation of any infrastructure project. Another example includes the extension of infrastructure networks built by mining and oil companies for the exclusive use of their operations to benefit the local community, through enhanced partnerships between the public and private sectors.

- **Projects to generate spatial benefits (regional).** Building regional infrastructure can help spur trade, but can also contribute to regional trust and security, which is particularly important for fragile states.<sup>17</sup> Examples include regional power projects that unlock the electricity production potential of an entire region, with ripple effects beyond the host country and multimodal transport corridor projects that improve transit costs and delays.



# IMPLEMENTATION—PRINCIPLES AND ACTIONS

**The strategy update rests on three pillars—core engagement, transformational engagement and mobilization of private capital and other sources.** “Core engagement” in infrastructure consists of sector-based interventions (physical infrastructure and institutional strengthening) to support access to basic infrastructure services and growth (Pillar 1). This represents 80 percent of the Group’s infrastructure portfolio: it is the bedrock of the Group’s involvement in infrastructure. Building on this strength, the update proposes innovation and increased impact in two areas: transformational engagements (Pillar 2) and mobilization of private capital and other sources (Pillar 3).

**Catalyzed and leveraged interventions will be at the center of this strategy update.** Under Pillar 1, the Group will apply increased selectivity at the regional and country level, depending on country needs and expressed demand. It will also increase its effectiveness in four specific areas: poverty, governance, gender and knowledge. Under Pillar 2, the Group will transform the way it engages in order to tackle second-generation issues. Depending on country circumstances and client demand, this will take various forms: the Bank focusing on brokering knowledge between MICs and LICs, or MICs and OECD countries; the Group using new and existing partnerships to pool resources and knowledge, recognizing that it is no longer an independent actor; and the Group engaging with client countries in a dialogue to identify opportunities for transformational projects and supporting them where there are client champions or alliances that the Group can build on. Leveraging the Group’s capital by mobilizing the private sector, MDBs and others more systematically will be critical to expand the financing envelope for infrastructure (Pillar 3). Implementation of this strategy update will be monitored by using a set of indicators.

**While increased Group engagement under Pillar 2 and 3 will entail higher risks, the Group has room to engage in more complex endeavors and the associated rewards are potentially very large.** For example, some transformational projects and public-private partnerships will be complex and may involve higher risks in terms of design and implementation (e.g., projects focusing on the nexus between sectors will require a cross-sectoral approach, while many of our client countries are still organized by sectors, with infrastructure

projects planned within sectoral boundaries). However, the benefits of such projects will be substantial for client countries. Efforts sustained by the Group over past years to strengthen the quality of the infrastructure portfolio offer a window of opportunity to increase our engagement in high-risk/high-reward projects. Even with the recent scale-up in commitments and reduced project preparation time, both associated with the Group’s crisis response, the quality of the Group’s infrastructure portfolio remained high. Eighty four percent of the outcome ratings from Bank infrastructure projects completed between FY05 and FY09 were judged moderately satisfactory or better, outperforming the Bank average since FY03. This performance results from continued efforts made by the sectors to improve quality.

## Core Engagement

**The Group will consolidate its engagement in infrastructure for basic access and growth.** Access to electricity, improved water services and sanitation, all-season roads, telecommunications and internet services, which are still key constraints in many IDA countries, for some population segments in MICs and in fragile states, has been an area where the Group has built experience and knowledge. The Group has also played a key role in building and expanding modern infrastructure systems, as well as strengthening the enabling environment to support these systems (Box 2). The Group will continue to deliver sector-based projects in support of the access and growth agenda. This business will be guided by country demand and sector strategies of individual sectors. While the private sector can contribute to this core business,<sup>18</sup> attracting the private sector requires a high quality investment climate and public investment process. The Group will continue to support upstream work on the enabling environment including development of appropriate sectoral policies (e.g., pricing, role of regulator), reform of the legal and regulatory environment (e.g., PPP framework) and the public sector.

**There are many new opportunities for high impact engagements in client countries.** For example, promoting policy and institutional reforms through an initial DPL in a country that has relied exclusively on investment lending;

helping client countries to fix their own systems and institutions; building a power plant to provide electricity in a post-conflict country, meeting the primary constraint reported by firms operating in fragile states;<sup>19</sup> engaging client countries on a broader strategic discussion on maintenance for financial sustainability of infrastructure solutions at the CAS level, instead of working out ad hoc solutions at the project level; and helping client countries shift the financial burden from the public sector by supporting the development of national investment programs and targets for private sector participation. Furthermore, there is scope to increase the effectiveness of the core business, in particular in the areas of poverty, governance, gender and knowledge.

**Learning from past experiences, the Group will do more to enhance the delivery of infrastructure services to the poor.** Overall, the business has been biased towards infrastructure investments that promote growth, with expected “trickle-down effects.”<sup>20</sup> In reality, the results of any trickle down have been slow. In Bank projects, the poverty impact of sector-based interventions has also proved complex to achieve and demonstrate, as recently shown by IEG.<sup>21</sup> Going forward, the Group will continue to implement its sector strategies, with additional actions to step up their poverty focus (Box 3). For example, in the water sector, Sanitation, Hygiene and Wastewater Support Service (SWAT) teams will be mobilized to work with Bank teams to identify opportunities to address poverty in water supply and sanitation projects, as appropriate.

**Financial sustainability of infrastructure services will be critical to ensure a long-lasting impact on poverty alleviation and growth.** Experience has shown that it is considerably more difficult to maintain infrastructure in good working condition than it is to build it in the first place. Lack of proper maintenance results from not only a lack of funding, poor service provider capacity and/or inadequate institutional and regulatory frameworks to provide the right incentives for service providers to perform their duties in meeting the needs of users,<sup>22</sup> but also from a lack of skills and insufficient human capital. In the transport sector, for example, Bank experience with Road Funds shows that success largely depends on local conditions and on the existence of reliable institutions to make them work; second-generation Roads Funds, which involve road users in the management of these Funds, can help address some of these governance issues, but not the overall fiscal challenge of internalizing the cost of maintenance in overall transport sector spending. Ensuring that overall investments in infrastructure are connected with relevant investments

in the education sector in terms of skills is equally important. It is increasingly recognized that these issues cannot easily be addressed at the project level, but require engagement with client countries at a broader, strategic level.

**In the water sector, for example, the issue of cost recovery has been raised at both the strategic and the project levels.** The Bank has made efforts to recover the costs of operation and maintenance from users in order to enhance the financial sustainability of investments in the sector, but even further improvements are being considered: (a) being more explicit about the level of tariff charged to customers, unambiguously recognizing when public transfers are necessary in order to sustain the infrastructure should there not be sufficient revenue to cover its costs (e.g., public expenditure reviews, analysis of experience on cost recovery in a range of projects); (b) offering training courses for utility leaders in client countries; and (c) benchmarking the performance of utilities to increase transparency and accountability through a database of utility performance.

**Effective governance is integral to ensuring sustainability.** Weak governance and corruption in the infrastructure sectors severely constrain development: they create inefficiencies that are translated into higher unit costs, with some estimates suggesting 10 to 30 percent financial leakage; and they allow for government capture and misallocation of public resources. The poor are typically hit the hardest, as they are constrained in their ability to avoid the outcomes of weak governance and corruption. As one component of the Governance and Anticorruption (GAC) Strategy, the Bank has been employing different tools to improve governance in Bank-financed projects, ranging from more innovative transparency measures, to the ring-fencing of projects against fiduciary risks, public debarment and comprehensive investigations led by the Institutional Integrity Vice Presidency (INT).<sup>23</sup>

**The next frontier will be to embed a Governance perspective in upstream CAS preparation and enhance the capacity of sectors to address governance in general and corruption in particular.** The GAC Update will emphasize support to country systems and institutions more comprehensively to enhance accountability and transparency. For infrastructure, this will mean giving emphasis to sector level engagement in support of the traditional project focus. This may entail, among others, using economies of scale in institution-building across the infrastructure sectors, deepening the dialogue within sectors to improve how governments run their programs and how they address fraud and corruption





## ■ Box 2: Infrastructure Projects for High Impact

### Empowering local women to build a more equitable future

The Rural Transport Project in Vietnam promoted the idea of having local women work as road maintenance crews. A total of 1,533 ethnic minority women have been trained as rural transportation managers; many more eagerly await the opportunity. The project contributed to women achieving a greater voice in community decision-making and a more visible role in managing affairs at the household level, arising from increased economic power and social status. Road maintenance is also now more efficiently managed because local people have clear incentives to promote quality, limit corruption and directly benefit communities.

### A multipurpose bridge to ensure connectivity along the longest corridor of the Asian Highway Network

Connecting two sides of an otherwise uncrossed river, the Padma Bridge Project in Bangladesh will help unlock the potential of the South West region of Bangladesh and impact the lives of 30 million Bangladeshis by contributing to increased connectivity along the longest corridor of the Asian Highway Network. The absence of such a bridge has prevented ready and effective access to markets, medical care and education for an entire region.

### Innovative EZ latrine to meet demand in peri-urban areas

This project funded the design of the innovative EZ Latrine to meet consumer preferences and demand in peri-urban areas. Entrepreneurs were then trained to market and sell the latrines, capitalizing on the market based approach. This project helped immature markets overcome the inability to innovate and respond to the bottom of the socioeconomic pyramid.

### Road system restructuring to affect urbanization and trade patterns

The South West Roads Project in Kazakhstan is contributing US\$2.5 billion to the Kazakh highway structure. The project will help strengthen institutional capacity of the Committee for Roads within the GoK, utilizing US\$3 million of the loan to implement a road management system for the planning and budgeting of road maintenance, as well as rehabilitation and construction of the country's road network.

### Regional backbone networks to reduce wholesale price for broadband capacity

In Africa, the Caribbean and the Pacific, the development of regional backbone networks connecting to new submarine fiber optic cables has not been commercially viable. The Bank played a catalytic role by incentivizing private investment in large-scale national and regional backbone facilities for broadband access. The projects have contributed to a 90 percent decrease in wholesale prices for broadband capacity since 2009, while retail high-speed Internet access prices have been reduced by 30 percent in East Africa.

Source: World Bank Group, 2011



and effecting greater competition among both construction and service agents in infrastructure. It will also entail distilling lessons learned for the transport practice from the recent assessment of corruption issues by INT, including the strengthening of the engineer's role to oversee cost and quality of infrastructure investments. High-risk environments will continue to pose a challenge to the adoption of country systems or sector-wide approaches, in which continued effort is needed on safeguarding investments on a project-by-project basis. Work is also underway in about 35 countries to achieve transparent disclosure of extractive industry revenues and payments as steps towards accountability and good governance (EITI). The Bank and IFC will continue to integrate improved revenue management and governance, where appropriate, in the design of extractive industry and other large infrastructure projects.

**The Bank will scale-up its efforts to increase the efficiency of public spending.** In many countries, public infrastructure investments do not generate large growth dividends due to institutional deficiencies in the investment process. In Sub-Saharan Africa, the efficiency gap in infrastructure spending has been estimated at 3 percent of GDP (or US\$17 billion relative to estimated infrastructure needs of US\$93 billion). Subsidies to financing in infrastructure could be cut significantly if the public sector was better managed, less subject to corruption and if users were charged for the cost of the services they receive. Reforming state-owned utilities is important to improve public infrastructure spending and establish a nurturing environment for private investment. In this context, the regions will continue to roll out public expenditure reviews, support the reform of state-owned utilities and pursue institutional, legal and regulatory reform efforts in sector projects. Modern ICT technologies can improve monitoring and enhanced information for greater transparency, if coupled with effective platforms for citizen engagement. For example, ICT can be used to create feedback loops from citizens to their institutions, making institutions more accountable to citizenry. At the global scale, the Construction Sector Transparency (CoST) initiative has helped countries to nudge procuring entities in the construction business to disclose verified contract management information to the public.<sup>24</sup>

**Project design will continue to manage carefully environmental and social impacts and risks.** On the IFC side, infrastructure projects show a strong record in complying with environmental and social performance standards. IFC updated its Policy and Performance Standards on Environmental and Social Sustainability, which will be effective in January 2012. IEG showed that the environmental and social impacts and the risks associated with infrastructure projects supported by the Bank (especially category A) were appropriately identified during preparation and appraisal and that resources were in most cases appropriately allocated at supervision to mitigate the impacts and risks. The Bank is following complementary process to update and consolidate the environmental and social safeguard policies of IBRD and IDA. The Bank process will focus on the evolution of the safeguard policies to more effectively address complex issues associated with infrastructure and better support joint Bank-IFC initiatives. The update of the Bank's safeguard policies, which was initiated by Bank Management, is anticipated to be completed by the end of calendar year 2013.

**More specifically, the infrastructure sectors will scale-up their efforts to mainstream gender in Bank operations.** The World Development Report (WDR) 2012 on Gender, along with its Companion Piece, provided the empirical foundations for the infrastructure sectors' centrality in gender mainstreaming efforts. For example, investments in clean water and sanitation, combined with maternal health services, can help reduce female mortality and investments in the access agenda (roads, electricity, ICT) can empower women by moving them out of low productivity/low earning jobs. Thus, mainstreaming the gender agenda in the Group's business will require scaling up support for access to infrastructure at the country level. Going forward, 100 percent of Country Assistance Strategies (CAS) will be gender-informed, measured through consultations and monitoring and evaluation. But more must and will be done. The energy and mining, transport and water sector boards will continue to implement ambitious gender targets for both IDA and IBRD projects over FY12-14, in terms of screening (consultations/analysis), responsive-design and responsive monitoring and evaluation. In addition, the SDN Companion Piece to the WDR 2012 (under

### ■ Box 3: Supplemental Actions to Step up the Poverty Focus of Infrastructure Projects

By looking at conditions to accelerate growth and change the development trajectory of clients towards more sustainable development, TTI positions increased inclusiveness at the core of Group's efforts in infrastructure. For the poor, the most dramatic impact of inadequate infrastructure is the lack of access. For example, without roads, the poor are unable to sell their output to the market. In Indonesia, access to electricity has contributed to increased employment and incomes for the poor. TTI proposes additional actions to those already established by the four sector strategies to scale-up the poverty focus of sector projects in support of the core access agenda.

#### Water and Sanitation

- Conduct Water Supply and Sanitation (WSS) Portfolio assessment of poverty focus (including poverty assessment, components of projects and results indicators).
- Mobilize a Sanitation, Hygiene and Wastewater Support Service (SWAT) team to look for opportunities to do more on poverty in WSS projects.
- Create a learning module on WSS and poverty for Bank staff.

#### Transport

- Support project teams in strengthening focus on gender-disaggregated access to resources, markets and employment.
- Implement the United Nations Convention on the Rights of People with Disability, which promulgates universal accessibility of infrastructure as a legal obligation for its signatory countries.

#### ICT (under preparation)

- Re-purpose Universal Access Funds with a focus on the poorest and least connected.
- Facilitate the roll-out of mobile financing and using ICT for micro-finance.

#### Energy (under preparation)

- Support modern energy access for the poor, including promotion of lifeline rates and other subsidies targeting the poor.
- Provide low-cost lighting (e.g., Lighting Africa and Lighting Asia).
- Provide access to clean cooking and heating solutions (e.g., deploying modern cooking stoves, promoting switch to cleaner fuels where feasible and promoting efficient and sustainable production of wood fuels).
- Extend electricity access to community-based institutions used by the poor, such as schools, clinics and hospitals.
- Expand support for renewable energy in low-income/low-access countries, such as through the Program on Scaling-Up Renewable Energy in Low-Income Countries (SREP).

Source: World Bank Group, 2011



preparation) will identify entry points for gender in operations, disseminate guidance and resources for task teams and create communities of practice. Infrastructure projects integrate gender more thoroughly than is recorded in project documents and “guidance notes” exist for almost all sectors. Work is under way to collate, aggregate and disseminate these tools and to use them more effectively at the policy, program and project levels.

**Increased effectiveness in delivering knowledge will be critical.** The Bank has long produced knowledge reports, flagship or country-based, with large impact and has a plethora of analytical instruments to support a more holistic perspective on issues (Box 4). These instruments include low-carbon studies, public expenditure reviews (PER), country infrastructure diagnostics and urbanization reviews. The strategy update does not propose to develop any new country-level analytical instruments, but rather to maintain existing instruments and increase, wherever possible, their effectiveness. For example, PPP success depends on countries having a fully-fledged national infrastructure investment program with targets for private sector participation. The strategy update does, however, propose that this new dimension be integrated into PERs and the CAS dialogue. There is still a large research agenda in infrastructure, such as refining further the concept of green growth through the Green Growth Platform, conducting Impact Evaluations, developing an instrument to operationalize the points of leverage concept in a country investment program (along the lines of the spatial analysis work initiated by AFR in the Democratic Republic of Congo) and expanding efforts initiated by MNA to assess the ripple effects of infrastructure investments on job creation.

**Enhancing the development impact of the knowledge portfolio will require connecting the Bank with outside expertise.** As part of the modernization agenda, the Bank has put in place a suite of new instruments to enhance the knowledge basis within the Bank, including Global Expert Teams (GET), Chief Technical Specialists and World Bank Fellows. For example, the GET PPP has been the vehicle for responding quickly to requests for support from regional departments in the Bank on PPP issues and where needed, assemble teams of experts to address medium- to long-term interventions. Bank-wide efforts are being made to adopt a more strategic approach to cross-cutting themes, using GETs as a resource of experts and mechanism of quality assurance and monitoring of Bank’s activities in the area. New

results frameworks for GETs have been developed in FY11, which will help monitoring progress towards a set of pre-defined objectives.

**The new environment puts an increased premium on the Bank’s ability to extract knowledge from projects and enhance their design through global knowledge work.** In an environment where resources and projects will be fewer and in order to stay relevant, it will be critical to extract lessons learned from projects, especially in MICs, with the view of replicating them in LICs. The anchor will pilot an internal upstream strategic review system aimed at extracting and transferring the knowledge derived from projects in a more systematic way and potential for replication in other regions and globally. At the same time, the Group’s involvement on global issues and its connection with outside expertise should feed into projects and inform the dialogue with clients.

## Transformational Engagement

**Transformation is defined as getting a larger leveraged impact on the key, second-generation challenges that our clients are facing.** In Asia, for example, it will involve dealing with the challenge of rapid urbanization; in the Middle East and North Africa, water scarcity and social stability; in Sub-Saharan Africa, opening up land-locked countries; and across regions, the critical component is moving towards a more sustainable development path. Tackling these issues will require transforming “with whom and how” the Group engages.

**Transformational engagement will require broadening the range of actors engaged in contributing to the solution.** Developed countries are interested in exporting their technologies, middle-income countries in playing a bigger role—financially and in knowledge transfer and non-traditional donors, such as South Korea, in contributing to specific aspects of the transformational agenda. Consulting firms and foundations are now advocating on issues of global relevance that cannot be ignored, with some even having gained a seat at the table in international fora such as the G20. Some private firms have not only adopted the principles of corporate social responsibility; they also want to emerge as responsible businesses. Private sector leaders and good practice firms have factored responsibility into their business models (Box 5). With expectations of the private sector’s role shifting, it is not only





## ■ Box 4: Delivering Knowledge for High Impact

### **Using Impact Evaluations for gender-responsive design of projects**

Impact evaluations of the Decentralized Rural Transport Project in Peru showed that participatory planning is a cost-effective method for identifying investment priorities, particularly with respect to women. Through participation in the Rural Road Committees, women expressed their needs, leading to the rehabilitation of 7,000 kilometers of bridle paths and women comprising 24 percent of the road maintenance micro-enterprises.

### **Improving expenditure efficiency and prioritization for action by building comprehensive infrastructure data**

The Africa Infrastructure Country Diagnostic (AICD), as the first comprehensive data collection effort for infrastructure in Africa, yielded a baseline of needs, measured actual spending and identified inefficiencies and priorities for action. The Bank is currently financing the replication of this effort in selected countries in South Asia.

### **Disseminating best practices in pay-for-use testing helped 666,000 people identify safe water sources**

In Bangladesh, technical assistance and knowledge exchange contributed to a local government-led replication of a pay-for-use source testing and a marking and switching program covering 78,000 predominantly private, improved water sources. Policy makers learned from local governments, which helped place source switching at the foundation of the revised Implementation Plan for Arsenic Mitigation. These efforts contributed to 660,000 people now consuming water that is safe from arsenic contamination.

### **Spatial analysis to scan infrastructure investment opportunities in the Democratic Republic of Congo**

By geo-referencing data on productive sectors and infrastructure networks, the study evaluated the returns associated with proposed investments. In addition to detailing the specific infrastructure interventions that would have the highest return, the study found the power sector had the highest returns, while transport investments had low returns unless packaged in a multi-modal framework.

### **Fee-based services to support the establishment of licensing for international internet gateways**

The Government of Thailand used fee-based services to continue Bank TA for the establishment of the National Telecommunications Commission (NTC), an independent state agency. NTC's mandate includes regulation and licensing of the telecommunications sector, providing a path for private sector, license-based entry into the sector. The Bank worked with the NTC to establish licensing for international Internet gateways, contributing to a rapid and substantial reduction in Internet access prices.

Source: World Bank Group, 2011

the price of doing business, but also the key to opportunity and market share as financiers and regulators seek standards of performance beyond financial ones. Working out private sector solutions to infrastructure requires engagement with large and global sponsors, as well as regional and local players. Addressing issues such as rapid urbanization requires engagement with line ministries and Ministries of Finance, but also city mayors, provinces, the private sector and citizens.

**Transformational engagement will require more leveraging and brokering of knowledge.** There is a keen interest from LICs and other MICs, to learn from some MICs. For example, India is interested in learning from Mexico, Peru and Brazil on energy efficiency and Brazil in transferring knowledge to Mozambique (Box 6). But MICs are also interested in the good practices developed in OECD countries. The Bank can help transfer this knowledge by acting as a broker through technical assistance loans, or real-time advice. It can also use knowledge platforms, such as those for Urban and for “Open Development Technology Alliance” ICT for accountability and development, to connect the Bank with outside expertise. For example, the ICT platform is piloting a new approach, which will connect outside expertise to project teams in order to enhance the impact of their projects. Adapting flexibly to this new dynamism will be critical to ensure the Group’s relevance in both MICs and LICs.

**Where is the next frontier in infrastructure investments?** Ongoing dialogue with client countries shows opportunities for transformational projects across regions. In Sub-Saharan Africa, transformational projects are regional projects, which connect countries with power grids, broadband networks, transportation corridors and large scale renewable energy projects (e.g., Inga hydro-power site, West Africa Power Pool, Ethiopia-Kenya Inter-Connector and the North-South Corridor). In East Asia and the Pacific, projects include renewable energy investments, low carbon infrastructure, sustainable urban systems and power trading in the Mekong sub-region. In Europe and Central Asia, projects feature institutional bottlenecks impeding competitiveness, integration and growth. In Latin America and the Caribbean, there is an increasing demand for projects that tie environmental and social sustainability. In the Middle East and North Africa, opportunities for transformational projects lie in strengthening regional integration and social accountability. Finally, South Asia sees transformation through projects addressing issues such as regional integration and green growth/climate change, requiring a programmatic approach and institutional reform.

**In order to support a critical mass of transformational projects, several factors will have to be aligned, including demand from client countries, client leadership and champions and engagement of multiple partners.** It is estimated that over the SIAP period, about four-fifths of the Group’s projects focused on access and growth (core engagement), with the rest qualifying as “transformational”. Going forward, the Group will engage with client countries in a dialogue to identify opportunities for transformational projects. In line with the country-based model, client countries will determine where and which transformational projects will be selected. Provided that the necessary factors are aligned, TTI aims to achieve a critical mass of transformational projects, evolving from a fifth to a third of the infrastructure portfolio by FY15. This critical mass is necessary in order to support the learning associated with these projects and achieve the desired results.

**Supporting transformational projects will require a new range of data.** Information—not only by volume, but also on the quality and spending on infrastructure and impact including beneficiaries disaggregated by gender and by sector—is critical to deliver on this complex agenda. The Bank played a key role in advocating for a Global Benchmarking Initiative through the G20. It is also investing tremendous resources in data collection at the country level, but more will be done: the Open Data System which, for example, helped to streamline and consolidate fragmented data collection efforts, will be expanded further. ICT offers a range of new opportunities in data generation that the Bank will support.

**The increased risks associated with some transformational projects will require accelerated efforts on safeguards and procurement and a separate track for corporate attention.** While IFC completed the modernization of its environmental and social performance standards, the Bank is currently undertaking the update of its safeguard policies. Completion of this update is important to support the Group to engage more effectively on complex transformational projects (e.g., urban projects with associated risks of resettlements of people living in slums). It will be equally important to continue working with other MDBs to develop procurement procedures that will enable optimal implementation efficiency for exceptional projects. Also, some of the more risky projects will impact the risk exposure of the Group and as such, will be subject to closer scrutiny at a Senior Management level.





## ■ Box 5: The Role of the Private Sector in Leading the Transformational Agenda

The private sector has made tremendous progress in addressing environmental stewardship and social responsibility,<sup>25</sup> as well as adopting integrity standards. For example, 67 financial institutions have adopted the Equator Principles, developed in 2003. Companies are also adjusting their business model to better position themselves to exploit synergies among sectors and thereby develop new infrastructure solutions. Large companies, which used to think along mono-product lines, are diversifying their products and activities into multiple sectors. For example, Veolia expanded its activities beyond water in transport and waste water management; Areva's business no longer rests on a core nuclear pillar, it has expanded into large-scale bio-mass, wind farms and micro-reactors. Engineering companies, such as CH2M Hill, are now offering multi-disciplinary services that range from water, transportation and communications to nuclear and environmental activities. Innovative technological approaches offer new infrastructure solutions.

### Electric Smart Metering

With electronic democratization, companies such as GE have developed electric smart metering as a first step toward smart grid integration. Electric smart metering enables remote and instantaneous reading, dynamic pricing implementation and monitoring energy quality while being compatible with technology evolutions such as the fluorescent to L.E.D. lamp transition. Whereas smart metering aims at lowering the total energy consumption, they contribute to actively manage the integration of multiple networks, energy providers and renewable energy while enhancing their reliability.

### Access to Safe Drinking

Companies such as DI Environment have developed portable water treatment units, using low cost solar energy, with monitoring and controlling process over satellite or GSM networks. While the emphasis of such systems is to reduce health risks associated with contaminated water and help reduce infant mortality, the concept also supports communities in water resources management and helps develop local economies by creating jobs for the maintenance of the units.

### Green Infrastructure Material

Refurbishing and recycling of demolition scrap and industrial by-products contribute substantially to decreasing wasted matter for storage and disposal, as well as preserving natural resources. Construction companies of transportation and urban infrastructure, such as Eurovia, pushed this to the next level by developing a vegetable based binder for road and infrastructure building, which consists mostly of renewable, non-edible plant materials. Because of the low temperature application process, it dramatically impacts greenhouse gas emissions and energy consumption. Its translucent property offers options to better integrate infrastructure in the landscape and improve road safety.

Source: World Bank Group, 2011

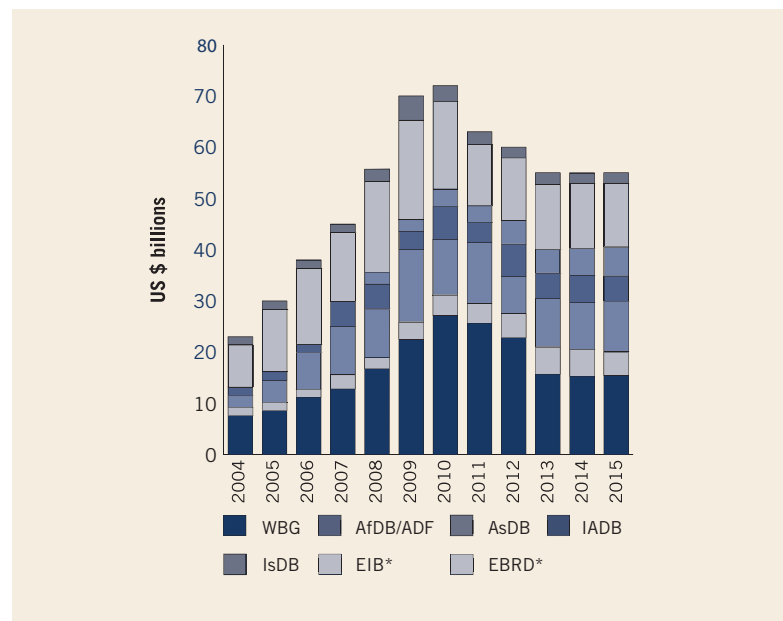


**The next frontier in staffing and skills will be to address the ability to connect among disciplines.** In order for the Bank to stay relevant, it will be critical to continue to have staff with deep technical skills in specific sectors and disciplines (e.g., engineering, finance), complemented with access to consultants with deep expertise in specific areas. The current matrix model is well-designed for a two-dimensional mapping between sectors and countries. The two-dimensional approach shows in staffing and skills: there is a tendency to hire highly specialized technical staff in a particular sector. However, the Bank is less equipped to deal with the three-dimensional mapping found between countries, individual sectors and infrastructure, which often relies on multiple sectors. The establishment of a new “transitional sector board” for ICT—the sector where this multi-disciplinary perspective is intrinsic—is one step in the direction of promoting a more cross-cutting view of infrastructure. Some progress has also been achieved in defining “integrative skills” as a core competency in some SDN specializations. But a much more real knowledge and talent view across silos is needed. The Infrastructure Panel, which is currently filling only a Human Resources function, could, for example, play a larger role as a true “integrative” Sector Board. This is an area under consideration by management.

**The Group will need to use more effectively international fora to advance on issues of global relevance.** Increasingly, the Group is called on to take a leadership role in international fora. For example, the Group was given a coordinating role in the preparation of the G20 MDB Infrastructure Action Plan. In other cases, the Bank has advocated on issues of global relevance, such as climate change and food security, or even acted as a catalyst of resources to tackle issues at scale. More effectively fulfilling this role will require the Bank to go beyond its country-based business model, developing an ability to connect to the outside world and work internally across sector and institutional boundaries in a more systematic way (e.g., through a Task Force set up to position the Bank more effectively on selected issues).

**Transformational engagement will require more effective collaboration with other MDBs on some issues and projects of regional and global relevance that go beyond the individual mandate of MDBs (e.g., MDB Road Safety Initiative).** While the overall infrastructure envelope from MDBs is expected to decline, there is scope to increase the effectiveness of existing resources (Figure 6). The MDB ‘Heads of Procurement’ have recently produced a new guidance note which focuses on best practice for procurement under PPP operations when MDBs make sovereign loans. Greater flexibility for PPP procurement was introduced by the Bank in January 2011 and a number of other

**Figure 6: MDBs Infrastructure Commitments, FY04-15**



MDBs have indicated that they plan to introduce similar flexibility in their own procurement guidelines. In addition, the G20 has established a platform of engagement in promoting the ‘lead bank’ concept for joint MDB financed transactions. However, some difficulties still remain with the implementation of this concept which primarily relate to differences among MDBs in the application of investment lending policies applicable to sovereign financing such as eligibility, cross debarment and environmental safeguards.

**Within the Group, further progress is also needed in terms of linking various programs.** In FY10, bilaterals channeled US\$4 billion to the Group, via 50 different infrastructure-related Global Partnership Programs (GPP). Of these, five programs comprised 95 percent of the cash contributions in FY10. Some programs support specific interventions, which require localized action (e.g., Water and Sanitation Program). However, the largest of these GPP support projects deal with global issues. For example, climate-related financing is

## ■ Box 6: Leveraging and Brokering Knowledge for High Impact

### Brazil-Mozambique South-South Knowledge Exchange

The Bank is piloting a cross-regional project between the Governments of Brazil and Mozambique to go beyond the one-off transfers of knowledge typical in South-South Cooperation initiatives. This project looks to transfer Brazilian knowledge, technologies and practices to Mozambique and includes technical assistance, institutional development and commercial investment projects between the two countries.

### Facilitating Kazakhstan's EITI experience sharing with Yemen

The Bank organized a knowledge exchange seminar that brought together EITI stake-holders in Yemen with peers in Kazakhstan, who had successfully navigated the EITI consensus building process. The seminar helped improve collaboration among industry, civil society and government and helped ensure continued partnership of the donor community. Soon after the exchange, Yemeni authorities finalized the EITI Validation process. By March 2010, Yemen had received full EITI Validation.

### India studies Bus Rapid Transit in Latin America

The Bank facilitated a study tour for Indian officials, visiting Bogota, Colombia and Mexico City to see their Bus Rapid Transport (BRT) systems. Since returning from the tour, the Indian officials have announced that they will develop BRT systems in at least two cities. Prior to the tour, their discussions had centered solely on rail-based systems of public transport in the state capital. The city of Indore is making efforts to improve the pedestrian environment in the city, with particular attention to integrating the pedestrian infrastructure with the proposed Bus Rapid Transit System to improve accessibility.

Source: World Bank, South Knowledge Exchange Library

provided through the Clean Development Mechanism, the Global Environmental Facility, the Climate Investment Funds or Green Growth Funds. The Bank launched a mapping of available infrastructure-related financing with a view of identifying efficiency and complementarity opportunities vis-à-vis the Bank's program, repurpose existing funds and directing fund-raising efforts for increased aid effectiveness.

**More broadly, achieving impact at scale may require pooling resources.** It is estimated that bilaterals devoted US\$23 billion to infrastructure in FY09, which represents about 20 percent of their total foreign assistance. Given the evolving fiscal considerations in donor countries, there is significant uncertainty concerning new money from bilaterals over the years to come and it will thus be critical to increase the effectiveness of existing resources. For example, the G20 identified the lack of project preparation funding as a serious bottleneck to large-scale transformational projects and PPPs. It was estimated that in Sub-Saharan Africa alone, some \$500 billion are needed to unlock high-priority regional projects; even more is likely required for low-income countries in Asia. While many project preparation facilities exist in Sub-Saharan Africa, none has the scale needed: the largest sources of project preparation funds have limits that are significantly lower than what is required to bring a transformational opportunity to the point of financial disclosure and to attract private investment. The Bank will launch a mapping of available funding for project preparation in existing project preparation facilities, with the view of identifying where opportunities exist to increase efficiency. More broadly, the transformational agenda also offers an exciting platform to engage non-traditional donors interested in cross-cutting areas, such as Green Growth. In the Bank's East Asia and the Pacific region, for example, collaboration with the Asian Development Bank, Japan International Cooperation Agency (JICA)/Japan Bank for International Cooperation (JBIC) and the Australian Agency for International Development (AusAid) will be critical to move this agenda forward.

## Mobilization of Private Capital and Other Sources

**The Group's current reporting system at the country and sector level focuses on volume of commitments.** The Group had a monopoly in infrastructure financing in 1995; however, as a result of the competition with other MDBs and the private sector, this is no longer the case. Moreover, its ability to attract co-financiers in projects, such as other MDBs, trust funds and the private sector (excluding government's counterpart funding) declined. By focusing on the scale-up of commitment volume, the reporting system also provided little incentives to look beyond the existing IDA/IBRD envelope. While this was the right reporting focus in the context of the early 2000s, when the Group decided to scale up its commitments in infrastructure, this approach is not sustainable if the Group aims to maintain its level of engagement in infrastructure in an environment subject to medium-term constraints. Going forward, the Group will need to bring in more private sector into infrastructure. There are

many entry points to increase private sector participation in infrastructure (PPI)—ranging from supporting the enabling environment to public-private partnerships (PPP). The focus of the Group will be on three components: (a) more systematically mobilizing the private sector and other sources of financing; (b) in some instances, developing joint Bank-IFC solutions and (c) lifting the game on public-private partnerships (PPPs), as appropriate. A combination of mechanisms and actions is required to deliver on this agenda.

**The IFC will continue to ramp up private sector financing for infrastructure.**

In so far as financing for private sector projects is concerned, there are multiple sources, including MDBs, commercial banks, local development banks, bilaterals (such as Export Credit Agencies) and Sovereign Wealth Funds. MDB financing for private projects represent an insignificant share of the total volume of PPI financing available globally. IFC, which has been the Group's main instrument for direct assistance (both in financial and advisory support) to the private sector, expects its infrastructure business to grow over FY12-15, with an increasing portion of the business going to LICs. In this spirit, IFC has obtained Board approval for a global equity fund for infrastructure that seeks to invest across a range of infrastructure sub-sectors in emerging markets. The IFC Global Infrastructure Fund will seek to ramp up private sector financing for investment projects. The IFC Asset Management Company, a wholly-owned subsidiary of IFC, mobilizes and manages third-party funds for investment in developing and frontier markets. It was created in 2009 to expand the supply of long-term capital to these markets, enhancing IFC's development goals as well as investing profitably for others. And yet, the private sector continues to have varying appetites across projects and regions for financing many large-scale or high-risk projects.

**MIGA will continue to support the private sector by providing political risk insurance in high risk environments.** Guarantees are one instrument among a menu of options that can help client countries mobilize private capital. MIGA has implemented important changes to expand the application of its guarantee instruments through amendments to its Convention and implementation of changes to its operational regulations. These changes have enabled MIGA to scale-up its support for infrastructure. In FY11, guarantees in infrastructure accounted for 43 percent of the total guarantees issued, a significant increase from previous years. Another notable trend during FY11 was the significant level of involvement of the public sector in these insured investments. This trend is expected to continue and should bring an increase in the number of opportunities where different entities of the Group can work together on transactions to support infrastructure development.

**The Bank is offering several financial instruments to promote infrastructure solutions.** Several instruments are currently being used, including sub-national finance and Output-Based Aid (OBA), which draw together the Bank's pro-poor policies and the IFC's ability to leverage private sector finance and expertise. More recently, the Bank undertook efforts to enhance the use of IBRD/IDA Guarantees and Enclave Operations (e.g., reducing the level of IBRD guarantee exposure counting against country limits, from 100 percent to 25 percent to align with IDA guarantees to incentivize governments; streamlining the processing of guarantees in line with those for lending to level the playing field; and encouraging Regions to seek assistance from specialized units in identifying opportunities for guarantee/enclave operations). These actions are part of a broader effort aimed at modernizing the Bank's guarantee instrument.<sup>26</sup>

**The Bank will enhance its support for the enabling environment.** The bulk of Bank assistance on PPI focuses on the enabling environment (e.g., investment climate and legal and regulatory frameworks to foster new entry and competition into infrastructure sectors, etc.). In line with the Private Sector and other sector Strategies,<sup>27</sup> the Bank will continue to support reforms of the regulatory environment and development of appropriate sector policies (e.g., pricing, role of regulator) that are necessary to attract the private sector.

**The Group will shift its focus to “capital enabled” for infrastructure.** The Bank will introduce a new indicator—additional capital mobilized in IBRD/IDA projects, including from the private sector—tracking progress on the mobilization of additional capital and reporting on it to the Board. In FY11, an additional US\$4 billion from MDBs, trust funds and the private sector (of which US\$700 million) was mobilized from the US\$21 billion committed from the Bank's own account (excluding governments' counter-part funding). By the end of FY15, the Bank proposes to double its mobilization from these sources, including the private sector, provided that current financial market conditions continue to prevail. The IFC will continue to place an emphasis on third party resource mobilization: IFC Investment Department scorecards track financing mobilized from third parties, as an indicator, in addition to investments made from IFC's own account. In FY11, IFC's mobilization ratio in infrastructure increased to 1.51 from 0.45 in FY10. Over the FY12-15 period, IFC expects to raise between US\$0.75 and US\$1 for every US\$1 of its own account investment.



## Box 7: Conditions for Successful PPPs – the 4 “Cs”

Public-private partnership (PPP) is defined as any contractual arrangement between a public entity or authority and a private entity whereby construction and/or operational and/or financing risks are fully or partially transferred to the private entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility.

Lessons learned from WBG experience suggest that successful PPPs require:

### Climate

The right enabling, legal, regulatory and institutional environment allows well-structured, balanced PPPs to be offered to market and ensures the projects' sustainability (e.g., power sector in Romania).

### Commitment

Commitment at highest levels, sustained over time, is necessary to attract private finance, and ensure PPPs remain integrated in investment financing plans (e.g., Jordan, Senegal).

### Capacity

The public sector needs the skills and resources to understand the public-private interface and how to work with the private sector (e.g., governance and transparency reforms, public sector management).

### Capital

LIC countries, where the infrastructure gap is largest, have had the most difficulty attracting private capital (e.g., Ethiopia, Tanzania, Mozambique). “Patient capital”: Where there are large up-front investments (e.g., utility projects), or the private sector requires shorter pay-back periods, governments may need to do early development work and mobilize financing instruments (e.g., sovereign guarantees, loans and risk/credit guarantees from MDBs, direct foreign investment financing) to attract private capital from project developers or commercial lenders. Government liabilities arising from PPPs, whether direct or contingent, which are often known as fiscal risk/contingent liabilities, should be monitored to ensure that the amount of fiscal risk born by the Government reflects the value for money it receives from the PPP project and is manageable.

Source: World Bank Group, 2011



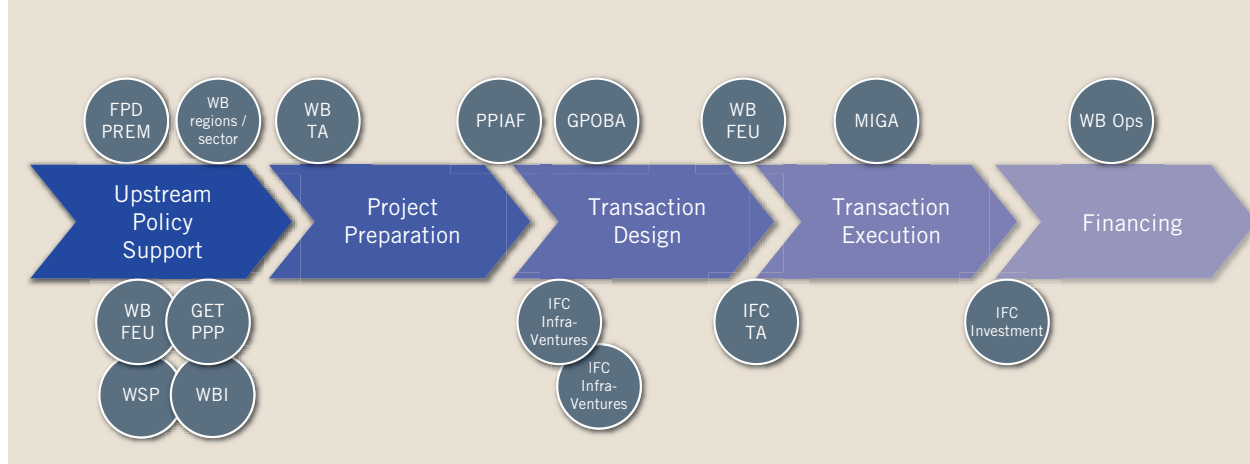
**In order for the Group to deliver joint Bank-IFC projects, alignment of safeguards for private sector projects among WBG institutions remains a critical issue.** The key issue to date for joint IFC/Bank projects is that IFC's Performance Standards and the Bank's safeguards are applied concurrently. This issue will be addressed as part of the updating of the Bank's Safeguards Policies, which is expected to be completed by the end of calendar year 2013. The IFC updated its Policy and Performance Standards on Environmental and Social Sustainability, which will be effective in 2012.

**Public-private partnership (PPP) is one instrument among many to crowd in the private sector in infrastructure.** Private participation in infrastructure has been most common in sectors with a readily identifiable revenue stream, such as energy and telecom. In a large number of OECD countries, private participation in infrastructure has in recent decades helped boost both the coverage and efficiency of infrastructure services.<sup>28</sup> While mobilization of public and private capital can accelerate infrastructure development, particularly in countries with larger domestic markets and stronger legal and

institutional frameworks, PPPs remain a complex endeavor in many cases (Box 7). Overall, it has been difficult to achieve PPPs at scale—an issue that resonates across all MDBs.

**Within the WBG, it has proved difficult to collectively mobilize and sustain resources over time to deliver on the final outcome, as measured by the number of PPP transactions.** In IFC, structuring a PPP transaction is a specific business of IFC Advisory Services (with appropriate fee compensation from clients). By contrast, in the Bank, there are few incentives to pursue costly, risky and time-intensive PPP projects, or joint projects involving both institutions. Moreover, PPPs are complex from a technical point of view. This difficulty is further exacerbated by the approximately 20 units and groups contributing one way or the other to the PPP agenda (Figure 7). This is inherent to the nature of this business: it requires working along the entire spectrum of PPP activities—from the enabling environment and upstream policy support, to capital market development support, training, capacity building, transaction advisory, design, execution and financing (including guarantees).

**Figure 7: WBG Involvement with Public-private partnership<sup>29</sup>**



#### List of Acronyms

FPD:	Finance and Private Sector Development
PREM:	Poverty Reduction and Economic Management
WB:	World Bank
TA:	Technical Assistance
FEU:	Finance, Economics and Urban Department
GET PPP:	Global Expert Team on Public Private Partnerships
WBI:	World Bank Institute
WSP:	Water and Sanitation Program
PPIAF:	Private Participation in Infrastructure Advisory Facility
IFC:	International Finance Corporation
GPOBA:	Global Partnership for Output-Based Aid
MIGA:	Multilateral Investment Guarantee Agency
WB Ops:	World Bank Operations



## Box 8: Joint Bank IFC Action Plan for PPP Scale-Up

**Tier 1:** Concerted efforts by all Bank, IFC and MIGA PPP-related units to develop the enabling environment to attract the private sector and a pipeline of PPP projects in 6 focus countries, with existing resources (budget, trust funds and expertise) strategically re-aligned. The first phase of the pilot includes Ghana, Kenya, Nigeria, Indonesia, Pakistan and the Caribbean. Other countries, such as Côte D'Ivoire, will be added to the pilot when the enabling environment is in place. The menu of options includes:

- New PPP portfolio assessment tool to identify “quick wins,” “transformational” projects and problem PPPs for restructuring or cancellation. Agreement with country directors on PPP priorities for short term and medium term.
- Integrated program of activities (joint Bank (SDN/FPD/WBI), IFC and MIGA strategy), based on the findings of the assessment tool for PPP involvement. Strategic realignment of existing resources from the various Group units (including PPIAF). Funding to cover upstream engagement, PPP transaction and implementation.
- Dialogue with client countries to support the establishment of targets for private participation in national infrastructure investment programs (including PPPs) and devise a strategy to complement private financing.
- Capacity building of client countries, making greater use of south-south knowledge exchange and transferring lessons on the “how to” aspects of PPPs.
- Technical support from the Infrastructure Finance Center of Excellence (IFCOE).
- Preparatory work to be funded through IFC InfraVentures and country units budget/IFC advisory.
- Staff training for PPP skills building.

**Tier 2:** Enhanced support for engaging with the private sector (e.g., Tunisia as a priority).

Source: World Bank Group, 2011



**The Group will pilot a new approach in a few joint Bank-IFC focus countries, which involves developing and testing new instruments and coordinating actions across the Group (Tier 1).** In the first phase of the pilot, the new approach will target six countries, which have been jointly agreed by the Bank and IFC for coordinated actions (Box 8). The selection of Tier 1 countries was based on several criteria, including priority given to the Africa region, opportunities for an integrated approach to support a PPP program beyond individual transactions and limited engagement of both the Bank and IFC compared to the country's potential. Other countries, including post-conflict countries will be added to the list of Tier 1 countries when the enabling environment is in place. Upon completion of the pilot and using lessons learned, the Group will roll out the approach to additional countries. This pilot will be supported by a more strategic realignment of existing resources behind coordinated efforts of the Group. In Tier 2 countries, the Group will provide enhanced support for the enabling environment and engagement with the private sector.

**For Tier 1 countries, the Group will pilot a new PPP portfolio assessment tool, with coordinated actions across the Group.** Evidence from earlier PPP engagement has shown the importance of upstream involvement in promoting the PPP agenda for both IFC and the Bank. Other critical elements for PPP success include the need develop a pipeline of projects (instead of working on individual transactions), to plan for capacity building and to support a programmatic approach to PPPs. The new instrument will identify three categories of PPP projects: (a) those that are “quick wins” and can become demonstration projects; (b) those that are “transformational” and require long-term planning; and (c) those which require either restructuring or cancellation to reduce the reputational risks for the PPP agenda. Using the findings from this PPP portfolio assessment, the Bank (SDN/FPD/WBI/country units), IFC and MIGA will articulate an integrated program of activities for the various Group units (including PPIAF), and re-align existing resources (budget, trust funds and expertise) to support this program.

**Where there is a demand from client countries, the Bank will help governments to set targets for private participation against their national investment programs and devise a strategy to complement private financing.** Setting and monitoring these targets creates incentives to identify projects that are

suitable for PPPs and to address structural bottlenecks to meet these targets. It provides a more integrated approach to project financing by leveraging PPP procurement to expand the reach and effectiveness of the investment program; it also provides discipline to the process of selecting PPPs by not crowding out projects that could have been done on a PPP basis with public money. Finally, it enlarges the market for PPPs beyond individual projects by offering investors a pipeline of projects, thereby increasing the incentives for investors to put time and resources into a country. The Bank will support this approach by helping governments to devise a strategy to complement private financing (including grants, guarantees, loans and credit guarantees). This strategy may involve setting up a Viability Gap Fund, which would support a share of project costs for PPPs (along the Indian model), and introducing credit and political risk mitigation for private investors. It may also include measures to address the quality of institutions and regulations, sector reforms and the management of fiscal risks (e.g., structuring and sizing Government guarantees). The Bank will lead such a dialogue with client countries at the macro-economic or strategic level (e.g., CAS).

**The Bank will test new approaches for capacity building.** These capacity building efforts will make greater use of practitioner-to-practitioner south-south knowledge exchange to transfer lessons on the “how to” aspects of PPPs between developing countries with on-going PPP programs, as well as an increased focus on governance and reform leadership to address political economy challenges often encountered in developing PPP programs. The Bank will work with other MDBs and partners in the G20 to strengthen these practitioner exchanges through networks and secondments between financial institutions and PPP agencies—for example, between private investment banks of developed countries and banks from developing countries, or between utilities in middle-income countries and utilities in LICs.<sup>30</sup>

**Using lessons learned from the pilot phase, the operational mandate of the Infrastructure Finance Center of Excellence (IFCOE) may be expanded to evolve towards a center for PPPs with global reach.** In 2009, the Bank, with the Government of Singapore set up the IFCOE as a “global advisor” in selected PPP transactions. Recently, The Group staffed up and co-located three senior managers from the Bank, IFC and MIGA to this office. The IFCOE is ideally positioned to unlock private sector interest in infrastructure

by bundling services to clients, advising governments on the full suite of Group products and services (including guarantees, equity and local currency debt financing) and by offering credit enhancements for municipal and revenue bonds. The Group will also continue working with external partners, such as the Public-Private Partnerships in Infrastructure Resource Center and the European PPP Expertise Center.

**Training for nominated operational staff will be scaled up.** The Bank, in conjunction with GET PPP, IFC, MIGA and industry support including educational institutions, will undertake dedicated training for nominated staff to develop a cadre of private project finance skills across the Bank. The IFCOE will also be integrated to carry out this training and capacity development plan. A strategic staffing and skills upgrading plan will be developed, including the recruitment of specialized outside expertise, as warranted by the emerging regional demands and PPP project pipeline.

**IFC's InfraVentures will continue to support early stage development costs on a risk capital basis.** It will also leverage senior IFC professionals to actively participate in the earliest stages of project development in IDA countries. IFC InfraVentures is an internal, US\$100 million 5-year Fund created in 2008 to finance early stage project development expenses and to proactively develop private and PPP infrastructure projects in IDA countries. In the three years since its inception, the Fund has committed to 11 projects representing total project development expenditures for the Fund of US\$28.9 million. In FY11, the Fund continued its infrastructure project development activities in IDA countries, including Nicaragua, Pakistan, Rwanda, Tajikistan and Vietnam, and committed four additional project development investments in the water sector in Bangladesh, in the hydropower sector in Georgia and Mali and in the gas distribution sector in Kenya.

**For Tier 2 countries, the Group will provide enhanced support for engaging with the private sector.** The Bank and the IFC Advisory Services will work together to put in place policies and programs to support the enabling environment for private sector development. In line with the Private Sector and other sector Strategies<sup>31</sup> the Bank will continue to support reforms of the regulatory environment and development of appropriate sector policies that are necessary to attract the private sector. This support will be provided through policy dialogue and in project preparation on the advisory

side and in Bank projects. IFC Infrastructure Advisory Services and PPIAF, a multi-donor facility, will continue to more systematically coordinate their work.<sup>32</sup> The Group will continue to support one-off PPP transactions with demonstration value.

**Pillar 3 will include joint Bank-IFC targets for PPP projects and PPP advisory activities.** Assuming that current financial market conditions prevail, the Group will seek to double by FY15 the number of PPP projects and advisory activities, relative to the FY10 baseline for the Bank (i.e., 19 PPP projects, 18 PPP advisory + 59 PPIAF advisory) and to the FY08-FY11 baseline for IFC (20 advisory). To identify PPP opportunities, the Group will use PPP portfolio assessments, as well as expand the PPIAF PPI platform to track down the global pipeline of PPPs that can be tapped. Additional incentives for staff to undertake PPPs are under consideration, including OPEs and a mentoring scheme under the GET PPP.



# WORLD BANK GROUP REGIONAL ACTION PLANS

**Regions differ markedly in their infrastructure needs and spending.** Over the past few years, the coverage, quality and efficiency of infrastructure services and investments have improved remarkably across regions. Massive infrastructure spending across the world has contributed to meeting the MDGs, in terms of access and poverty reduction. In spite of these achievements, some notable differences exist among regions in terms of access to basic infrastructure services. Water and electricity coverage is now above 85 percent in EAP, LCR and MNA; however, coverage is far lower in AFR. While over 90 percent of the populations in EAP, LCR, MNA and ECA are covered by a mobile cellular network, the coverage figures hover around 60 percent for AFR and SAR.

**If infrastructure is regarded as critical element in accelerating growth and shifting the development trajectory across regions, there are significant differences in initial conditions among regions.** Table 2 proxies those differences along three dimensions—growth, inclusiveness, and environmental sustainability—which infrastructure investments can help address. Within each region, this table masks huge differences among countries. To respond to these highly differentiated conditions and country needs, the Group will tailor its approach and adopt a flexible response.

**Regional Implementation Action Plans will show where opportunities exist for the Group to use its resources for the highest impact.** In particular, the Action Plans describe what each region of the Bank, IFC and MIGA is planning to do in infrastructure over FY12-15. The plans are based on the fundamental premise that clients will ultimately determine the type of engagements with the Group. This prospective analysis is based on an assessment of past performance and achievements of the Group over the SIAP period.

**Table 1: Status of Infrastructure Needs and Financing, by region**

		AFR	EAP	ECA	LCR	MNA	SAR
Annual investment and maintenance needs (billion, US\$) <sup>1</sup>		93.3	406.7	N/A	81.2	78.5	191.1
Annual Infrastructure spending <sup>2</sup>	Billion US\$	45.3	207.0	N/A	43.5	43.8	46.0
	% GDP	7.1	7.2	N/A	1.9	6.9	4.6
Private participation in infrastructure investment (billion, US\$) <sup>3</sup>		12.5	17.6	32.5	46.8	7.8	34.8
Of which: energy (% of total PPI) <sup>4</sup>		5.9	40.7	41.0	33.9	7.2	49.6
Water and sanitation (% of total PPI) <sup>5</sup>		0.3	6.5	1.5	0.9	10.7	0.2
Telecom (% of total PPI) <sup>6</sup>		88.8	32.2	50.6	38.5	64.9	35.7
Transport (% of total PPI) <sup>7</sup>		5.0	20.7	6.9	26.7	17.1	14.5

<sup>1</sup> Constant 2005 US\$; Interim Report for the G20 of the MDB Working Group on Infrastructure, May 2011.

<sup>2</sup> 2005; Interim Report for the G20 of the MDB Working Group on Infrastructure, May 2011.

<sup>3</sup> Annual average 2007-9; Private Participation in Infrastructure Database: Encompasses capital expenditures invested at contract signature or financial closure for projects where private parties have at least 25% participation in the project contract or divestures with at least 5% of equity owned by private parties. Investments recorded encompass total investment in the project, not the private component alone.

<sup>4</sup> Energy sector defined as i) electricity generation, transmission and distribution; ii) natural gas transmission and distribution.

<sup>5</sup> Water and sanitation sectors defined as i) potable water generation and distribution; ii) sewerage collection and treatment.

<sup>6</sup> Telecom sector defined as i) fixed or mobile local telephony; ii) domestic long-distance telephony; iii) international long-distance telephony.

<sup>7</sup> Transport sector defined as i) airport runways and terminals; ii) railways (including fixed assets, freight, intercity passenger, local passenger); iii) toll roads, bridges, highways, tunnels; iv) port infrastructure, superstructures, terminals and channels.

<sup>8</sup> Constant 2008 US\$; OECD, 2009.

Table 2: Regional Differences in Initial Conditions, Selected Indicators							
		AFR	EAP	ECA	LCR	MNA	SAR
Growth	GDP per capita (constant 2000 US\$) <sup>1</sup>	635	2,099	2,785	4,890	1,967	770
	Foreign direct investment, net inflows <sup>2</sup> (% of GDP)	3.4	2.9	4.4	2.7	3.2	2.5
	ODA (DAC/non-DAC) flows to infrastructure (billion US\$) <sup>3</sup>	7.9	1.8	1.4	1.6	2.4	2.5
	Public Investment management Index (range, out of 4)	3.53-0.50	2.87-0.77	2.39-1.41	3.12-0.27	2.97-0.80	2.10-1.57
Inclusiveness	Poverty head count ratio at US \$1.25 a day (PPP) (% of population) <sup>4</sup>	51	17	4	8	4	40
	Labor Participation Rate, total (% ages 15+) <sup>5</sup>	70.7	72.4	59.0	65.5	50.6	58.9
	Ratio of female to male labor force participation (% ages 15 and over) <sup>6</sup>	77	81	75	65	35	43
	Maternal mortality ratio (per 100,000 live births) <sup>7</sup>	650	89	34	86	88	290
	Public access to information (0-100) <sup>8</sup>	37	43	70	75	17	78
Environmental Sustainability	Per capital wealth (billions US\$) <sup>9</sup>	13,888	20,669	72,744	79,194	28,992	10,441
	CO2 emission (metric tons per capita) <sup>10</sup>	0.8	4.0	7.2	2.7	3.7	1.2

<sup>1</sup> WB national accounts & OECD national accounts, WDI, 2010; MNA data from 2009.

<sup>2</sup> IMF, International Financial Statistics and Balance of Payments database, WDI, annual average 2007-9.

<sup>3</sup> OECD/DAC Official Development Statistics, 2009.

<sup>4</sup> See IMF Working Paper Investing in Public Investment: An Index of Public Investment Efficiency, 2011.

<sup>5</sup> WB Development Research Group, 2005.

<sup>6</sup> International Labour Organization, Key indicators of the Labour Market database, WDI, 2009.

<sup>7</sup> WB Development Research Group, 2009.

<sup>8</sup> WHO, UNICEF, UNFPA, WB estimates, WDI, 2008.

<sup>9</sup> Global Integrity Indicators, 2008/9.

<sup>10</sup> "Wealth" is composed of produced capital (infrastructure and urban land), natural capital (cropland, forests, fish stocks, minerals, etc.) and human resources (human capital, quality of institutions). The Changing Wealth of Nations, WB publication, 2011; data from 2005.

<sup>11</sup> Carbon Dioxide Information Analysis Center, Environmental Sciences Division, Oak Ridge National Laboratory, Tennessee, WDI, 2007.





# WORLD BANK GROUP INFRASTRUCTURE ACTION PLAN AFRICA REGION



World Bank Group  
Infrastructure Strategy Update FY2012-2015







# 1. INFRASTRUCTURE ISSUES

## Highly heterogeneous region

- **Low income countries (LICs):** Senegal, Uganda
  - Enormous efforts in infrastructure development in recent years.
  - Heavily dependent on external finance for infrastructure.
- **Middle income countries (MICs):** Cape Verde, South Africa
  - Best positioned to meet infrastructure needs.
  - Stronger asset maintenance, institutional efficiency and larger urban populations facilitate network rollout.
- **Resource rich countries:** Nigeria, Zambia
  - Generating (or soon to be generating) substantial resource royalties for investment.
  - Experiencing serious governance challenges in converting investments into infrastructure assets.
- **Fragile states:** Côte d'Ivoire, Democratic Republic of Congo
  - Facing a particularly daunting post-conflict infrastructure reconstruction agenda.

## Regional infrastructure agenda

Africa's infrastructure agenda is inherently regional due to large number of economies under US\$10 billion GDP (31), landlocked countries (15) and trans-boundary rivers (60 basins), as well as an uneven distribution of energy resources and load centers.

- Economic and political interests are not always aligned in development of regional infrastructure and implementation is highly complex.
- There exists a large concentration of poverty: poverty rates rose on average by 4.2 percent in Africa during the 2008-09 crisis period, although the impact in rural areas may have been even higher.
- There are major access needs: Africa needs 7,000 MW of new power generation capacity each year, but has been installing only 1,000 MW in recent years; less than 5 percent of agricultural land is irrigated, less than 10 percent of hydropower potential has been tapped and only 58 percent of Africans have access to a clean water source.
- Exceptionally rapid rates of urbanization are leaving cities struggling to keep pace with burgeoning infrastructure demands.

## Access Indicators

Energy	
Electrification rate (% of population with access) <sup>1</sup>	30.5
Delay in obtaining electrical connection (days) <sup>2</sup>	31.2
Water and Sanitation	
Improved water source (% of population with access) <sup>3</sup>	59.7
Improved sanitation (% of population with access) <sup>3</sup>	31.3
Delay in obtaining water connection (days) <sup>2</sup>	29.4
ICT	
Internet users (per 100 people) <sup>4</sup>	8.8
Population covered by mobile cellular network (%) <sup>4</sup>	56
Delay in obtaining a mainline telephone connection (days) <sup>2</sup>	30.7
Transport	
Motor vehicles (per 1,000 people) <sup>3</sup>	34.2
Firms identifying transportation as a major constraint in doing business (%) <sup>2</sup>	27.1

Source: <sup>1</sup>International Energy Agency 2010

<sup>2</sup>Enterprise Firm Surveys, Enterprise Analysis Unit

<sup>3</sup>World Development Indicators

<sup>4</sup>Little Data Book on ICT

- Infrastructure services can easily cost twice as much as in other developing regions due to lack of scale economies and limited competition; power costs on average US\$0.14 per kilowatt-hour.

## Climate change and disaster vulnerability

- AFR has made little contribution to global carbon emissions (4 percent of global greenhouse gas emissions), however suffers high vulnerability to climate change impacts (e.g., weather-dependent rural livelihoods).
- Natural disasters are common (e.g., droughts in Niger, cyclones in Madagascar and floods in Mozambique) and increasingly widespread.

## Governance

- The public sector suffers from weak capacity in fragile states. The region has a large number of Fragile and Conflict-Affected States (FCSS), 20 of the World Bank's 33.
- Political instability affects the region (e.g., contested elections in Kenya, Zimbabwe and Côte d'Ivoire; coups and nondemocratic transfers of power in Guinea, Mauritania, Niger and Madagascar).

## Infrastructure investment and the private sector

- Historically, some 40 percent of the region's infrastructure investment has come from the public sector and a further 40 percent from the private sector. Donors and non-OECD partners have contributed the balance in roughly equal shares. Private finance has remained largely confined to the ICT sector, although there is some willingness to invest in power plants and container terminals.
- The region's infrastructure funding gap has been estimated at US\$31 billion per year, with additional systemic inefficiencies draining some US\$17 billion a year. This infrastructure deficit cuts per capita growth rates by 2 percentage points annually and there is significant scope for infrastructure policy and institutional reform.
- China has become a major partner supporting infrastructure development, particularly in some of the resource rich countries.





## 2. ACHIEVEMENTS AND LESSONS LEARNED, FY08-11

### World Bank Group Infrastructure Commitments

	FY11	FY08
WBG Infrastructure Commitments (US\$ billion)	3.3	3.0
World Bank Infrastructure Commitments (US\$ billion)	3.0	2.6
IFC Infrastructure Commitments (US\$ billion)	0.3	0.1
MIGA Infrastructure Commitments (US\$ billion)	0.03	0.2
Total private sector investment enabled by IFC (US\$ billion)	9.5	

Source: SAP Business Warehouse, MIGA, IFC

- Bank lending for regional infrastructure projects averaged US\$600 million annually over the FY08-FY11 period, which is close to 80 percent of Africa's overall regional lending for that period. The associated projects are contributing some 7,000 kilometers of regional fiber optic backbone and some 2,000 kilometers each of regional power transmission and regional trunk road networks.
- As part of the green growth agenda, the Bank has had some success in tapping climate funds for infrastructure development, though mainly for smaller scale interventions. There have been over US\$750 million of commitments for renewable energy and urban transport projects in Nigeria, Kenya and Ethiopia.
- The Group has pushed the envelope on the PPP agenda. Examples include 2 joint IDA-IFC rural electrification PPPs in Senegal, shared fiber-optic cable systems in East and West Africa and power generation in Botswana. The IFC Infrastructure Advisory Services were also active, with 10 active and closed mandates, including (i) projects with significant fiscal and development impact – Liberia Power and Kenya Telecoms; and (ii) a major port concession, supported by Millennium Challenge Corporation funding in Benin.
- Emphasis on governance and institutional reform has grown, with Bank projects blending investments with institutional, regulatory and administrative reforms. Bank teams are engaged in supporting high-level dialogue on governance and accountability in the Democratic Republic of Congo, assisting with catalytic reforms in Cameroon's Customs Directorate and advising on transparent oil and gas revenue legislation in Ghana. Analytical and advisory work on the value chain of extractive industries is influencing policy dialogue in Angola, Democratic Republic of Congo, Nigeria and Niger.
- The Africa Infrastructure Country Diagnostic (AICD) created a global knowledge base on Africa's infrastructure sectors.



### 3. ACTION PLAN, FY12-15

#### Lessons Learned

- The private sector share of total infrastructure spending is far lower in Africa than in other regions and extra effort is needed to leverage private capital.
- Regional projects face much larger implementation challenges than national ones: preparation time is significantly longer, disbursement ratios are slower and the percentage of commitments at risk is twice as high. Going forward, the region must adjust allotted time and expertise for brokering and implementing regional projects.
- IDA financing should be complemented by partnership and coalitions, especially with African institutions and actors (e.g., Nigeria's gas to power; Rwanda Energy Access SWAp; Bujagali hydropower; Democratic Republic of Congo's Multimodal Transport project and the Dakar Toll Road) to deliver greater impact.
- Good governance and improved operational and regulatory capacity are critical for sustainable access, services and financial viability.
- High quality of project preparation and execution is needed to ensure success in PPPs and deliver sustainable outcomes.

#### ■ CORE ENGAGEMENT

##### What will constitute the core engagement in infrastructure?

The Bank's infrastructure interventions are grounded in the broader Africa Region Strategy of 2011, based on two central pillars of "competitiveness & employment" and "vulnerability & resilience", building on a cross-cutting foundation of "governance & public sector capacity." In addition, the region has adopted a selectivity approach, which aims at focusing on a smaller number of high impact interventions.

- **Unmet access needs:** continue to focus on expanding access to infrastructure services in both urban and rural areas, including: electrification, meeting MDG targets in water and sanitation and improving rural road accessibility.
- **Sustainable transport:** focus on improving connectivity between key economic nodes, enhancing support to regional integration and trade/transport facilitation, promoting PPPs and leveraging funding, tackling urban mobility bottlenecks and mainstreaming social accountability in transport projects while supporting capacity building for sustainable results.
- **Sustainable energy:** accelerate scale-up of regional power generation and transmission capacity (target: 8GW of new generation capacity by 2015); complement supply expansion with demand-side management and energy efficiency programs.
- **Broadband infrastructure:** focus on completing the regional fiber optic network so that all landlocked countries have access to at least one submarine cable; provide public subsidies to users rather than to service providers where necessary; stimulate transformational applications of available bandwidth to applications including banking, education, medicine and public administration.
- **Water resources:** focus on regional capacity building for River Basin Organizations to assist them in developing consensual basin-wide investment plans, key focus basins are the Niger, Nile, Senegal and Zambezi.
- **Disaster risk management:** mainstream disaster risks into country strategies and operations; develop national Disaster Risk Management programs in 9 priority countries.



## What will the region do to secure more/efficient public sector financing for infrastructure?

- **Public Expenditure Reviews (PER):** offer on a demand-driven basis. Use of spatial analysis to provide guidance on the prioritization of infrastructure investments is a growing area of work.
- **Leveraging finance of other partners:** use strong track record to continue partnering with other multilateral and bilateral donors, notably the African Development Bank. In recent years, every US\$1 of IDA resources for Africa's infrastructure has leveraged US\$3 of donor co-finance. Non-OECD financiers are increasingly partnering with IDA, most notably the Arab development banks, while exploring possible parallel co-finance with the China Exim Bank.
- **Cost recovery and targeted subsidies:** promote cost recovery pricing of key services such as power and water to ensure sustainability and possible extension to unserved populations and apply limited subsidies on a targeted basis.

## ■ TRANSFORMATIONAL ENGAGEMENT

### Where are the new opportunities for “transformational” engagements?

- **Regional:** The region has a very strong pipeline of regional infrastructure projects, many of them aiming to address critical missing links and bottlenecks in the regional transport, power transmission and fiber optic networks. The new Regional Integration Assistance Strategy for Africa sets the framework for these interventions. A number of these projects have attracted the interest of the G20. In the power sector, a number of key cross-border transmission projects in West Africa (Côte d'Ivoire-Liberia-Sierra Leone-Guinea interconnector), East Africa (Ethiopia-Kenya interconnector) and Southern Africa (Mozambique and Zambia) will allow countries to benefit from more abundant and lower cost power in neighboring states. Efforts in transport will be selectively targeted at three major regional ports (Douala, Mombasa and Tema) and their associated hinterland road corridors into Central, East and West Africa respectively. In southern Africa, the region is contributing a number of projects to the high priority

North-South Corridor. For ICT, the region will invest in the completion of the Central Africa Backbone and make connection to the submarine cable possible for a number of small West African countries.

- **Broader development:** The region will work on supporting projects that have the potential to unlock broader development benefits. A preeminent example is the development of the Inga hydropower site, which, when fully developed, will be the world's largest hydropower site (40GW), leading to a huge expansion in the availability of low cost power on the continent with major ripple effects for the competitiveness of Africa's productive sector.
- **Green growth:** Opportunities for green infrastructure exist in Africa's vast unexploited renewable energy resources (hydro-power and geothermal), as well as in its substantial volumes of flared gas. The region has a strong pipeline of hydropower projects – with schemes identified in Benin, Burundi, Cameroon, Ethiopia, Guinea, Liberia, Niger, Sierra Leone, Tanzania – that will help put these countries and their surrounding neighbors on a greener development path. Investments are also being made in the development of Kenya's geothermal potential. The energy agenda will also look beyond power to sustainable biomass supply and use.
- **Co-benefits:** Two important areas where the region is pursuing co-benefits are city level engagements and multi-purpose water resource development. The region's urban practice is in the midst of a paradigm shift from piecemeal infrastructure projects to city level engagements that look at governance, financing and service delivery as an integrated system, often with a multi-sectoral approach. These kinds of engagements are being pursued in Kenya, Mozambique, South Africa and Tanzania. The region's water resource practice is also strongly committed to multi-purpose development of water resources that takes into account the full range of potential water uses in urban supply, hydro-power, irrigated agriculture, navigation, fisheries and others. Extensive analytical work on this issue is paving the way for engagements of this kind on the Niger, Nile and Zambezi.

## What will the Bank do to build client capacity to support transformational engagement?

- **IDA grants to regional organizations to build capacity for regional projects.** Regional projects face significant capacity constraints that hold back their implementation. New rules allow grant financing for building capacity in regional organizations to support regional project development and operations.
- **Capacity development and training for national and citywide programs of urban slum upgrading,** land use planning, street addressing and municipal finance, pertaining to a range of municipal infrastructure and service delivery challenges (WBI).

## ■ INFRASTRUCTURE FINANCING

### What will the Bank do to improve the investment climate?

- The Bank is developing a new breed of operations—the Growth Poles Projects—to help African countries deploy a critical mass of reforms, infrastructure investments and skills building for the appropriate environment to foster industrial investment. Such projects are being implemented or prepared in Cameroon, the Democratic Republic of Congo, The Gambia, Madagascar and Mozambique.
- The Bank will also work on reforming labor and land regulation, as well as deploying new approaches to improve the business environment, such as the regulatory “guillotine,” which, combined with regulatory impact assessment, is a way to reduce the stock and flow of business regulations.

### What will the Group do to help client countries attract more private sector financing?

- The region will work more closely with IFC and other actors to increase leverage with private capital. From IFC, 20-25 projects are expected annually over FY12-14 for IFC own account volumes of US\$500-600 million, with an additional US\$300-400 million anticipated in mobilization.

- Africa's resource rich countries are working to break out of the enclave model through strategic development of resource corridors, leveraging major infrastructure investments from mining companies and other resource concessionaires. The Group can facilitate, as for example in Guinea and Liberia.
- The Bank plans to scale-up the “Lighting Africa” program to reach 80 million people by 2020. The program has harnessed private sector initiative to increase availability and reduce cost of decentralized solar lighting solutions for Africa's rural areas.

### Where are the opportunities for public-private partnerships?

- Considerable potential exists in gas-fired and geothermal power generation, as well as port development. Through the recently Board-approved special initiative for infrastructure, IFC will focus on creating PPPs jointly with IDA, look to support the second generation of PPI in power sector and help further extractives-related transport initiatives. In addition, IFC will pursue opportunities in improved delivery of services and payments through the ICT sector. IFC Advisory services will, wherever possible, take a programmatic approach to develop PPP project pipelines, as for example in Nigeria and East Africa.
- On-going reforms to the World Bank's guarantee instrument, including the expansion of partial credit and partial risk guarantee instruments to IDA countries, constitute a mainstreaming of innovative practice already underway in the region and will help to facilitate the structuring of viable PPPs, particularly for Africa's energy sector.

### What are the opportunities to tap into “green financing”?

- Clean Technology Fund has three projects in the pipeline for South Africa, including the Energy Efficiency Program, the Sustainable Energy Acceleration Program and the Eskom Renewable Support Project, with \$300 million in CTF going to IFC and the Bank and over US\$1.1 billion leveraged from the public and private sector. In addition, the CTF Trust Fund Committee has endorsed an investment plan for Nigeria, and moving forward is contingent upon the availability of funds beyond what is planned for in the current pipeline.

- Three countries have been selected to be part of the Strategic Climate Fund's Program for scaling up Renewable Energy in LICs (SREP), to pilot the viability of low carbon development pathways in the energy sector. Mali, Ethiopia and Kenya can expect to receive between US\$25-50 million as part of the program.
- There is a potential to link climate finance to Africa's energy access agenda, particularly if large hydro projects were to become eligible for climate finance. The Bank will build client capacity for access green financing through: i) the Mitigation Action Implementation Network; ii) the Regional Carbon Forum; and iii) carbon finance support for Dar es Salaam (WBI).

### What will the Bank do to tap into knowledge and financing of private foundations, think tanks and others?

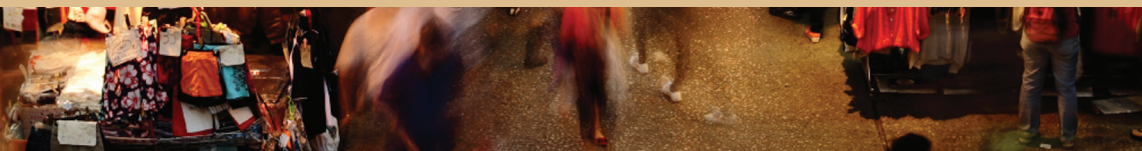
- The Region is defining a strategy for closer partnership with think tanks in Africa, of which there has been a recent upsurge.



# WORLD BANK GROUP INFRASTRUCTURE ACTION PLAN EAST ASIA REGION



World Bank Group  
Infrastructure Strategy Update FY2012-2015







## Access Indicators

Energy	
Electrification rate (% of population with access) <sup>1</sup>	90.8
Delay in obtaining electrical connection (days) <sup>2</sup>	21.3
Water and Sanitation	
Improved water source (% of population with access) <sup>3</sup>	87.9
Improved sanitation (% of population with access) <sup>3</sup>	59.0
Delay in obtaining water connection (days) <sup>2</sup>	27
ICT	
Internet users (per 100 people) <sup>4</sup>	24.1
Population covered by mobile cellular network (%) <sup>4</sup>	93
Delay in obtaining a mainline telephone connection (days) <sup>2</sup>	10.8
Transport	
Motor vehicles (per 1,000 people) <sup>3</sup>	46.7
Firms identifying transportation as a major constraint in doing business (%) <sup>2</sup>	16.4

Source: <sup>1</sup>International Energy Agency 2010

<sup>2</sup>Enterprise Firm Surveys, Enterprise Analysis Unit

<sup>3</sup>World Development Indicators

<sup>4</sup>Little Data Book on ICT

# 1. INFRASTRUCTURE ISSUES

The East Asia and Pacific region has 59 percent of the world's population. Countries are in various stages of development with differentiated needs and financing capabilities:

- China
- Middle Income Countries
- IDA Countries
- Small Isolated Pacific Islands

Within countries access to services and infrastructure needs can vary considerably (eg., Indonesia or Vietnam).

## Despite significant poverty reduction, significant numbers still lack access to infrastructure services

- With approximately 170 million persons still lacking access to electricity, the region lags behind the Latin American and the Caribbean, Europe and Central Asia and Middle East and North Africa regions in access to electricity.
- Almost every second household in the region lacks access to modern cooking fuels or clean and efficient cooking stoves.
- Access to good quality sanitation services is lower than what one might expect at East Asian and Pacific income levels, and in many parts of the region access to good quality water services is still a problem.
- By 2013, the region is expected to have a population of 2 billion people. About 800 million people already live in urban areas and there is net migration from rural to urban areas. Cities absorb two million new urban residents every month and are projected to triple their built-up areas in the coming two decades. The urban areas are the engines of growth; however, it is estimated that about 28 percent of the urban population live in households that lack improved water, improved sanitation, sufficient living area, or durable housing.

## Environment, Climate Change and Disaster Vulnerability

- The region has many of the world's most polluted cities. Rising inequality could pose a challenge to future social stability.
- Although still relatively low on a per capita basis, the region's carbon dioxide (CO2) emissions have more than tripled over the past 20 years, and energy consumption has more than tripled over the past three decades and is expected to double over the next 2 decades.

- Environmental vulnerability is a continued concern, including pollution of water bodies, degradation of watersheds, competition between irrigation and urban water services.
- The region has the highest projected annual cost of adapting to climate change amongst all six of the Bank's geographical regions.
- The region is subject to over 70 percent of the world's natural disasters (e.g., source of 90 percent of the world's earthquakes).
- Cities face the brunt of climate change impacts due to their concentration of people and physical assets, as well as their geographic location. (Most megacities in the region are along the coast).

## Governance

- Political and electoral changes may continue to affect the timing and composition of policy positions and investment programs in a number of countries.
- Rising inequality could also pose a challenge to future social stability.
- A number of infrastructure subsectors in a number of countries face governance and corruption challenges.

## Infrastructure Investment and Private Sector

- With the exception of a few client countries, historic underinvestment in infrastructure is common and infrastructure expenditures continue to be low, especially since the East Asian Financial crisis:
  - From 2006-10, the region needed to spend an estimated total US\$165 billion per year on infrastructure investments, which amounted to nearly 6.2 percent of Gross Domestic Product (GDP) for the region.
  - China alone is expected to account for 80 percent of infrastructure expenditures in the region.
  - There is considerable interest in private investment in infrastructure in many countries, however with a few exceptions private investment still lags behind expectations.





## World Bank Group Infrastructure Commitments

	FY11	FY08
WBG Infrastructure Commitments (US\$ billion)	5.9	3.5
World Bank Infrastructure Commitments (US\$ billion)	4.9	2.7
IFC Infrastructure Commitments (US\$ billion)	0.6	0.8
MIGA Infrastructure Commitments (US\$ billion)	0.5	–
Total private sector investment enabled by IFC (US\$ billion)	7.2	

Source: SAP Business Warehouse, IFC, MIGA

## 2. ACHIEVEMENTS AND LESSONS LEARNED, FY08-11

### Green projects

- The region's portfolio hosts about 40 percent of active Bank climate-related projects, and 63 percent of carbon offset commitments.
- The Bank reached a record in hydropower lending of about US\$1 billion in FY11 for projects in Vietnam (Trung Sun) and Indonesia (Upper Cisokan pumped storage).
- The Bank prepared the first Climate Development Policy Operation (DPO) in Vietnam likely to be approved in FY12. The Vietnam DPO puts a financial framework in place that allows the country to target climate financing and allocate budget to climate change projects on the basis of clear criteria.
- The region is also supporting several high-speed rail lines in China, and preparing its first investment for an urban underground rail line.
- The China Renewable Energy Scale-up Program (CRESP) continues to provide policy advice and support investments for advanced renewable energy technologies (e.g. off-shore wind, concentrated solar power, smart grids).
- Technical assistance for Carbon Capture Utilization and Storage is also building capacity for implementation of the transformational low-carbon projects in the power generation sector.

### Achievements on meeting access needs

- Over the last 15 years, rural electrification in Lao PDR has increased from 16 percent in 1995 to about 70 percent in 2010.
- Five Bank-financed rural electrification projects (US\$127 million total) directly contributed to connecting more than 150,000 households – about 15 percent of all households that have benefited from rural electrification.
- A separate US\$250 million rural electrification project in Vietnam added 550,000 households to the grid, culminating a long program of electrification in Vietnam and significant Bank support.

**Consolidation of IFC position as a key player in power sector**, with a particular emphasis on renewable energy, including wind, biomass and geothermal.

- Highlights include the first wind farm in China financed on a project-finance basis by international banks, the full privatization of the Philippines Geothermal company as well as financing three of the first four power projects sold to the private sector by the government, and an investment in a China Export-Import Bank sponsored private equity fund targeting the infrastructure sector primarily in the ASEAN region.

### **Mobilization of private financing**

- IFC invested about US\$1.7 billion in 57 projects in the infrastructure space, and an additional US\$470 million was mobilized from third parties between FY08-11.
- IFC Infrastructure Advisory Services, with 10 active and closed mandates, engaged in off-grid private power supply to increase dependable power and reduce subsidies in a group of Philippines islands, privatization of electricity distribution business in city of Olongapo, Philippines, and partial privatization of Samoa Airlines.

### **Sustained support of the Bank in PPPs**

- The Bank also supported the government of Vietnam in designing a PPP Financing Framework through a strategic, multi-year AAA engagement supported by the East Asia Infrastructure Growth trust fund (EAAIG).
- Continuing assistance was offered to the government of Indonesia in moving its PPP program forward, including setting up of a financing and guarantee facility in support of PPP transactions.
- Support is being provided to the government of the Philippines on a new initiative to scale-up PPPs.
- More recently, the region is assisting the Government of Thailand in drafting a new PPP law.
- The Bank has also launched the Infrastructure Finance Center of Excellence (IFCOE), which will focus on PPPs, expanding the infrastructure finance advisory work of the Singapore Hub.

**Continued Support to East Asia and Pacific Region Network of Regulators** focuses on building capacity, south-south learning and knowledge exchange among the main regulators in the region.

**Establishment of a WBG Hub in Singapore for urban development and infrastructure financing solutions**, designed to leverage Singapore's expertise and the Group's global development knowledge and operational experience. Together with the Singapore Cooperation Enterprise (SCE), the Singapore Hub has implemented six cooperation projects in the region last year for China, Indonesia, Mongolia and Vietnam.

**Partnering with several organizations on disaster risk reduction**, namely with UN International Strategy for Disaster Reduction (UNISDR) and ASEAN in FY09, with the Pacific Islands Applied Geoscience Commission (SOPAC), and with the Asian Disaster Reduction Center (ADRC) in FY11.

- The region is working with SOPAC to establish a geonode (open web based warehouse for geospatial data) and organizing training for post-disaster needs assessments.
- The region signed a Memorandum of Understanding (MOU) with ADRC to have a cross-collaborative dialogue on capacity building.

## **Lessons Learned**

- Governments across the region recognize the need of a greater role for the private sector in developing and financing infrastructure and are attempting to introduce measures to improve the development of PPPs. However, a number of institutional, governance and financing issues remain:
  - Weak pipeline of bankable PPP projects and poor quality of project preparation prior to bidding, with inadequate background analysis undertaken prior to tendering resulting in unrealistic expectations.
  - Lack of market-oriented legal, administrative and institutional systems to: (a) promote private investment in infrastructure PPPs; (b) clearly define the roles and responsibilities for the public and private sectors throughout the project cycle; (c) mitigate risks associated with integrating projects into broader systems (e.g., light rail to road/bus network), line agencies delays on project site, pricing risk, regulatory approvals, etc; and (d) address key sector policy issues (e.g., tariff regimes, land acquisition) which can undermine the viability of PPPs.
  - Limited government capacity and lack of methodology to determine which projects should be procured publicly and which should be PPPs. This includes an unclear and/or inappropriate role of state owned enterprises in the PPP market, which continues to crowd-out private sector investment/expertise.
  - Inability of local financial markets to provide adequate levels of long-term local currency financing for infrastructure PPPs.

The increasing role of bilateral trade and export promotion agencies in the PPP market may also start to create distortions and affect the ability of private investors to participate in PPPs.



# 3. ACTION PLAN, FY12-15

## ■ CORE ENGAGEMENT

What will constitute the core engagement in infrastructure?

- **Access to electricity**

- The Bank will contribute to activities needed to expand access, including finding low-cost options, exploring new solutions for off-grid electrification, making better use of a proven entity (such as national and regional distribution utilities), making the supply chain for petroleum products more efficient (especially in Pacific Island countries), supporting fuel switching from solid fuels to cleaner-burning fuels where the latter are affordable, and main-streaming advanced cooking stoves. Some investment projects include the ongoing Laos rural electrification Adaptable Program Loan (APL) and the planned 1,000 islands electrification program in Indonesia that will focus on replacing high-cost diesel based generation with renewable energy technology in Indonesia's eastern islands.
- Australian Agency for International Development (AusAID) funding will be used to produce AAA work that initially assists with the scaling-up of access to clean cooking stoves.
- The Bank will continue to disseminate to key stakeholders products of the energy flagship report series (such as "One Goal, Two Paths") as more AAA and TA work is produced for the region.

- **Access to water and sanitation**

- Substantial AAA work is being conducted with AusAID funding to prepare demand driven knowledge products in improving water and sanitation access in the region.
- Projects such as the Metro Manila wastewater project are under way. Investments in wastewater in China and Vietnam are being made. In Indonesia access to water and sanitation will continue through the Pamsimas project (it is estimated 3.5 million people will receive access to better water facilities and 2 million will receive better access to sanitation).
- In Vietnam, the Bank will support a more results-based approach to rural water supply and sanitation, possibly using the new program for results instrument, if approved.

- **Access to sustainable transport**

- The Bank will focus on supporting countries to ensure sustainable development of sub-national level roads to ensure good quality, all-year access and value for money in investments (projects are underway or planned in Vietnam, Indonesia and the Philippines).
- China, Philippines and Vietnam, among others, have requested expanded integrated urban transport engagements involving bus rapid transit and/or urban rail.

- **Disaster risk management**

- Scale-up of AAA work in the areas of risk assessment, risk mitigation and risk financing over the next two fiscal years.
- Continued efforts in building climate and disaster resilience into core investments across sectors, helping countries perform better recovery planning, and making sector investments through Bank instruments such as Emergency Recovery Loans.
- Expand as appropriate the use of the Catastrophe Deferred Draw Down Option (Cat DDO) instrument.
- Access to aviation through an APL for the Pacific Islands aviation investment project.

What will the Bank do to secure more/efficient public sector financing for infrastructure?

- In partnership with AusAID, the Bank will develop analytic work that will prioritize public financing for infrastructure particularly in the water and sanitation, energy and transport sectors.
- The Indonesia Infrastructure Development Initiative grants will cover costs to provide policy and institutional advice as well as practical inputs for better targeting of development aid, application of improved standards of design and greater resiliency for financing of infrastructure.
- The Bank will work with agencies in key countries to develop national strategies and frameworks that will encourage more efficient public sector financing of infrastructure.







- The Bank is partnering with Cities Alliance to support the development of national slum upgrading strategies in Indonesia, the Philippines and Vietnam. These strategies provide the framework not only for slum upgrading but also for inclusive urban regeneration.
- Public expenditure reviews will be undertaken to provide government clients with action plans in order to improve their infrastructure service levels, meet growing demand and increase their borrowing capacity while at the same time ensuring financial sustainability.

## ■ TRANSFORMATIONAL ENGAGEMENT

### Where are the new opportunities for “transformational” engagements?

- Integrated urban development that focuses on addressing flooding and slum upgrading while at the same time improving competitiveness of cities and promoting a low carbon growth path.
- Low carbon sustainable energy development including renewable and energy efficiency.
- Systemic approaches to sustainable hydropower development in Laos and Indonesia.
- Opportunities for accelerating green investments are significant. Planned projects include: promoting renewable energy in the Philippines, energy efficiency projects across the region, a bus rapid transit system in the Philippines, sustainable management of water resources at the river basin level in Vietnam, and urban resilience to climate change in the Philippines.
- The region's Low Carbon Cities development strategy is looking at an integrated multi-sectoral approach to identify opportunities for low carbon infrastructure investments. Analytical work is setting the foundation for operationalizing the Low Carbon Cities program especially in China using Global Environmental Facility (GEF) and IBRD funding.
- The Eco2 Cities framework is supporting cities and metropolitan areas to plan, manage and invest in sustainable urban systems that are integrated, multi-functional and beneficial in the long-term. This framework was included as a core line of business in the Bank's urban strategy. The Bank has active programs in Indonesia, Vietnam, and the Philippines utilizing the Eco2 framework.
- The Bank is supporting power trading in the Greater Mekong Sub-region, which is creating momentum for greater economic integration and integration of electricity systems across the region's various countries.

## What will the Bank do to build client capacity to support transformational engagement?

Through AAA work and capacity building funded by AusAID, the Bank will continue to publish best practice reports series on new initiatives, while at the same time promote interactions among clients, the public sector and private sector through workshops and seminars.

## ■ INFRASTRUCTURE FINANCING

### What will the Bank do to improve the investment climate?

- The Bank will continue to work with sector agencies in our client countries to ensure that the policy environment (example: pricing permits and land acquisition) is conducive to support private financing of infrastructure.
- The Bank will also continue to work at a wider macro level with countries (example: Indonesia and Philippines) to put in place legislation, rules and regulations that will facilitate private participation and financing of infrastructure.
- The Bank will support specific PPP deals that can have a demonstration effect and help to open up the PPP market.

### What will the Group do to help client countries attract more private sector financing?

- With AusAID support, the Bank is leading two information and knowledge networks including the Infrastructure Finance Network and East Asia Regulatory Forum. These networks aim to strengthen regional partnerships, share knowledge, and build capacity to accelerate the financing of infrastructure and economic regulation.
- The WB-Singapore Urban Hub will continue to support clients and country offices via joint projects, collaboration with ASEAN and APEC, and development of knowledge sharing initiatives involving Bank units and Government of Singapore agencies.
- The Bank is working on a new financing framework to increase the participation of the banking sector in financing local infrastructure investments in water, sanitation and urban services for Vietnam.

- IFC expects to deliver about 12-15 projects expected annually over FY12-14, with IFC own account volumes of US\$400-450 million and an additional US\$300-350 million anticipated in mobilization.
- In Laos PDR, IFC will continue to work with the Bank in the hydro-power sector, where it is anticipated that the Bank would provide funding for the government's portion of the equity investments in some projects, complemented by IFC project finance.

### Where are the opportunities for public-private partnerships?

- On PPPs, the Bank will be: i) actively supporting the Government of Philippines and Indonesia in implementing their PPP programs; ii) assisting Vietnam in operationalizing pilot PPP projects based on their PPP framework; iii) supporting the development of a new PPP law in Thailand; and iv) providing technical assistance and advice to Mongolia on their regulatory and institutional framework and programs (specially related to mining infrastructure).
- On PPP advisory services, IFC will be: looking at toll roads, light rail, regional airports and water supply and irrigation in the Philippines; transport in Thailand; and multi-sectoral opportunities in Indonesia.
- The financing framework for green investments being developed will largely create new opportunities for public private partnerships in renewable energy and energy efficiency investments.
- A study is underway to conduct the prefeasibility of a PPP with US\$100 million IBRD support for a Philippines liquefied natural gas (LNG) import terminal.

### What are the opportunities to tap into “green financing”?

- AAA work on developing a framework for improving the investment climate of green investments is already underway.
- Work will continue to initiate new financing structures that need to be developed with an appropriate mix of debt, equity, subsidies, and innovative carbon finance instruments to ensure bankability of promising projects.



- Tapping into CDM, CTF and GEF for green projects.
  - Indonesia Geothermal CTF project approved in early FY12, with US\$125 million in CTF and US\$689 million leveraged from the public sector, with another Indonesia renewable energy project going to the Board in FY12, in which IFC will be receiving US\$50 million in CTF financing.
  - Vietnam distribution efficiency project with US\$350 million in Bank funding and US\$30 million in CTF funding will finance a smart grid component for power distribution in Vietnam.
  - Region is mobilizing Carbon Asset Development Funds (CADF) as well as the Partnership for Market Readiness (PMR) fund to identify new operations for post-Kyoto/2012 carbon markets.
  - A Philippines renewable energy development project is providing financing support (US\$45 million CTF, US\$100 million IBRD) for investments in renewable electricity rural distribution networks on energy efficiency and supply-side loss reductions.
  - A Philippines Cebu city bus rapid transit system is being developed as a demonstration project to improve urban mobility and reduce GHG emission per passenger with support from Bank funding and an additional US\$15 million in CTF funding.
  - IFC in the Philippines will have two CTF projects going to the Board in FY12, namely Renewable Energy Accelerator Program (US\$20 million CTF and US\$210 million leveraged from private sector) and the Sustainable Energy Program (US\$10 million CTF and US\$497.5 leveraged from private sector).
  - The Bank will build client capacity to access green financing through: the Mitigation Action Implementation Network; the Regional Carbon Forum; and carbon finance support for Quezon and Jakarta to access carbon offset markets (WBI).

## What will the Bank do to tap into knowledge and financing of private foundations, think tanks and others?

- The Bank works with a number of private and public think tanks on infrastructure issues in China and Vietnam.
- Conferences, workshops and knowledge transfer forums are organized in order to promote inclusive growth into the region's agenda.
- The Bank also participates in urban resilience work financed by the Rockefeller Foundation.
- The Bank has a partnership agreement with the University of Southern California.
- The Bank will participate at the Asia Pacific Cities Summit by presenting findings of AAA AusAID funded work on urban development.

# WORLD BANK GROUP INFRASTRUCTURE ACTION PLAN

EUROPE &  
CENTRAL ASIA REGION



World Bank Group  
Infrastructure Strategy Update FY2012-2015





# 1. INFRASTRUCTURE ISSUES

## Access Indicators

Energy	
Electrification rate (% of population with access) <sup>1</sup>	—
Delay in obtaining electrical connection (days) <sup>2</sup>	48.8
Water and Sanitation	
Improved water source (% of population with access) <sup>3</sup>	95.5
Improved sanitation (% of population with access) <sup>3</sup>	89.1
Delay in obtaining water connection (days) <sup>2</sup>	32
ICT	
Internet users (per 100 people) <sup>4</sup>	36.4
Population covered by mobile cellular network (%) <sup>4</sup>	91
Delay in obtaining a mainline telephone connection (days) <sup>2</sup>	17.5
Transport	
Motor vehicles (per 1,000 people) <sup>3</sup>	187.3
Firms identifying transportation as a major constraint in doing business (%) <sup>2</sup>	19

Source: <sup>1</sup> International Energy Agency 2010

<sup>2</sup>Enterprise Firm Surveys, Enterprise Analysis Unit

<sup>3</sup>World Development Indicators

<sup>4</sup>Little Data Book on ICT

Europe and Central Asia is a diverse region, 30 countries, 480 million people.

- Poor and Fragile: Kosovo, Kyrgyz Republic, Moldova, Tajikistan
- Middle Income Countries (MICs):
  - **EU members:** Slovenia, Latvia, Lithuania
  - **EU Candidate/ Potential:** Croatia, Montenegro, Turkey
  - **Lower Income MICs:** Armenia, Georgia, Bosnia & Herzegovina
  - **Resource Rich Countries:** Kazakhstan, Russia
- Many of the new EU member states have significant grants available from the EU for infrastructure investments, yet they lack capacity to absorb the available funds and comply with EU environmental standards.
- Former Soviet Union (FSU) countries inherited a legacy of large transportation networks and obsolete water and sewerage networks and have not been able to maintain or upgrade to keep up with demand.

## Financial Crisis

- The global financial crisis severely affected the region. Industrial production plummeted, leading to higher unemployment and lower gross domestic product (GDP). Currencies depreciated across the region. Government tax revenues declined sharply, leading to high budget deficits and rising levels of public debt. A tightening credit supply and deteriorating financial conditions have limited the ability to borrow in the public and private sector.

## Access, Demand and Supply Constraints

- While many economies inherited a legacy of reasonably good infrastructure, it has badly deteriorated due to inadequate maintenance, poor operational efficiency and deferred investment. Most municipal utilities operate large, obsolete facilities and old networks, in urgent need of rehabilitation.
- Significant financing needs exist in the energy sector, equivalent to about 3 percent of cumulative GDP over the next 20 years. ECA countries waste a lot of energy in production, transmission and utilization. The sources of energy waste include low efficiency in power and heat production, gas flaring and venting, and inefficient industrial stock and buildings.
- Funding for transport infrastructure projects has been decreasing at the same time as the demand for transport has been rising.



## Climate Change and Disaster Vulnerability

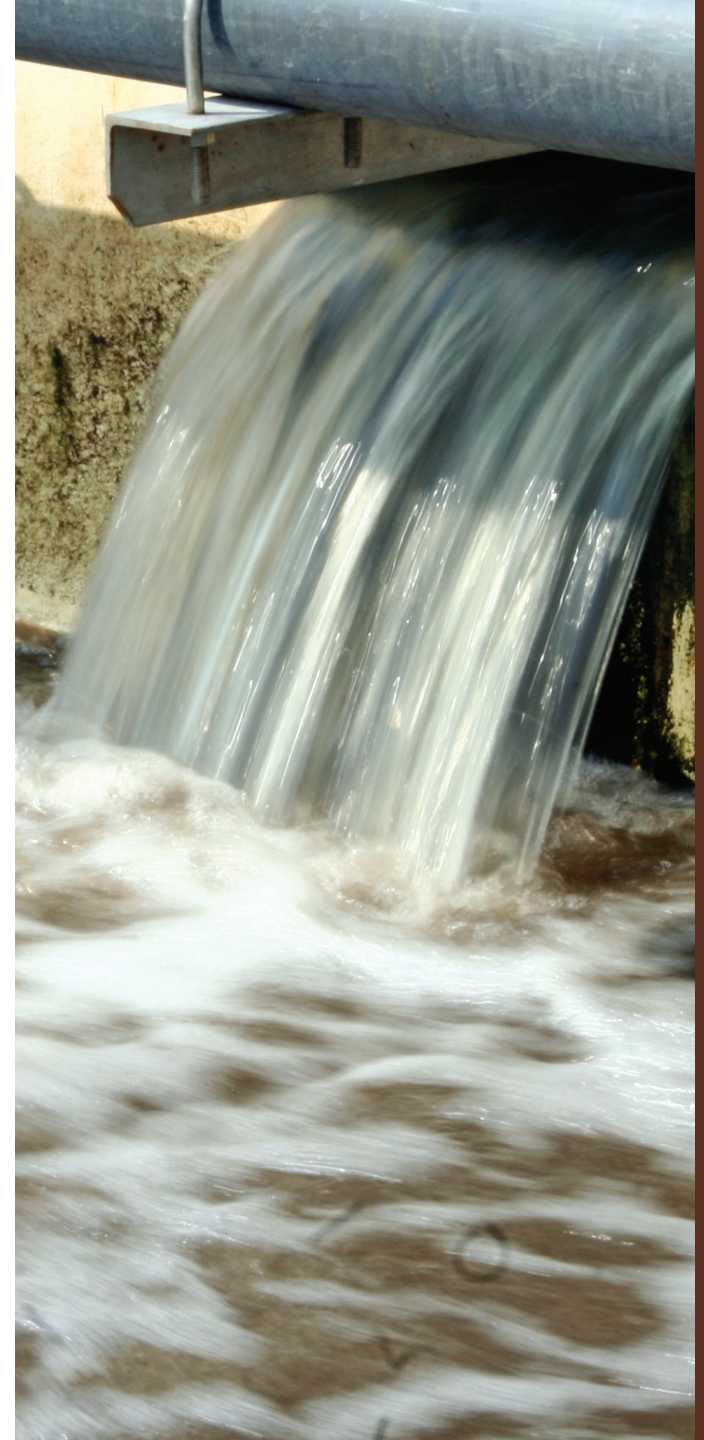
- The region faces increasing risks of winter floods, summer droughts, melting permafrost and glaciers, rising sea levels, water shortages and decertification. A legacy of environmental mismanagement exacerbates the region's vulnerability to climate change: poorly constructed and maintained Soviet-era infrastructure is ill-suited to cope with or protect people from extreme natural occurrences such as heat waves and floods.
- CO2 emissions relative to GDP in the region are among the highest in the world. In 2005, Russia was the third-largest CO2 emitter, after the United States and China; Turkey now has the largest annualized CO2 emissions increase in the region. The region's EU members have a substantial reliance on domestic coal that will not be easy to reduce.

## Governance

- Regional cooperation on electricity production and gas transportation can yield huge economic savings and boost supply security but faces significant challenges, – e.g., Uzbekistan's opposition to Tajikistan's plans to construct the Roghun hydropower plant.
- With decentralization advancing across the region (due in part to EU policy directives), local governments are assuming increasing shares of total public investments. This should expand the base for IFC sub-national lending and IBRD/IDA in urban and water infrastructure investments, both of which fall under the responsibility of local governments or their utilities.

## Infrastructure Investment and Private Sector

- The financial crisis has dramatically impacted the region's ability to secure commercial financing in the energy sector to a far greater extent in comparative terms than in the rest of the world.
- Limited IBRD resources constrain investments in water and sanitation.







## World Bank Group Infrastructure Commitments

	FY11	FY08
WBG Infrastructure Commitments (US\$ billion)	3.4	2.8
World Bank Infrastructure Commitments (US\$ billion)	2.3	2.1
IFC Infrastructure Commitments (US\$ billion)	0.6	0.7
MIGA Infrastructure Commitments (US\$ billion)	0.4	–
Total private sector investment enabled by IFC (US\$ billion)	7.4	

Source: SAP Business Warehouse, MIGA, IFC

## 2. ACHIEVEMENTS AND LESSONS LEARNED, FY08-11

In the ECA region, the Bank Group has made major contributions in infrastructure sectors despite the challenges of the financial crisis:

- **Maintenance and reconstruction of core infrastructure:** The network-wide Road Maintenance and Rehabilitation Program in Poland increased the quality of road infrastructure in good condition from 52 percent to 60 percent between 2008 and 2010, with a decrease in road fatalities from 5,500 to 3,900 over the same period. In Kazakhstan, the Bank financed a US\$ 2.125 billion highway loan that will revive the old Silk Road linking Europe to Asia through Central Asia.
- **Support for institutional capacity development:** In Romania, the Bank is undertaking a transport sector Functional Review, which designed a reform program in 2010, and may lead to Reimbursable Technical Assistance (RTA) for implementation of the reforms. In Bulgaria, the Bank has prepared its first Railway DPL designed to support strategic sector reform over the next decade (2010-2011), and to help EU funds absorption through a potential RTA. In Montenegro, the Bank strengthened the framework for managing private provision of infrastructure services, including identification of priority projects for potential private financing.
- **Mobilization of partner resources:** The Bank has been working with other International Financial Institutions to assist with major investments, for example, the East-West Highway in Georgia, where the Bank financed the first 200km and other IFIs have now taken up support for the remaining sections, and in Azerbaijan, where the Bank is financing about 500km of the Highway network and other IFIs now are getting more involved.
- **Tapping into green financing:** The Bank has two Clean Technology projects in Turkey, the Private Sector Renewable Energy and Energy Efficiency Project and the Commercialized Sustainable Energy Finance Program, with US\$122 million in CTF and over US\$1.1 billion leveraged from the private and public sectors. Gaziantep, Turkey was the first global pilot of the Energy Management Sector Assistance Programme (ESMAP) developed TRACE (Tool for Rapid Assessment of City Energy) diagnostic tool. It helped the city to identify vital energy saving investments across six areas under city administration control, including urban transport, water/sanitation, solid waste, municipal buildings, street lighting and heating. Implementation of the diagnostic tool is now being rolled out across 5 other cities in the region with the aim of supporting cities to improve their sustainability, while identifying priority green investments.

- **Continued support for PPP activities and private sector participation:** Over the period FY08-11, IFC invested about US\$2.1 billion in 56 projects in the infrastructure space. An additional US\$1.5 million was mobilized from third parties. Highlights include (i) multi-pronged engagement in Turkey's power sector, including corporate financing for a pool of power assets, the first long-term financing for a privatized power distribution company and financing for the country's largest wind farm; (ii) the first financing of a new hydropower project under a new regulatory regime to help Georgia with energy security, as well as the promotion of regional integration through power exports to Turkey and (iii) a wind farm in Romania. IFC infrastructure Advisory Services were also very active in the region, with 13 active and closed mandates, including a power sector PPP in Albania, a solid waste project in Kosovo and a water distribution concession in Bulgaria.
- **Development of new business models for clients:** The Group used a fee-based services model for the St. Petersburg Pulkovo Airport Fee-based service (FBS) (financial close in 2010), which attracted €1.2 billion in private investment and received the award of "Global PPP Transaction of the Year" from Infrastructure Investors in 2011. In addition, the provision of a partial risk guarantee (PRG) to Enel in Romania for the privatization of two distribution companies indirectly benefited the other distribution companies, incentivizing the privatization of three (out of the remaining six) distribution companies.

## Lessons Learned

- Capacity of national and local institutions varies, which limits the pace at which transformational projects can be undertaken.
- Advanced clients request a quality of support that requires the Bank to strengthen its own capacity to respond, with possibly more reliance on external technical expertise.
- Improving public sector capacity for project preparation should be a priority for most countries, especially those with some experience with PPPs.
- Countries with limited PPP experience should start by formulating a strategy for the required reforms and policies for PPPs, and consider using risk mitigation instruments.

### 3. ACTION PLAN, FY12-15

#### ■ CORE ENGAGEMENT

##### What will constitute the core engagement in infrastructure?

The Bank will continue to offer clients a menu of services based on core products as well as explore opportunities to develop new types of engagements to match shifting client needs.

- In IDA countries, the Bank will focus on financing core infrastructure investments that improve access to services and look to partner with other multilateral and bilateral partners to leverage more financing for clients. IDA envelopes for ECA countries are very limited and such partnerships are a way of attracting more financing to support policy frameworks developed with Bank expertise.
- In IBRD or blend countries that are not eligible for EU funds, the Bank will finance infrastructure investments but IBRD exposure limits will challenge this model.
- In IBRD countries that are eligible for EU funds, the Bank will support countries to improve their absorption (utilization) of EU grant funds. The challenge is to improve the efficiency and effectiveness of institutions to plan and implement infrastructure investments. A recent commitment by the EU to allow the Bank to access WBIF (West Balkan Infrastructure Fund) resources to carry out sector analysis and technical studies, should provide an important instrument for investment project identification and preparation.

In all of these countries, the Bank is likely to engage in the following:

- **Energy efficiency and energy security:** The Bank will help develop markets and support services for energy efficiency financing programs through banking intermediaries and energy efficiency funds—in some cases in conjunction with GEF grant programs. Energy security is a core objective in the region and this is being achieved through energy

diversification, programs aimed at increasing the trade and utilization of gas, as well as the development of domestic energy resources. In addition, in Central Asia the World Bank is engaged in a regional energy-water development program to build energy and water security through enhanced regional cooperation energy supply efficiency improvement. Given the state of the energy infrastructure in the region, supply improvement programs focus on hydropower plant rehabilitation, transmission and distribution rehabilitation and enhancement and district heating infrastructure improvements.

- **Water supply and sanitation:** Programs focus on rehabilitation and expansion of existing infrastructure, optimization of systems, demand management and operation efficiency, and compliance with EU standards and wastewater treatment facilities.
- **Transport:** The focus will be on improving regional corridors to facilitate trade and integration and provide improved access to markets, for both local produce and for trade with other countries.

##### What will the Bank do to secure more/efficient public sector financing for infrastructure?

- Technical assistance and advisory programs to support policy reforms to advance energy market development and pricing reforms in power and gas sectors and end-use energy efficiency, provided in conjunction with investment lending and associated services.
- Development policy loans for energy policy and institutions (e.g., the Kyrgyz Republic, Poland, Serbia, Turkey and Ukraine).
- Expand Reimbursable Technical Assistance (RTA) for countries to absorb EU grants and undertake structural reforms. (e.g., Romania and Bulgaria). In other countries, leverage private sector participation through use of a broad range of instruments, such as guarantees, availability payments, securitization, etc.









## ■ TRANSFORMATIONAL ENGAGEMENT

### Where are the new opportunities for “transformational” engagements?

Restoring growth and convergence in the region will require tackling bottlenecks to competitiveness, faster productivity growth and more integration. Energy and transport infrastructure development will be key to restoring growth. Economically sound adaptation and mitigation investments constitute significant opportunities and will require investment in new knowledge and expertise. Growth in the post-crisis world will also require sub-regional approaches to many issues, but the institutional framework to do so is often lacking, particularly for the lower income countries of the region. Some examples of transformational engagements include:

- **Fee-based services for the upper MICs:** The Bank has successfully pursued fee-based-services and the provision of transaction advice to assist countries absorb EU grants and to attract private financing (e.g. Pulkovo Airport in Russia).
- **Regional energy trade and cooperation:** (i) Adaptable Program Loans to support the establishment of an integrated regional market in the South East Europe; (ii) Central Asia/South Asia Regional Electricity Market and the CASA (Central Asia South Asia) 1000 transmission line for power exports from Central Asia to South Asia; (iii) development of the Caspian Development Corporation to facilitate gas exports from Azerbaijan and Turkmenistan to Western Europe and the Balkans (the Western Balkans gas ring is being considered for implementation with the European Commission and other European international financial institutions) and (iv) the Central Asia Energy Water Development Program to build energy and water security for Central Asia through enhanced regional cooperation.
- **Promoting renewable energy development and clean technology investments:** The Bank is supporting countries in increasing the share of renewables in their energy mix. The Bank has pioneered the utilization of the CTF concessional resources for renewable energy scale-up and climate change mitigation with programs in Turkey and in Ukraine to promote low-carbon programs and projects.
- **Re-engaging on PPP:** The Bank is (i) preparing a US\$500 million Infrastructure Finance in Russia that will cover also PPP projects (all infrastructure sectors); (ii) including in the water sector possible new PPP on water treatment plants (water policy note and support to reform the management of water utilities); (iii) proposing support for electricity generation investment and distribution privatization through Partial Risk Guarantees and (iv) potential US\$ 1.6 million fee-based service in Romania to support the development of PPP projects in transport.
- **Improving regional transport corridors to facilitate trade:** The US\$2.125 billion loan to Kazakhstan, plus US\$1.5 billion to Azerbaijan and Georgia, will rebuild parts of the ancient “Silk-Road” transport corridors that link Europe to Asia through the South Caucasus and Central Asia.

In Eastern Europe, the IBRD is financing US\$1 billion of improvements to transport corridors that will link countries of the European Union with Russia through Ukraine and Belarus.

- **Promoting Green Transport:** A study in Georgia will promote use of non-fossil fuels, modal shifts from private to public transport in urban areas, and from road to rail for freight transport in order to reduce GHG emissions and the dependence on imported fuels.
- As cities account for 70 percent of GHG emissions, integrated solutions that draw on the Bank's strengths across all infrastructure sectors will need to be further explored under a Sustainable Cities framework.

### What will the Bank do to build client capacity to support transformational engagement?

- Support absorption of available EU grant funds (in EU Member states) and capacity improvement to implement and maintain infrastructure networks. Introduce more efficient contracting methodologies (in SE Europe, EU neighborhood countries and New Member States) through technical assistance through exposure to international best practice in infrastructure management and RTA.
- Develop a water academy in Russia to train and build capacity for water utilities managers in financial management, water governance and PPP.
- Engage in capacity development support to local governments on urban management and planning in urban service delivery, including PPPs. The program focuses on seven countries of the Western Balkans (WB-Austria Urban Partnership Program for South East Europe).
- Develop the WB-Austria Danube Region Water and Waste Water Sector Capacity Building Program, which will provide executive training opportunities in sector regulation for utility managers and senior government authorities.
- Enhance trade facilitation measures and transport logistics to improve the flow of goods and the movement of people across borders within Europe and Central Asia, and with other countries in Asia and the Middle East.

## ■ FINANCING OF INFRASTRUCTURE

### What will the Bank do to improve the investment climate?

- As countries transition into the EU and seek to become knowledge based economies, the Bank will continue to support work on knowledge and innovation and upgrading Metrology, Standards, Testing, Quality (MSTQ) infrastructure, as well as on broad regulatory reform.
- The impact of the financial crisis on firms is still a challenge in the region. The Bank will monitor the effects of the credit crunch and declining demand on the enterprise sector, and provide TA for corporate restructuring.

### What will the Group do to help client countries attract more private sector financing?

IFC expects 15-18 projects annually over FY12-14, for IFC's own account volumes of US\$400-600 million, with an additional US\$350-450 million anticipated in mobilization. Advisory services or technical support in implementing legal, regulatory or institutional changes can attract private sector participation and improve capital expenditure planning. Additionally, partial risk and partial credit guarantees can help lower the cost of financing and leverage private sector financing that otherwise might not be available. Examples of support for enhancing private sector participation include the following:

- Use Partial Risk Guarantees to promote electricity distribution privatization (Albania and Romania). Given the reduced appetite for private investment in energy, the expanded use of the guarantee instrument can bring in private investment through public-private partnerships and direct investment (e.g., in Kosovo and countries with higher risk perception).
- Mobilize trust funds to strengthen institutional frameworks and identify priority projects. In the water and sanitation sector, Austria may provide resources for 10 countries in the Danube basin region and Balkans, while Russia may fund activities in member nations of the Commonwealth of Independent States (CIS) countries.

- Expand fee-based-services for advice on PPP implementation (e.g., in EU countries and other cities/regions of Russia).
- Assist Turkey in meeting large infrastructure financing needs, particularly through mobilization of foreign lenders, privatization of existing toll and power generation assets and financing for power distribution and sub-national entities (IFC).
- Seek opportunities for climate friendly investment to reduce losses in existing district heating and power generation in Balkan states, as well as funding for low cost and efficient power generation in the former Soviet Union.
- Support national development banks through financial intermediation loans than can be used to leverage private financing for sub-national projects (VEB project in Russia, Iller bank in Turkey, etc.).

## Where are the opportunities for public-private partnerships?

Turkey and Serbia have been identified as countries with PPP potential and where the Bank could bring value through the use of loans and guarantees, contingent on country dialogue and demand, as part of a multi-year effort to develop financing solutions and viable PPP projects. While countries such as Albania, Estonia, Latvia, the Slovak Republic and Romania all have some experience from PPPs, the recent crisis has raised the need for stronger public support and better prepared PPP projects. Moreover, there is still untapped potential for private participation in several sectors and at the sub-national level.

Examples of existing and potential PPP engagements include:

- **Russia** - Preparation of US\$500 million Infrastructure Finance Financial Intermediary Loan (FIL) with Russian Development Bank - scope includes PPP (under preparation); FBS to strengthen institutional capacity of new road agency for toll roads and PPP (proposal).
- **Armenia** - Water Policy Note and PPIAF supporting the reform in management of water utility.

- **Central Asia South Asia (CASA) 1000** - power trade from Central Asia to South Asia. Support to Kazakhstan on transport PPP Technical Assistance (TA).
- **Kosovo** - proposed support for generation investment and distribution privatization through Partial Risk Guarantees.
- **Moldova** - restructuring the district heating company and power sectors, with the objective of introduction of PPP.
- **Romania** - Functional Review of the Ministry of Economy, energy sector and business environment; assessed private sector participation, past results and future options; TA on PPP in the transport sector (proposal).
- **Turkey** - Third Environmental Sustainability and Energy Sector DPL supports distribution and generation privatization.

IFC Advisory services will also continue to pursue opportunities in the PPP space, although capacity constraints in the public sector to design and implement PPPs will be an ongoing challenge.

## What are the opportunities to tap into “green financing”?

- Urban transport to shift private car users to green public transport (Turkey).
- Freight transport to shift from road to rail/waterways (Georgia).
- Energy efficiency in the water sector, (energy consumption is usually 50 percent of a utility's expenditure).
- Energy Efficiency Study, New Energy Efficiency Law and design of Renewable Energy and Residential Energy Efficiency programs in Russia.

## What will the Bank do to tap into knowledge and financing of private foundations, think tanks and others?

- ECA has actively utilized the GET-PPP to provide support on a selective basis; climate change mitigation and adaptation provide opportunities for close collaboration with think-tanks and leading universities.



# WORLD BANK GROUP INFRASTRUCTURE ACTION PLAN

LATIN AMERICA &  
CARIBBEAN REGION



World Bank Group  
Infrastructure Strategy Update FY2012-2015







# 1. INFRASTRUCTURE ISSUES

## Access Indicators

Energy	
Electrification rate (% of population with access) <sup>1</sup>	93.4
Delay in obtaining electrical connection (days) <sup>2</sup>	26.2
Water and Sanitation	
Improved water source (% of population with access) <sup>3</sup>	93.4
Improved sanitation (% of population with access) <sup>3</sup>	79.3
Delay in obtaining water connection (days) <sup>2</sup>	24.8
ICT	
Internet users (per 100 people) <sup>4</sup>	31.5
Population covered by mobile cellular network (%) <sup>4</sup>	92
Delay in obtaining a mainline telephone connection (days) <sup>2</sup>	18.5
Transport	
Motor vehicles (per 1,000 people) <sup>3</sup>	169.5
Firms identifying transportation as a major constraint in doing business (%) <sup>2</sup>	22.8

Source: <sup>1</sup>International Energy Agency 2010

<sup>2</sup>Enterprise Firm Surveys, Enterprise Analysis Unit

<sup>3</sup>World Development Indicators

<sup>4</sup>Little Data Book on ICT

The Latin America and the Caribbean region (LCR) is extraordinarily varied in the natural, financial and human capital available. Such extremes call for a varied approach to investment strategies, technology application, cost recovery and financing mechanisms.

- **OECD member states:** Chile, Mexico
- **Economic power houses:** Brazil
- **Landlocked:** Bolivia, Paraguay
- **Rural:** Nicaragua and Honduras
- **Low Income Country under Stress (LICUS):** Haiti

## Poverty and Inequality

- High Gini coefficients (measures of statistical dispersion) in the region impact infrastructure service provision, thus, average income levels are a poor measure of a community's ability to afford basic services. More directly, the quality of services available to the wealthiest deciles is not a reflection of the quality of service received by poorer deciles.

## Population and Urbanization

- The region will add 60 million people, and 64 million people will be moving to cities over the course of the decade, continuing the boom in demand for transport, water, sanitation, energy and housing. The region's motorization rate—4.4 percent per year—will translate into 138 million new vehicles on the region's roads (double the population growth), unimagined levels of congestion and increased pressure for alternative mass transit services. Likewise, conservative estimates of energy consumption suggest a 40 percent increase by 2020 and a near-doubling of demand by 2030. This means 240 Gigawatts of new generation for the region at a cost of about US\$430 billion in less than two decades.

## Climate

- The region contributes 12 percent of total greenhouse gas emissions but contains only 8 percent of the world's population. Emissions come from energy-driven uses (transport, power, industry) and from land use changes. Infrastructure is key to both since roads, rail and waterway access facilitate land use change for agriculture extractive industry and urbanization.
- Natural disasters are common (e.g., earthquakes and hurricanes in Central America and the Caribbean) with devastating consequences for the smallest and poorest economies.

## Governance

- Lack of accountability in public institutions translates to low quality of infrastructure services and inadequate investment decisions.
- Absence of sound cost benefit analysis and an adequate portfolio of projects facilitate investment decisions based on political grounds.
- Significant barriers to entry to international firms facilitate collusion of local firms or local partners with international firms.
- Second generation of regulatory reforms are needed to strengthen performance and accountability of infrastructure service providers, both public and private. This includes the governance structures of SOEs which continue to play an important role in nearly all sectors in the region.

## Infrastructure Investment and Private Sector

- Overall investment levels in infrastructure across the region have been low in recent decades, ranging from 2 to 3 percent of GDP. The poor state roads and rails, the shortfall in power generation reserve margins and the condition of urban assets such as mass transit and water and sanitation networks are testimony to this underinvestment. The historical exceptions to this rule: Chile (from private investment) and Costa Rica (from public investment) posted the region's highest levels of growth through much of the 1990s and 2000s.
- Although the region pioneered many forms of Public-Private Partnership, including concessions, joint-stock companies, outright privatizations, Output-Based transfers, pension-fund investments, spectrum and generation auctions, least cost subsidy and least net present value bids, it never succeeded in attracting sufficient levels of private investment to replace anemic levels of public investment.
- Private investment has reached over 2 percent of GDP only in Brazil while Peru, Colombia and Chile remain at around 1 percent of GDP. The growing concentration in private investment by country mirrors a trend in Country Risk. The unpredictability of the legal and regulatory framework—as well as unclear pricing and subsidy policies—act as major impediments to attracting higher levels of private sector financing.





## World Bank Group Infrastructure Commitments

	FY11	FY08
WBG Infrastructure Commitments (US\$ billion)	4.1	3.0
World Bank Infrastructure Commitments (US\$ billion)	3.2	1.9
IFC Infrastructure Commitments (US\$ billion)	1.0	1.0
MIGA Infrastructure Commitments (\$US billion)	–	0.2
Total private sector investment enabled by IFC (US\$ billion)	26.3	

Source: SAP Business Warehouse, MIGA, IFC

## 2. ACHIEVEMENTS AND LESSONS LEARNED, FY08-11

By 2010, Bank infrastructure lending was focused on:

- **Strengthening countries against both physical and financial vulnerabilities:** pioneering Green Growth DPLs to lock in policy commitments to environmentally friendly investments and regulations during periods of financial hardship; Catastrophic Draw Down Options to provide governments with the resources to respond quickly to catastrophic events and Probabilistic Risk Assessment techniques to help sub-regions anticipate even the most unpredictable climate and weather-related events.
- **Short-term and employment growth potential:** helping countries to frontload labor intensive activities such as rural road rehabilitation and maintenance. The Bank's infrastructure community has been central in Haiti's reconstruction after the earthquake of January 2010.
- **Urban quality of life:** through a platform of new support to the development of mass transit systems including Bus Rapid Transit and integrated water solutions combining supply expansion with sanitation and water resource management.
- **Bank analytical and advisory efforts:** (i) expanding regional integration for greater efficiency and scale economies in investment; (ii) exploring new approaches to PPPs and private finance of infrastructure; (iii) dissecting the effects of logistics costs on competitiveness and poverty and (iv) evaluating the region's performance and regulatory capacity in power, water and transport.
- **Private sector engagement during FY08-11:** including (i) largest ever IFC syndication for a port project in Latin America; (ii) financing for the first new generation hydropower project successfully bid out in Peru and (iii) the first large-scale baseload geothermal plant in Central America in Nicaragua, an IDA country. Over the same period, IFC Infrastructure Advisory Services had 12 active and closed mandates, including (i) projects with significant fiscal and development impact in IDA and small economies, e.g. Privatization of Haiti Telecom and Air Jamaica; (ii) major road projects in Brazil, BR116 and Colombia, Ruta del Sol and (iii) partnering with local and regional development agencies to promote PPPs in Central America, Jamaica, Brazil and Colombia.





## Lessons Learned

- An integrated approach is critical for continued client demand for Bank financing, where the Bank brings together traditional, sector specific interventions with strategic planning and social and environmental characteristics.
- The design of infrastructure projects must focus on infrastructure service provision services instead of physical infrastructure. Setting quality standards is a difficult task for project teams and government counterparts, while setting monitoring indicators based on service provision is challenging, as benefits usually accrue after project closure.
- Infrastructure projects have to take into account fiscal space, contingencies and financing sources. This is particularly important for PPPs, proper accounting of maintenance expenses and user fees.
- A regional approach to resolving infrastructure challenges is essential, particularly for energy and transport projects as well as integrated water resource projects. Interconnection remains a complicated task for energy.
- Governance remains a challenge in the region. There is a need to strengthen supervision capacity in infrastructure ministries, improve capacity of infrastructure regulators, SOEs and competition agencies, improve country procurement systems, and strengthen auditing bodies to guarantee proper allocation and use of public funds.



### 3. ACTION PLAN, FY12-15

#### ■ CORE ENGAGEMENT

##### What will constitute the core engagement in infrastructure?

Core engagement will encapsulate the notion of “green and inclusive growth.” This means projects, knowledge products and advisory services that are:

- **Socially sustainable:** giving all people voice in the development process, and improving access to markets and basic services across income level, ethnicity, age group and gender.
- **Environmentally sustainable:** ensuring that the investments do not infringe on ecosystems’ ability to continue to provide services, and improving or minimizing negative impacts on the environment and the climate overall.
- **Economically sustainable:** providing sufficient financial resources, from users, communities and/or taxpayers, to offer affordable and quality services over time.

##### What will the region do to secure more/efficient public sector financing for infrastructure?

**Diagnostic of investment needs:** The Bank is carrying out an exercise to measure investment needs for several growth scenarios in Central America. This exercise is expected to inform policymakers about the gap and will affect the Public Expenditure Review (PER) being carried out in Central America. PERs will address alternative public sector financing for infrastructure.

**Project components to improve efficiency of public sector financing:** several Specific Investment Loans (SIL), Development Policy Loans (DPLs) and Technical Assistance Loans (TALs), e.g., in Chile, Argentina, Brazil and Paraguay, include components aimed at increasing competition in public works, improving capacity for official project estimates to reduce the difference between planned, budgeted and actual costs. For example, extensive

recent work has been done jointly with the Government of Brazil to improve the efficiency of public expenditure in transport. Several recommendations produced in the Bank’s reports are being implemented.

#### ■ TRANSFORMATIONAL ENGAGEMENT

##### Where are the new opportunities for “transformational” engagements?

The region’s transformational engagements will be those that encapsulate the notion of green and inclusive growth by promoting greater access and more efficient and effective service delivery, improving the quality of life of users and their communities, while protecting or enhancing the natural endowment of the impacted area. At a sectoral level, this contributes to:

- **Transportation programs** that place networks in the context of territorial development; encourage a shift to lower emitting modes; and provide for integrated mass transit systems.
- **Energy programs** that help move the region to a cleaner matrix while extending services to the unconnected.
- **Water and sanitation programs** that value scarce water resources while expanding and improving coverage for the underserved.
- **Urban programs** that expand affordable services, utilize the tools of land use planning while reducing waste and emissions.
- **Disaster risk management programs** that mitigate the human, economic and financial effects of natural disasters, including climate-driven events.
- **Rural infrastructure programs** that increase the productivity, access to market and independent capacity of local communities.

## What will the Bank do to build client capacity to support transformational engagement?

The Bank has already begun to address client capacity for transformational engagements through institutional reform programs such as the DPL and TAL for the Modernization of the Ministry of Public Works in Chile. Going forward, it will blend its analytical, advisory and lending capacity to bring cross-cutting skills and tools to future operations.

**Planning capacity:** The Bank is working with client countries throughout the region to strengthen planning capacity to improve the selection of infrastructure projects; to assess the economic, social and environmental impacts of more complex infrastructure projects and to conceive infrastructure as a network with the ultimate objective of abandoning the “piece meal” or silo approach to infrastructure.

**Green infrastructure:** The Bank is fostering client capacity on the benefits of green infrastructure that is transformational. The greening of infrastructure requires a change in dialogue: many countries see the measures to address climate change, both mitigation and adaptation, as costly and growth reducing.

**Inclusive infrastructure:** Transformational investments that consider the costs of externalities such as climate change, local pollutions or biodiversity may have important distributional impacts. The Bank's advisory and operational work will help governments weigh the trade-offs associated with policies, regulations and investments. If green transformation means less choices or greater costs, then the Bank will work with governments to consider these social costs and construct policies to offset them.

## ■ INFRASTRUCTURE FINANCING

### What will the Bank do to improve the investment climate?

The extent of private sector financing of infrastructure, which typically involves a sunk investment, depends on country and regional business climate, including regulatory, political and financial risk. To that end, the

Bank will continue working to establish a sound macroeconomic and legal framework that reduces country risk. Examples include: redesign of INCO in Colombia, advice on the new concession laws in El Salvador, Honduras and Chile, establishment of a Competition Regional Center in Mexico City.

### What will the Group do to help client countries attract more private sector financing?

IFC expects to deliver 25-30 projects annually over FY12-14, with IFC own account volumes of US\$650-750 million and an additional US\$500-600 million anticipated in mobilization. In the Caribbean, IFC is looking at energy and transport sector investments in Jamaica, and a sub-regional focus on Central America, water services in Brazil and selective interventions across in broadband, telecoms infrastructure sharing and media sectors. In addition, IFC is looking to scale-up its renewable energy portfolio across the region, with continued involvement in large-scale, non-traditional renewable energy investments.

### Where are the opportunities for public-private partnerships?

Through strategic interventions at all levels of government, aimed at enhancing credit worthiness, designing PPP strategies, advising on the PPP design and designing specific transactions, IFC and the Bank have been assisting clients in building a pipeline of potential PPP projects. These interventions will continue over the next strategy period. A discussion of joint-network and Bank/IFC/WBI for Brazil's PPP program has begun, in an effort to forge a constructive, multi-sectoral and vertically integrated program of support in PPPs. Beyond Brazil, several other countries and sectors will receive focused attention from the infrastructure family:

- Evaluation of the concession program in Chile through analytical work.
- Redesign of a PPP agency in Colombia.
- Technical support to the airports PPP program in Brazil with Bank's own budget.
- Assistance to the Government of Panama to explore PPPs in the Canal reverted areas through a FBS-funded Land Use Strategy.

- Legal, regulatory and institutional strengthening of PPP programs in Uruguay, Honduras and Costa Rica.
- Regional growth through PPPs in the Caribbean.
- Technical and financial support on private off-grid electricity systems in Peru and Nicaragua; co-financing with GEF on select demonstration wind and other renewable projects, e.g., Chile and Mexico, and analytical support across the region on regulatory and technical needs for system integration, feed-in tariff design for renewables, subsidy reform and the other underlying policy and economic requirements for greater private sector involvement in sustainable energy provision.
- The Group will continue to provide support for urban transport, Bus Rapid Transit, port reform, airport concession and highway PPPs.

## What are the opportunities to tap into “green financing”?

- Tapping into CDM, CTF, SCF and GEF for green projects:
  - Clean Technology Fund (CTF) has four WBG projects in the pipeline for the region, including the Sustainable Energy Finance Program in Colombia and the Urban Transport Transformation Project, Efficient Lighting and Appliance Project and Private Sector Wind Development in Mexico. The region and IFC will receive US\$277 million in CTF financing and leverage over US\$3 billion from the public and private sectors. In addition, the CTF Trust Fund Committee has endorsed an investment plan for Chile, which will move forward depending on the availability of funds.
  - One country has been selected to be part of the Strategic Climate Fund’s Program for scaling up Renewable Energy in LICs (SREP), to pilot the viability of low carbon development pathways in the energy sector through the use of renewable energy. Honduras can expect to receive between US\$25-30 million as part of the program.
  - The Bank will build client capacity to access green financing through: (i) the Mitigation Action Implementation Network; (ii) the Regional Carbon Forum and (iii) Carbon finance support for Sao Paulo to access carbon offset markets (WBI).

## What will the Bank do to tap into knowledge and financing of private foundations, think tanks and others?

The Bank will continue to build relationships with regulatory associations, UNECLAC, private institutions and sub-regional think tanks and research centers across the region. The Bank has established learning and knowledge programs with universities such as Berkeley and Portland State (mass transit and integrated urban planning); Florida’s Public Utility Research Center and University of Illinois (logistics for agriculture and spatial economics) to facilitate cross-infrastructure thematic capacity building and knowledge-sharing.

# WORLD BANK GROUP INFRASTRUCTURE ACTION PLAN

MIDDLE EAST &  
NORTH AFRICA REGION



World Bank Group  
Infrastructure Strategy Update FY2012-2015







# 1. INFRASTRUCTURE ISSUES

## Access Indicators

Energy	
Electrification rate (% of population with access) <sup>1</sup>	90.2
Delay in obtaining electrical connection (days) <sup>2</sup>	60.9
Water and Sanitation	
Improved water source (% of population with access) <sup>3</sup>	87.3
Improved sanitation (% of population with access) <sup>3</sup>	84.3
Delay in obtaining water connection (days) <sup>2</sup>	55.7
ICT	
Internet users (per 100 people) <sup>4</sup>	21.5
Population covered by mobile cellular network (%) <sup>4</sup>	93
Delay in obtaining a mainline telephone connection (days) <sup>2</sup>	37.8
Transport	
Motor vehicles (per 1,000 people) <sup>3</sup>	87.6
Firms identifying transportation as a major constraint in doing business (%) <sup>2</sup>	21.5

Source: <sup>1</sup>International Energy Agency 2010

<sup>2</sup>Enterprise Firm Surveys, Enterprise Analysis Unit

<sup>3</sup>World Development Indicators

<sup>4</sup>Little Data Book on ICT

The Middle East and North Africa region encompasses great diversity of countries with differentiated needs and financing capabilities:

- **Non borrowing oil-exporting countries:** Gulf Cooperation Council nations(GCC), Libya, Algeria.
- **Middle Income Countries (MICs):** Morocco, Tunisia, Egypt, Jordan, Lebanon, Syria, Iraq and Iran.
- **Low Income Countries (LICs):** Djibouti, Yemen.
- **Special financing:** West Bank and Gaza (WB&G).

## Infrastructure status

- Relatively good stock of infrastructure in high-income/oil-exporting countries and some MICs but unsatisfactory service quality in most sectors.
- Low levels of regional economic integration. Huge potential benefits for developing intraregional trade and regional infrastructure, including more efficient logistical services.
- Infrastructure deficit in some rural and poor areas hindering access. More acute challenge for LICs.

## Challenges

- Growing backlog of infrastructure investments and rapid urbanization rate (+3 percent per year) leading to congestion, pollution and declining competitiveness of the region's cities and economies.
- Scarce water resources coupled with unsustainable and inefficient uses.
- Private investment in infrastructure lags behind other regions.
  - GCC accounts for about 10% of the region's population and 50 percent of GDP but over 80% of private infrastructure investment, particularly in Saudi Arabia, United Arab Emirates, Qatar and Oman.
  - 2011 investment impacted by the political events in the region; increased political risk leads to investor uncertainty and higher pricing.
- Building resilience against climate change and natural hazards and sensitivity to the food crisis; potential to develop green growth via Concentrated Solar Panels (CSPs) and city green growth programs.
- Most countries developed infrastructure stimulus packages to sustain economic growth and weather the impact of the financial crisis but there is still a US\$30-40 billion per year deficit in infrastructure investment out of US\$100 billion of spending needs estimated by the Bank. Improving governance is critical to give confidence to private sector to (re)invest in infrastructure.

The 2011 Arab Spring highlighted additional challenges:

- Lack of transparency, accountability and social inclusiveness, perception of cronyism and abuses of power (perceived or real).
- Contraction of the fiscal space, limiting resources for investment and refocusing Governments' priorities toward non economic infrastructure/social investments.
- Young, unemployed and growing population accentuating the challenge of job creation and how infrastructure investments and maintenance can contribute.





## 2. ACHIEVEMENTS AND LESSONS LEARNED, FY08-11

### World Bank Group Infrastructure Commitments

	FY11	FY08
WBG Infrastructure Commitments (US\$ billion)	1.4	1.8
Total private sector investment enabled (\$US billion)	1.1	0.8
IFC PPP advisory transactions completed	0.3	0.6
MIGA Infrastructure Commitments (US\$ billion)	–	0.4
Total private sector investment enabled by IFC (US\$ billion)	16.5	

Source: SAP Business Warehouse, MIGA, IFC

- **Regional integration:** transport/trade diagnostic studies for the Mashreq and Maghreb, technical assistance to specific countries, e.g., Tunisia, Morocco and Egypt, investment loans for the development of major infrastructure, e.g., Egypt power plants, airports and railways.
- **Urban development:** TA and studies for specific countries, e.g. Morocco, Yemen, Egypt, Jordan and Iran; investment loans, e.g., for improving traffic management in Beirut, and creating a new peripheral corridor in Amman; development policy loans to Morocco to promote policy reforms in urban transport and municipal solid waste management.
- **Expansion of rural access:** investment loans/credit for rural roads upgrading in Morocco and Yemen; Second Rural Access Project in Yemen has provided year round all weather road access to about 475,000 people.
- **Strengthening PPPs:** RTAs in GCC countries to support PPP unit in Kuwait and PPP framework in Qatar; support of the PPP Central Unit in Egypt in developing its portfolio.
- **Promoting private sector participation:** IFC invested about US\$1.5 billion in 38 projects in the infrastructure space in the region, with an additional US\$600 million mobilized from third parties. Highlights include a regional water company, two private airport concessions in Jordan and Tunisia, the first financing for a private power distribution utility in Jordan, financing for mobile telecom operators in Iraq and the West Bank and a container terminal in Iraq. Over the same period, IFC infrastructure Advisory Services were also very active in the region, with 10 active and closed mandates, including an airport in Jordan, an airport in Saudi Arabia and a wastewater treatment plant in Egypt.
- **Mitigation and adaptation to climate change:** pilot studies in Morocco, Tunisia, West Bank and Gaza and Yemen; carbon finance project for taxi fleet renewal in Egypt; component of the Morocco urban transport DPL reducing CO2 emissions by 400,000 tons/year.
- **Transport:** increased transport sector contribution to social development through gender and transport studies in Yemen, Morocco and West Bank and Gaza; labor intensive works in the rural roads projects; promotion of access for persons with reduced mobility in Morocco; and a pilot road safety diagnostics study in Yemen.
- **Water:** in Iraq, 2 million people recovered access to safe water and half a million people benefited from sewers rehabilitated by Bank-supported projects; in Egypt, Bank-financed projects helped 850,000 families increase their annual agricultural production by US \$35 million; in West Bank and Gaza, the Assessment of Restrictions on Palestinian Water Sector Development resulted in dialogue for improving the joint Israeli-Palestinian governance framework that controls water projects implementation.
- **Energy:** additional power capacity installed in Egypt and Jordan; significant renewable energy projects are under preparation (concentrated solar panels and wind power).



### 3. ACTION PLAN, FY12-15

#### Lessons Learned

- If political will is paramount in getting things done, good governance is essential for public acceptance. The Group can play a key role helping decision-makers to be more transparent, to consult more widely and to be more accountable.
- The quality and capacity of national and local institutions are essential for designing and implementing improvements in sector performance.
- Change is a long process which requires sustained effort by Government, local authorities and the Group.
- Transfer of knowledge, especially international best practices, is in high demand at all levels and essential to promote change.
- The study *Optimizing Wheat Import Supply Chains (WISC)* indicates that Arab countries would save millions of dollars each year by addressing WISC bottlenecks, e.g., insufficient storage capacity which creates clogs in the supply chain or over-reliance on one unloading port which increases supply risk. The Bank can help by improving existing WISC port logistics, storage facilities and road networks in-country and by promoting regional cross-border trade that may require infrastructure development.

#### ■ CORE ENGAGEMENT

##### What will constitute the core engagement in infrastructure?

Core engagements will include:<sup>33</sup>

- Boosting the development of economic infrastructure to sustain economic growth, enhance competitiveness and unlock regional integration benefits.
  - **Transport:** disseminate studies on regional trade and transport in Maghreb and Mashreq; provide technical assistance to develop trade facilitation and logistics in Egypt, Yemen; produce study on regulation of port operators and transport constraints to employment in Djibouti; support regional transport programs (TA and horizontal Adaptable Program Loans); support Egypt railway sector (studies, TA and investment as required).
  - **Energy:** provide ad hoc support to power generation projects including independent power producers; continue facilitating the regional energy agenda, particularly by supporting regional interconnections (Egypt-Saudi Arabia); manage water resources; support water resource management initiatives, in particular the Tigris-Euphrates monitoring program.
- Achieving basic infrastructure service provision in rural and poor areas.
  - Develop rural road programs in Yemen, Morocco, Tunisia and Egypt.
  - Pursue large scale irrigation programs in Egypt.
  - Explore desalination for horticulture in Morocco.
- Supporting integrated and inclusive development of efficient municipal infrastructure services in urban and peri-urban areas.
  - **Integrated urban development operations:** produce studies in Tunisia and Morocco to assess how to improve the delivery of municipal services and help empower local authorities in their role as promoter of local economic growth, social cohesion and quality of life in urban areas.
  - **Urban transport:** produce study on transport and climate change; support urban transport programs in Morocco and Egypt (Cairo).



- **Municipal Solid Waste (MSW):** scale up tailored support (DPLs or RTAs in Gulf countries) to help governments implement reforms of their respective municipal solid waste sectors. Combine MSW projects, when possible, with CO2 emission reduction schemes.
- **Water supply and sanitation:** produce nation-wide studies on sector performance and provide ad hoc support to water and sanitation projects.
- Engaging with clients on cross-cutting issues.
  - **Rationalization of demand in infrastructure:** improve the efficiency of uses of natural resources, e.g., water, arable land, and infrastructure assets, e.g., more urban roads versus urban transport system.
  - **Infrastructure service quality, governance and job creation:** produce studies to assess and maximize the benefits of infrastructure development on job creation; develop road asset management programs and explore labor-oriented technologies; improve the performance and governance of the energy sector in capturing inefficiencies, strengthening regulators and creditworthiness.
  - **Development of private sector participation in infrastructure service provision:** support harmonization and foster the PPP agenda; develop use of guarantees; provide ad hoc support to rescue PPP transactions affected by the Arab Spring.
- Managing green growth, climate change adaptation and disaster risk management.
  - **Promotion of renewable energy:** integrate, leverage climate funds and cross-sector approaches while implementing low carbon investments (new technologies) and enhancing the efficient use of natural resources (Jordan); draw lessons from the Ouarzazate project to help replication of concentrated solar panel programs in the region; scale-up financing and TA/RTA for renewable energy programs.
  - **Resilience to climate change:** finalize and disseminate studies on adaptation to climate change in the Arab countries; develop a regional pilot, climate change DPL, in Morocco.
  - **Improved disaster risk management (DRM):** focus on small-scale, labor-intensive work to build resilience at the community level to mitigate risk of water scarcity, drought, food insecurity and floods;

expand capacity building efforts for Disaster Risk Management by providing support to national and regional institutions of learning.

- **Modernized water and irrigation schemes:** develop wastewater reuse program in Tunisia; develop innovative finance schemes (e.g., PPPs) in irrigation.

## What will the Bank do to secure more/efficient public sector financing for infrastructure?

- Continue developing partnerships and further coordination with other Development Finance Institutions (DFIs) to address the region's infrastructure challenges with European partners (EU, EIB, EBRD and bilaterals) and with Arab/Islamic partners (Islamic Development Bank, Arab Funds and bilaterals).
- Assess inefficiencies in infrastructure services and devise practical solutions to capture them.

## ■ TRANSFORMATIONAL ENGAGEMENT

### Where are the new opportunities for “transformational” engagements?

Core engagements will be considered transformational if they address to a large extent one or more of the below critical issues in infrastructure development:

- **Regional integration:** supporting regional programs/projects when possible and harmonization of national frameworks to help countries share the benefit of more economic integration.
- **Concerns of the Arab Spring:** strengthening the Governance Framework (transparency and accountability) of infrastructure service delivery; and enhancing economic and social inclusion of basic infrastructure and growth.
- **Job creation:** increasing Bank's ability to frame competitive infrastructure projects which can create sustainable jobs (direct, indirect and induced).
- **Green growth and climate change:** preparing demonstration projects to foster green growth programs.

## What will the Bank do to build client capacity to support transformational engagement?

- Scale-up institutional capacity building linked with lending operations.
- Target technical assistance for project preparation with attention to procurement and public consultation.
- Support regional PPP harmonization.

## ■ INFRASTRUCTURE FINANCING

### What will the Bank do to improve the investment climate?

- During and since the Arab Spring, citizens have called for greater voice and accountability. The region's main challenge, loudly proclaimed, is to create sustainable jobs generated by the private sector. The key is improving the enabling environment for private sector players, both large and small. Also key is ensuring fair competition and reducing privileges which have historically benefited solely the elite class. For example, the Bank has two new DPLs focusing on improved accountability and governance in Iraq and in Jordan. The Bank will also be continuing analytical work on economic governance and social safety issues in Egypt, Morocco and Tunisia.

### What will the Group do to help client countries attract more private sector financing?

- Arab Financing Facility for Infrastructure (AFFI): a regional partnership between WBG and the Islamic Development Bank, is designed to promote regional policy dialogue on infrastructure challenges, to catalyze access to public and private finance sources and to support the preparation of sustainable infrastructure projects, in particular PPPs. Its goal is to become a center of excellence for infrastructure financing in the region.
- Private sector participation: The region will continue to be a critically important region from an infrastructure perspective for IFC, with 8-10 projects expected annually over FY12-14 for IFC own account volumes of US\$400-500 million, with an additional US \$200-300 million anticipated in mobilization. There is an appetite for well structured deals in the region with multiple sources of funding available.
- Political risk mitigation products: MIGA expects to allocate US\$500 million of net insurance capacity and further mobilize an additional US\$500 million of reinsurance from the private market for a total of US\$1.0 billion for the region. This capacity should meet the market demand for guarantees for a period of approximately 15 months. Beneficiaries of this allocation will include large infrastructure projects.



- Conflict Affected and Fragile States facility: (currently under development) will help stimulate Foreign Direct Investment (FDI) flows to some countries.

### Where are the opportunities for public-private partnerships?

- PPP opportunities are spread across sectors (independent power producers, integrated water and power projects, solid waste, toll roads, urban transport, ports, airports, logistics hubs, wastewater treatment plants, schools, hospitals), but need to be well prepared and structured to attract investors.
- Continued capacity building development in Morocco, Tunisia, Egypt, Syria and Jordan.
- Increased lending support as PPPs are rebalanced (less private/ more public) via investment loans and targeted DPLs.
- PPP “rescue” operations for bankable projects impacted by the Arab Spring.
- Continued IFC Advisory services which pursue opportunities in the PPP space as the Arab Spring puts pressure on regional governments to provide better coverage and quality of infrastructure services; potential for reevaluating PPP development pipeline and existing PPPs in tender (opportunities for increased transparency, governance and social prioritization).

### What are the opportunities to tap into “green financing”?

- Concentrated solar power programs and other renewable energies.
- City green growth programs.
- Municipal solid waste programs.

### What will the Bank do to tap into knowledge and financing of private foundations, think tanks and others?

The Bank will develop cooperation with existing partners, listed below, on joint activities (conference, knowledge products):

- Marseille Center for Mediterranean Integration.
- Arab Water Academy, Arab Water Council, Arab Water Country Utility Association.
- Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD).
- Arab Academy and Regional Center for Disaster Risk Reduction.
- League of Arab States.

The Bank will further engage/explore with Gulf countries and funds to finance infrastructure development.





# WORLD BANK GROUP INFRASTRUCTURE ACTION PLAN SOUTH ASIA REGION



World Bank Group  
Infrastructure Strategy Update FY2012-2015







## Access Indicators

Energy	
Electrification rate (% of population with access) <sup>1</sup>	62.2
Delay in obtaining electrical connection (days) <sup>2</sup>	48.4
Water and Sanitation	
Improved water source (% of population with access) <sup>3</sup>	86.7
Improved sanitation (% of population with access) <sup>3</sup>	35.7
Delay in obtaining water connection (days) <sup>2</sup>	64.2
ICT	
Internet users (per 100 people) <sup>4</sup>	5.5
Population covered by mobile cellular network (%) <sup>4</sup>	61
Delay in obtaining a mainline telephone connection (days) <sup>2</sup>	31.2
Transport	
Motor vehicles (per 1,000 people) <sup>3</sup>	15.7
Firms identifying transportation as a major constraint in doing business (%) <sup>2</sup>	18.6

Source: <sup>1</sup>International Energy Agency 2010

<sup>2</sup>Enterprise Firm Surveys, Enterprise Analysis Unit

<sup>3</sup>World Development Indicators

<sup>4</sup>Little Data Book on ICT

# 1. INFRASTRUCTURE ISSUES

The South Asia region is one of great diversity of countries, each with different needs and capabilities:

- **GDP per capita >US\$1,400:** India (population 1.2 billion), Maldives (population 316,000), Sri Lanka (population 21 million).
- **Low Income Countries (LICs):** Bangladesh, Pakistan (population >140 million each).
- **Fragile countries:** Afghanistan, Nepal.

## Large concentration of poverty, with major access needs

- Large reduction in poverty in last two decades, but still home to more than ½ billion poor people. Lagging, landlocked/border regions are home to an estimated 50 percent of South Asia's poor.
- Huge ranges in access and coverage: electricity coverage ranges from 95 percent in Maldives to 16 percent in Afghanistan. Bangladesh has only 10 percent of its roads paved, India and Nepal have 49 and 56 percent respectively, while Sri Lanka 81 percent and Maldives 100 percent.

## High population density

- The region already has five cities with a population of over 12 million (Mumbai, Delhi, Kolkata, Dhaka and Karachi), and the region will account for 17 percent of the world urban population by 2030. One million people are expected to join the labor force each month for the next two decades, with labor force doubling by 2050.

## Climate variability and natural disasters

- The region suffers an exceptionally high number of natural disasters. Between 1990 and 2008, more than 750 million people—46 percent of the region's population—were affected by at least one weather related disaster, leaving almost 60,000 dead and resulting in about US\$45 billion in damages.
- The region's climate variability makes it especially sensitive to the consequences of climate change (e.g., 2004 Tsunami in Sri Lanka, India and the Maldives, the earthquakes in Pakistan, recurrent floods and recent cyclones in Bangladesh [cyclone in SIDR in 2007 and AILA in 2009]).

## Governance

- For the first time, all countries have elected governments, yet conflict, insurgencies and civil strife are rampant in the region.
- Heterogeneity among countries creates huge opportunities for cross border cooperation. In energy, for example, Nepal has a huge untapped hydropower potential, while India faces a large power deficit. However, the region is the world's least integrated; intraregional trade in South Asia accounts for a mere 5 percent of total trade, the lowest level of any region in the world, which can be primarily explained by conflicts among countries in the region. Less than 2 percent of Afghanistan and Nepal's economically feasible hydropower potential of over 50 GW is actually used due to lack of regional cooperation.

## Infrastructure Investment and Private Sector

- The share of infrastructure investments in GDP varies widely: India: 5-7 percent of GDP during the last 50 years, with 25-35 percent of that investment coming from the private sector; Bangladesh: 3-5 percent of GDP during the last 40 years, with 35 percent of investment coming from the private sector in the late 1990s early 2000s.
- The region lags behind almost every other region in number of projects with private participation. India makes up the lion's share of South

Asia's private sector investment hosting 380 projects with a total value of US\$158 billion, while Pakistan attracted only US\$28 billion in 63 projects and the rest of the region the remaining US\$12 billion in 70 projects. For comparison, Brazil received US\$270 billion for 467 projects over the same period.

- While South Asia garnered almost no PPP projects before 1993, it has recently become a significant destination for private investment. The private sector has mainly played the role of financier rather than manager of infrastructure projects.

## 2. ACHIEVEMENTS AND LESSONS LEARNED, FY08-11

In FY11, the Bank embarked on a strategic shift towards bigger, more innovative, higher impact infrastructure projects. Examples include the India Rural Roads project (US\$1.5 billion), Bangladesh Padma Bridge (US\$1.2 billion), India Integrated Coastal Zone Management, National Ganga River Basin project, and the Eastern Dedicated Freight Corridor project. These projects are expected to be transformational, not only in the magnitude of their expected impact, e.g., Livelihood project lifting 8 million women out of poverty through small community support, Information and Communication Technologies (ICT) use and micro-finance, but also in their design in addressing a broader development concern, e.g., territorial development - Padma bridge project focus on connectivity; rapid urbanization and congestion - potential Dhaka gateway project.

The Bank implemented several projects involving in-depth assessments of procurement and financial management practices with a view to implementing enhanced governance and accountability measures, e.g., National Solidarity Program Supervision Design in Afghanistan, Procurement and Financial Management Capacity Building Workshop in India, Procedures for Debarring Firms that Engage in Fraudulent Practices in Pakistan. The region also implemented knowledge sharing projects on how civic engagement ensures improved governance in infrastructure projects.

Furthermore, the Bank continued to sustain its analytical and financial engagement in the following areas:

- **Regional integration:** (i) studies, policy notes and training to promote specific ventures in cross border energy trade, e.g., South Asia Cross Border Energy Program-India, Nepal, Bangladesh, Sri Lanka; and (ii) studies to

prepare the ground to directly finance cross border integration of power systems, e.g., Central Asia South Asia Electricity Transmission and Trade project, Nepal-India Electricity Transmission and Trade project.

- **Urban development:** (i) technical assistance to support sustainable urban development policies, e.g., TA for Emerging Towns and Water Supply and Sanitation Sector in Nepal and South Asia Megacities Improvement Program in Mumbai and Dhaka; (ii) project to develop a model integrated solid waste management in Pakistan; (iii) pilot activity in India to promote the sustainable urban transport technologies adoption; (iv) technical assistance to build capacity in urban water sector; (v) study on municipal financing requirements in urban water, sewage and solid waste (Non-lending Technical Assistance to the High Powers Expert Committee on Urban Development); and (vi) capacity building and pilot investment to reduce water source pollution (National Ganga River Basin Project).
- **Rural access:** (i) impact evaluation of rural access interventions in Afghanistan, e.g., Impact Evaluation of National Emergency Rural Access project; (ii) regional and country specific studies on improving rural access to infrastructure services, e.g., Infrastructure Gap in the South Asia region, Sri Lanka Infrastructure Assessment; (iii) projects to expand and improve rural roads, e.g., Enhanced Implementation Support for the PMGSY Rural Roads Project and Rural Roads Project; (iv) project to finance access to water systems and sanitation facilities, e.g., Punjab Rural Water Supply and Sanitation and (v) project in Afghanistan to support community-managed reconstruction and development that improve access of rural communities to social and productive infrastructure and services, e.g., Afghanistan: Emergency National Solidarity Project II.



## World Bank Group Infrastructure Commitments

	FY11	FY08
WBG Infrastructure Commitments (US\$ billion)	6.9	3.0
World Bank Infrastructure Commitments (US\$ billion)	6.6	2.0
IFC Infrastructure Commitments (US\$ billion)	0.3	0.9
MIGA Infrastructure Commitments (US\$ billion)	–	–
Total private sector investment enabled by IFC (US\$ billion)	13.6	

Source: SAP Business Warehouse, MIGA, IFC

- **Mitigation and adaptation to climate change and green work:** (i) study in India on moving the country towards a low carbon growth path; (ii) projects to improve natural disaster forecasting capacity (Bihar State Flood Management Information System Project and the India National Cyclone Risk Mitigation Project); (iii) pilot activity in Andhra Pradesh, India, to build a comprehensive and holistic drought resilience program; (iv) build the climate resilience of rural communities (Himachal Pradesh Mid-Himalayan Watershed Development Project) and (v) renewable energy, with additional capacity built in Small Hydropower & Renewable-based power generation in Afghanistan, India, Nepal, Sri Lanka.
- **Social development:** (i) a pilot program in Afghanistan to enhance the job skills of young women and facilitate their access to wage employment; (ii) project to facilitate access to employment opportunities in the garment sector for poor and vulnerable women from Bangladesh and (iii) project to improve access, equity and the quality and relevance of education in Punjab.
- **Public-private partnerships:** (i) non-lending technical assistance to build capacity and create enabling frameworks for PPPs, e.g., DEA Non-Lending Technical Assistance, Support to Development of PPP Framework project in Pakistan; (ii) analytical efforts to integrate PPP policy framework in the overall planning efforts of countries, e.g., Sri Lanka Infrastructure Assessment; and (iii) Projects to directly finance PPP concessions, e.g., Second Karnataka Highway Improvement project in India.
- **Private participation:** IFC has focused on consolidating its position as a key player in the power sector, with a particular emphasis on renewable energy. IFC has also actively diversified into other sectors. Highlights include the first private sector water project in Bangladesh focused on rural areas with significant development impact, support for the construction of modern warehousing facilities for storing agricultural commodities across India, including a significant component in the low income states and an end-to-end waste recycling company.

## Lessons Learned

- Use of programmatic approach for greater leverage of development impact.
- Scaled-up impact by consolidating stand-alone projects into larger sector projects.
- Increased selectivity of projects to become more effective, for example by focusing on less transaction-intensive projects.
- Need to focus on transformative (i.e., larger more innovative) infrastructure projects with a higher impact on client countries.
- Need to mainstream good governance practices for designing and implementing large-scale projects.

### 3. ACTION PLAN FY12-15

#### ■ CORE ENGAGEMENT

##### What will constitute the core engagement in infrastructure?

The Bank will engage in the following core areas:

- **AAA products:** (i) regional gap analysis (e.g., Infrastructure Gap in the South Asia Region); (ii) country level analysis (e.g., Padma bridge analysis and Nepal emerging towns); (iii) sector level analysis.
- **Knowledge products:** (i) Impact evaluation analyses; (ii) infrastructure analyses (e.g., benchmarking of utilities).
- **Lending projects for:** (i) connecting people to prosperity, e.g., First National Highways Interconnectivity Improvement Project in India and Afghanistan Rural Access Project; (ii) providing cleaner and more secure energy supply, e.g., Kabeli A Hydroelectric Project in Nepal, Tarbela Fourth Extension Hydropower Project in Pakistan and Siddhirgandj Power Project in Bangladesh and (iii) adapting to rural-urban transformation, e.g., Urban Water Supply & Sanitation Modernization Project in India.

##### What will the Bank do to secure more/efficient public sector financing for infrastructure?

- Multi-donor trust funds: (i) Bangladesh – Multi-Donor Trust Fund for climate change resilience (US\$110 million); (ii) Afghanistan – ARTF for improved effectiveness of the reconstruction.
- Roll over of infrastructure diagnostic assessments in countries to assess infrastructure investment needs and policy reforms needed to improve the provision of infrastructure services (including those needed to increase the efficiency of public financing for infrastructure). Instruments will be used to engage the planning commissions on mid-term investment plans.

#### ■ TRANSFORMATIONAL ENGAGEMENT

##### Where are the new opportunities for “transformational” engagements?

- **Regional Integration:** Greater connectivity and integration of markets would increase growth and equality. Thus, there is a need to strengthen regional cooperation in water, electricity, transport and climate change adaptation/mitigation efforts.
  - Northeast Electricity Transmission and Trade: facilitate Nepal power trade between Nepal, India and Bangladesh to address power shortages.
  - Northeast Trade and Transport Facilitation Program: ease transport congestion at Bangladesh-India and India-Nepal border crossings (in collaboration with ADB). Precursor to boosting regional trade in subsequent phases of the program.
  - Central Asia-South Asia (CASA) Electricity Transmission Project: support (with IFC) the preparation of this project to supply 1300 MW of surplus power in Tajikistan and Kyrgyz Republic to Afghanistan and Pakistan.
  - AAA: South Asia Trade and Transit Facilitation AAA and TA Program; South Asia Water Initiative (SAWI) and associated Abu Dhabi Dialogue; Regional Electricity Trade: Trading Arrangements and Risk Management.
- **Green/climate change:** mainstreaming hazard risk management, e.g., Building Resilience to Climate Related Hazards projects in Nepal and Climate Change Resilience in Bangladesh; AAA: Greener and More Efficient Infrastructure Systems.
- **Cross-synergy projects:** Integrated Approach for Developing the South West of Bangladesh; Metro Colombo Integrated Urban Development Project, Sri Lanka; AAA: South Asia Water Initiative (SAWI); Sustainable Infrastructure for Economic Growth and Social Development of the Sunderbans, India; Greener and More Efficient Infrastructure Systems.



- **Programmatic approach:** bringing transformational projects to fruition such as National Ganga River Basin project, Dedicated Freight Corridor project and National Solidarity Program.
- **Institutional reform:** using DPLs to support dialogue on institutional reforms, where engagement dominated by investment lending; integrating governance analytics at all stages of projects and increasing GAC resources and staffing in the field.

## What will the Bank do to build client capacity to support transformational engagement?

The Bank will continue to support capacity building programs, using experiences from other regions and promoting south-south knowledge. It will also explore the opportunity to use the Infrastructure Finance Center of Excellence in the Singapore hub.

## ■ INFRASTRUCTURE FINANCING

### What will the region do to improve the investment climate?

- Strengthen the enabling environment/investment climate for PPPs through TA on (i) policy, e.g., regulatory framework, access to capital markets; (ii) incentives, e.g., VGF, PDF and (iii) capacity building, e.g., PPP unit support.
- Integrating governance analytics at all stages of projects and increasing GAC resources and staffing in the field.

### What will the Group do to help client countries attract more private sector financing?

- IFC expects 12-15 infrastructure projects annually over FY12-14 for IFC own account volumes of US\$400-450 million, with an additional US\$250-300 million anticipated in mobilization.

### Where are the opportunities for public-private partnerships?

There is immense opportunity for PPP, e.g., in India during the Eleventh Plan (2007-2012), 33 percent of total envisaged infrastructure investment of US\$515 billion is projected to come from private sources.

- **Actions to scale-up the PPP agenda:** (i) targeting of selected countries for PPP scale-up (India, Sri Lanka, Bangladesh, Nepal and Pakistan); (ii) supporting the deepening of capital markets (India); (iii) mobilizing outside expertise (IFCOE); (iv) sustaining capacity building for PPP scale-up in client countries (India, Sri Lanka, Bangladesh, Nepal and Pakistan), e.g., Support for Post-Crisis PPP framework development in Sri Lanka, support for post award contract management in India.
- **Opportunities for PPP projects:** targeting traditional sectors - roads, ports, power, logistics parks and “new” areas – supply chains, rural/urban service delivery and effluent treatment plants.
- **Opportunities for PPP advisory services:** (i) building awareness, capacity, institutions; (ii) assisting country PPP strategy and priorities, e.g., support PPP policy in India; (iii) sustaining advisory engagement on policy, regulation; (iv) providing TA on specific transactions, issues, advice; (v) identifying financing options (annuity, toll, shadow toll).

### What are the opportunities to tap into “green financing”?

- **Bangladesh:** Multi-Donor Trust Fund for climate change resilience (US\$110 million) and Pilot Program for Climate Resilience (PPCR) (US\$110 million) from Climate Investment Fund (CIF).
- **India:** Discussions ongoing with Government of India to develop an investment plan for CTF support.
- **Nepal:** Ongoing preparation for Pilot Program for Climate Resilience (PPCR).
- **21 Carbon Offset operations** in Bangladesh, India, Nepal and Pakistan, with Emission Reduction Purchase Agreements (ERPA) signed (or to be signed by 2012) for the total greenhouse gas (GHG) reduction of 51 million tons.

### What will the Bank do to tap into knowledge and financing of private foundations, think tanks and others?

- The Bank is working with the Delhi School of Economics, University of Colombo, Royal University of Bhutan, BRAC University and Lahore University of Management Sciences, among others.



# ANNEX A

## Achievements under the Sustainable Infrastructure Action Plan, FY08-11

**SIAP provided the framework for scaling-up the Group's engagement in infrastructure in support of core access agenda, with some actions initiated in the emerging areas of climate change, PPP and rapid urbanization.** By providing an integrated platform for action over FY08-11, SIAP took the form more of a strategy than an action plan. Several milestones were reached over FY08-11:<sup>34</sup>

- WBG infrastructure commitments exceeding SIAP targets by more than US\$34 billion over FY08-11.
- High-performance of environmental and social safeguards in infrastructure projects (design and supervision).
- Increased integration of broader environmental concerns (especially climate change) in the design of infrastructure projects, with relatively less progress made on the social front (e.g., in gender).
- Accelerated efforts to explicitly integrate governance risks and accountability framework in infrastructure projects.
- Increased direct mobilization of private financing for infrastructure through IFC; slight increase in the number of public-private partnerships; most of the IBRD/IDA's leverage effect on the private sector continuing to be largely indirect through knowledge work.

**The Group significantly scaled-up infrastructure commitments under SIAP.** This performance resulted from the continued push for infrastructure support, as well as the demand from client countries during the global financial crisis. By maintaining long-term infrastructure investment programs during the crisis and by sustaining the potential for private sector-led economic growth and employment creation through IFC, the Group played a countercyclical role with partners and countries in withstanding the global downturn.<sup>35</sup> IFC delivered results with existing clients and in co-financing operations, while MIGA provided guarantees to several key financial institutions in Eastern Europe. This surge in the operational work program was, however, not associated with an increase in administrative resources for Group country services. The "implied" productivity increase was achieved in part through larger project size, which doubled for IBRD and increased by thirty percent for IDA.

**In terms of safeguards performance, infrastructure projects ranked higher than many Bank projects.** A recent IEG evaluation showed that the environmental and social impacts and risks associated with Bank infrastructure projects (especially category A), were appropriately identified during preparation and appraisal, and that resources were in most cases appropriately allocated at supervision to mitigate the risks.<sup>36</sup> Nonetheless, evolving needs in WBG client countries mandate updating the environmental and social safeguard policies of the Bank, a task initiated by WBG Management.

**Beyond safeguards compliance, there has been notable progress on integrating the environmental agenda in project design, but relatively less progress on the social agenda.**<sup>37</sup> Infrastructure projects have increasingly integrated climate change mitigation and adaptation considerations in their design in addition to other environmental factors. For example, a larger proportion of transport projects in FY10 relative to FY06 addressed considerations such as water quality, biodiversity loss and change in land use. On the knowledge side, the Bank has focused on the impact of climate change (e.g., Transport and Climate Change, Water and Climate Change, low-carbon studies), demonstrating the importance of a holistic approach to infrastructure with a closer link to other sectors, such as environment. There has been comparatively less progress on gender, for example.

**Efforts to tackle governance risks in infrastructure projects accelerated since the endorsement of the 2008 Governance and Anticorruption Strategy.** Large infrastructure projects are especially vulnerable to rent-seeking opportunities and integrity risks, including procurement, transparency and accountability. Since 2008, support to task teams on governance was strengthened – 30 good practice notes were issued, just-in-time technical assistance was provided to 9 task teams and sourcebooks on GAC in energy, transport and water sectors were issued.

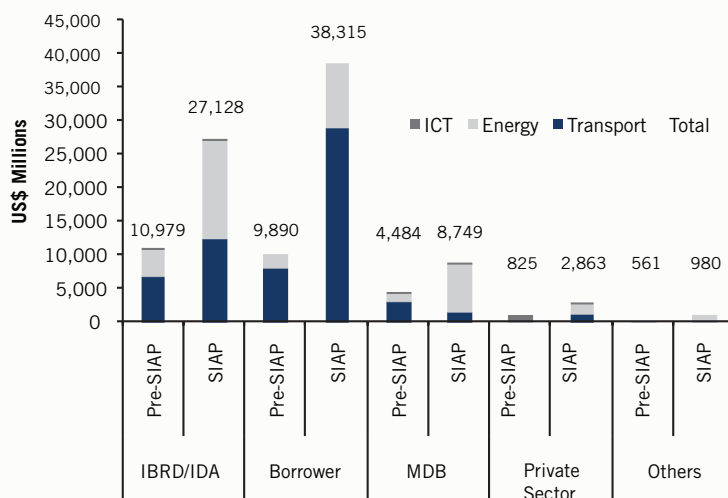
**Direct mobilization of private finance for infrastructure during SIAP has been notable.** IFC increased its support for infrastructure from \$7 billion during FY04 – FY07 to US\$15.3 billion during FY08 – FY11. This support was further leveraged: for example, in FY11, in addition to the US\$3.2 billion committed from its own account, IFC mobilized US\$3.4 billion in financing from third parties for its infrastructure clients. While MIGA's direct support for infrastructure was limited during SIAP, MIGA took notable steps during this period to adapt its products and expand the potential application of its guarantees. For example, MIGA amended its



Convention and updated its Operational Regulations. One of the results of these changes was the introduction of the Non-Honoring of a Sovereign Financial Guarantee product, which is expected to have a significant impact on the underwriting of infrastructure projects. Other changes include the ability of MIGA to offer coverage for debt transactions and Temporary Business Interruption coverage. The total direct leverage effect of IBRD/IDA support increased over FY09-10 (Figure 8).

**Support for PPP was not achieved at scale.** The Group is increasingly providing integrated support to PPP, from upstream support for the enabling environment, to capacity building in client countries, transaction advisory and MIGA and IDA/IBRD guarantees to help mitigate specific project risks or backstop government contractual obligations. Bank PPP support centered on the enabling environment, technical assistance to support advisory services for transactions, partial risk guarantees and IBRD/IDA lending to support the public portion of the PPP. IFC Infrastructure Advisory Services helped close 20 PPP transactions over FY08-11. MIGA provided guarantees to support eight private infrastructure projects in FY11. While the coordination and information flow among the various teams involved in PPP is improving, more work is needed to provide integrated support across the Group. Several initiatives are working to encourage teams to move this agenda forward at the country level, such as the GET PPP (a virtual team which provides support to regional teams seeking to advise clients on strengthening PPP programs or on specific transactions), the Finance, Economics and Urban Development (FEU)-IFC memorandum of understanding on PPP Advisory Services and FEU-MIGA memorandum of understanding on joint transactions. In addition, the Group should further leverage outside expertise (e.g., South-South exchanges, staff exchange program with the private sector and IFCOE in Singapore).

**Figure 8. Direct Leverage of IBRD/IDA Projects in Energy, Transport and ICT**



Note: analysis based on breakdown of project cost by financiers. For this analysis, the pre-SIAP and SIAP periods are defined as FY06-07, and FY09-10, respectively. In FY10, Energy, Transport and ICT lending constituted 81 percent of total infrastructure lending.



# ANNEX B

## World Bank Group Support for Infrastructure, FY03-11

<b>WBG Commitments in Infrastructure (US\$ Million)<sup>a</sup></b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
World Bank (IBRD, IDA, Others <sup>b</sup> )	5,454	6,508	7,658	8,362	10,596	12,154	18,424	24,573	21,076
International Finance Corporation <sup>k</sup>	1,022	1,400	1,265	2,302	2,196	4,180	3,770	4,165	3,160
Multilateral Investment Guarantee Agency <sup>i</sup>	433	399	393	467	539	757	109	403	908
<b>Total</b>	<b>6,908</b>	<b>8,307</b>	<b>9,316</b>	<b>11,131</b>	<b>13,332</b>	<b>17,091</b>	<b>22,303</b>	<b>29,141</b>	<b>25,145</b>
<b>WBG Commitments by Sector (US\$ Million)</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
Energy	2,125	1,810	2,863	4,651	3,839	7,669	8,332	12,947	8,091
Transportation	2,969	4,055	3,471	3,795	5,511	6,103	7,581	10,098	10,073
Water	1,464	1,903	2,447	2,028	3,282	2,544	4,955	4,999	5,366
Information & Comm Tech	305	539	523	555	676	486	957	640	1,496
Other Infra <sup>h</sup>	45	0	11	101	24	290	479	457	120
<i>Irrigation and Drainage<sup>j</sup></i>	<i>235</i>	<i>787</i>	<i>1085</i>	<i>422</i>	<i>912</i>	<i>493</i>	<i>589</i>	<i>1161</i>	<i>-</i>
<b>WBG Commitments by Region (US\$ Million)</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
East Asia & Pacific	1,644	2,009	1,923	2,045	2,696	3,523	3,916	3,331	5,895
Europe & Central Asia	612	960	1,812	2,252	2,182	2,809	5,741	3,372	3,372
Latin America & Caribbean	1,404	1,373	1,715	2,290	2,422	3,037	4,461	6,634	4,139
Middle East & North Africa	352	911	546	971	778	1,774	1,727	2,022	1,394
South Asia	1,352	1,101	1,594	1,760	1,852	2,959	2,360	5,369	6,896
Africa	1,533	1,828	1,701	1,812	3,332	2,949	4,097	8,406	3,310
Other <sup>c</sup>	11	125	25	0	69	40	0	6	138

<b>Development of Policy Loans</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
Number of Development Policy Loans containing infrastructure related components	29	21	32	31	40	50	62	50	35
Volume of Development Policy Loans containing infrastructure related components (US\$ million)	554	344	551	589	747	1,401	3,379	3,509	2,583
<b>World Bank Non-Lending AAA</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
Number of ESW Delivered with Infrastructure Components <sup>d</sup>	120	95	110	92	99	86	81	74	78
Number of Non-lending TA Delivered with Infrastructure Components <sup>d</sup>	106	91	80	66	112	131	161	168	162
Water	1,464	1,903	2,447	2,028	3,282	2,544	4,955	4,999	5,366
Information & Comm Tech	305	539	523	555	676	486	957	640	1,496
Other Infra <sup>h</sup>	45	0	11	101	24	290	479	457	120
<i>Irrigation and Drainage<sup>i</sup></i>	<i>235</i>	<i>787</i>	<i>1085</i>	<i>422</i>	<i>912</i>	<i>493</i>	<i>589</i>	<i>1161</i>	-
<b>Quality of Output for Infrastructure Projects (IBRD/IDA)</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
Project performance <sup>e</sup>									
Number of Projects	446	441	444	456	484	586	657	695	760
Net Commitment Amount (US\$ millions)	40,268	38,620	39,902	41,054	44,972	50,418	61,082	77,500	89,351
Projects at Risk (Percent)	15	15	13	12	16	17	20	20	18
Commitments at Risk (Percent)	13	14	10	10	16	16	17	19	14
Realism (Percent)	76	79	74	83	71	61	62	62	68
Proactivity (Percent)	89	77	79	81	78	83	76	68	63

Amount Disbursed in Fiscal Year (US\$ millions)	4,345	4,233	4,655	4,717	5,150	5,755	6,483	8,222	8,520
<i>Rating of Completed Projects (IEG Evaluation of Infrastructure Sector Board Projects<sup>f</sup>)</i>									
Number of Projects	61	59	57	59	57	58	45	27	2
Net Commitments	4,762	4,369	3,547	5,457	4,540	5,679	3,166	1,260	244
Outcome (% Satisfactory)	81	89	86	86	86	83	82	61	100
Sustainability (% likely)	86	88	84	71	100	-	100	-	-
Institutional development impact (% substantial)	67	67	55	57	100	-	100	-	-
Net Disconnect	7	-2	4	3	7	12	11	11	0
<b>Quality of Output for IFC Infrastructure Projects</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
IFC Infrastructure projects rated successful (%)	-	-	-	-	-	-	72	-	-
<b>Staffing Indicators<sup>g</sup></b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
World Bank Infrastructure Staff (IBRD/IDA)	377	446	461	463	542	595	664	661	667
IFC Infrastructure Staff	-	-	-	142	170	185	171	190	211

a WB figures based on OPCS Sector Codes for water (Sanitation, Solid Waste Management, Water Supply, Flood Protection, Sewerage General Water, Sanitation and Flood Protection), transportation (Roads and Highways, Ports, Waterways and Shipping, Aviation, Railways, General Transportation), ICT (Information Technology, Media, Postal Services, Telecommunications, General Information and Communications), energy and mining (District Heating and Energy Efficiency Services, Mining and Other Extractive, Oil and Gas, Power, Renewable Energy, General Energy) and the Public Administration of these sectors. World Bank figures include IBRD, IDA, GEF, Guarantees, Carbon Finance, Special Financing and Recipient Executed Activities. IFC figures include Energy, Telecoms, Water and Other Infrastructure projects. MIGA figures include Power, Transportation, Telecommunications and Water (Water, Water and Wastewater).

b Based on new commitments approved by the Board; other product lines include GEF, Carbon Finance, Special Financing, Recipient Executed Activities.

c "Other" includes World Bank region "Other" and "World" for IFC and MIGA.

d Sum of components containing infrastructure-related sector codes (i.e., a AAA project which is 75% INF and 25% Central Government Administration would be considered three-quarters of one AAA infrastructure activity, rather than one full AAA infrastructure activity).

e QAG Portfolio Status Indicators for projects with Infrastructure-related Sector Codes.

f IEG Evaluation Data of projects mapped to infrastructure-related sector boards is provided in Business Waterhouse. (Projects ending in FY11 have not yet been evaluated by IEG).

g Staff includes World Bank (IBRD/IDA) employees, Grade GF and above who are mapped to all Infrastructure Units in the Bank and the Infrastructure Investment/Advisory Departments in IFC. These numbers do not include JPO, JPA, SPA, Seconded, GE and below, Trust-funded staff for the Bank or IFC Regional Department Staff that spends a fraction of their time on the Infrastructure business.

h "Other infra" includes financing such as in Infrastructure Funds that cover multiple sectors.

i Based on MIGA figures include only signed contracts (commitments).

k Figures reflect amounts committed by IFC.

l Not included in total.

# ANNEX C

Figure 9: Structure of the Results Chain



## Results Framework

This Strategy Update pilots a newly developed results framework for sector strategies. This results framework is organized in a four-tier structure that groups indicators along the results chain. Tier 1 reflects the long term development outcomes that provide the context for the Group's work; and Tier 2 shows results supported by Group operations. These two tiers track elements of development results (Tiers I and II) and the other two capture elements of Group performance (Tiers III and IV). This results framework monitors, at an aggregate level, whether the Bank is functioning efficiently and adapting itself successfully (Tier IV), and whether it is managing its operations and services effectively (Tier III) to support countries in achieving results (Tier II) in the context of global development progress and priorities (Tier I). World Bank Group progress in implementing the strategy will be measured by indicators in Tier II, III and IV.

The results framework is designed to reflect the demand-driven nature of the Group's work. As such, it does not include targets for Tier 1 (global indicators) and Tier 2 (output and outcome level indicators). It uses all the relevant results indicators, which are part of the regular reporting system of the Bank through the Corporate Scorecard<sup>38</sup> and standardized sector indicators that are being developed by individual sectors through their sector strategies. Additional indicators are being developed by the Group in the context of an enhanced results focus (for example, in Pillar 2, an indicator to proxy for knowledge brokerage). Whenever not reported below, baselines for indicators will be established as part of the first year of strategy update implementation. The results framework for the WBG Infrastructure Strategy Update contains 30 indicators, out of which 17 are output and outcomes, 23 are input indicators and 7 are knowledge indicators.



## Tier 1: Global Development Context

	Key Outcomes	Global Outcome Indicators	Baseline	Year	Source
Overarching Vision	Growth	GDP per capita (constant 2000 US\$)	1,873	2009	CSC
		Private Sector Participation in Infrastructure (current million US\$)	1,466	2007-9	PPIAF
		Foreign Direct Investment net inflows (% GDP)	3.1	2007-9	IMF
		ODA (DAC/non-DAC) flows to infrastructure (billion US\$)	22.6	2009	OECD
		Public Investment Management Index (range, out of 4)	3.53-0.27	2011	IMF/PRMPS
	Inclusiveness	Population below US\$1.25 (PPP) a day	25.4	2005	CSC
		Employment to population ratio (%)	61.6	2008	CSC
		Ratio of female to male labor force participation (%)	66.9	2009	CSC
		Maternal mortality ratio (per 100,000 live births)	290	2008	CSC
		Public access to information (0-100)	50	2007	CSC
	Environmental sustainability	Per capital wealth° (US\$) 5% of which is natural capital	120,475	2005	World Bank
		CO2 emission (metric tons per capita):	3.0	2007	CSC
Sector-Level Vision	Energy	Electrification rate (% of population with access)	78.9	2009	IEA
		Firms identifying electricity as a major constraint in doing business (%)	38.9	Latest available	IFC
	Water	Improved water source (% of population with access)	87	2008	WHO
		Improved sanitation (% of population with access)	61	2008	WHO
		Delay in obtaining water connection for firms (days)	32.8	Latest Available	IFC
	ICT	Fixed broadband Internet subscribers (per 100 people)	9.1	2009	ICT Strategy
		Population covered by mobile cellular network (%)	80	2009	ITU
		Delay in obtaining a mainline telephone connection for firms (days)	22.8	Latest Available	IFC
	Transport	Roads paved (% of total roads)	49	2008	IRF
		Firms identifying transportation as a major constraint in doing business (%)	21.4	Latest Available	IFC

“Wealth” in this context is composed of produced capital (infrastructure and urban land), natural capital (cropland, forests, fish stocks, minerals, etc.) and human resources (human capital, quality of institutions). CSC Corporate Score Card (definitions as agreed with CODE); PPIAF Private Participation in Infrastructure Advisory Facility; IMF International Monetary Fund; OECD Organization for Economic Cooperation and Development; PRMPS PREM Private Sector Governance; IEA International Energy Agency; WHO World Health Organization; IFC International Finance Corporate; ITU International Telecommunications Union; IRF International Road Federation.

## Tier 2: Country results supported by the Group

	Global Outcome Indicators	Baseline		Progress		Source
		Value	FY	Value	FY	
Pillar 1	Number of people newly gaining access to electricity by household connection attributable to Bank projects (million)					Energy Strategy, Draft
	Average electricity interruption frequency per year in project area (WBG contribution to reducing average interruption)					Energy Strategy, Draft
	Number of countries supported by the Bank that have adopted transparency standards for oil, gas and mining industries <sup>K</sup>	9	FY08-11			EITI
	Number of people provided with access to "improved water sources" attributable to Bank projects (million)					Water, CSC*
	Number of people provided with access to "improved sanitation" attributable to Bank projects (million)					Water, CSC*
	Number of rural people with access to an all season road attributable to Bank projects (million)	[8.8]	FY10, 3 yr aggr.			Transport*
	Roads constructed or rehabilitated supported by Bank projects (km)	[31,000]	FY10, 3 yr aggr.			Transport, CSC*
	Access to telephone services (fixed mainlines plus cellular phones per 100 people) attributable to Bank projects					ICT*
	Access to internet services (number of subscribers per 100 people) attributable to Bank projects					ICT*
Pillar 2	Number of countries supported by the Bank that have adopted an integrated approach to city management <sup>K</sup>	3	FY11			Urban Strategy
	Number of countries supported by Group projects with ICT-enabled innovation <sup>K</sup>					ICT Strategy, draft
	Additional jobs created by Bank projects (#)	69,000	FY10			ICR Review
	Number of countries supported by WBG that systematically consider the value of natural resources in their national investment decisions <sup>K</sup>	0	FY10			Environ. Strategy, Draft
	Number of countries supported by the Bank which consistently have integrated disaster risk into national plans and policies		FY06			GFDDR
Pillar 3	Number of countries supported by the Bank which developed early warning systems for natural disasters	14	FY06-11			GFDDR
	Number of countries supported by the Bank on the enabling environment which have adopted plans or strategies for private participation in infrastructure <sup>K</sup>	21	FY08-11			PPIAF
	Number of countries supported by the Bank on the enabling environment which have adopted policies, law and/or regulation to promote private participation in infrastructure <sup>K</sup>	15	FY08-11			PPIAF

\* Core Sector Indicator (as defined by Sector Board)

[ ] IDA only K Knowledge indicator:

CSC Corporate Score Card (definitions as agreed with CODE); ICT Information Communication Technology; SDV Social Development; EITI Extractive Industries Transparency Initiative; ICR Implementation Completion and Results Report; GFDDR Global Facility for Disaster Reduction and Recovery; PPIAF Private Participation in Infrastructure Advisory Facility. All indicators retrieved from sector strategies are subject to change pending implementation of the respective sector strategy.

Indicator Definitions:

Electrification rate: Electricity access at the household level, i.e. percentage people who have electricity in their home. It comprises electricity sold commercially, both on-grid and off-grid. It also includes self-generated electricity for those countries where access to electricity has been assessed through surveys by government or government agencies;

Number of countries supported by the Bank that have adopted transparency standards for the oil, gas and mining industries: As measured by EITI compliance.

Number of countries for supported by the Bank which had adopted an integrated approach to city management: As measured by the number of Urbanization Reviews completed.

Number of countries supported by WBG that systematically consider the value of natural resources in their national investment decisions: As measured by the number of countries which have estimated comprehensive wealth in their national account systems.

Additional jobs created by Bank projects: Refers to number of jobs specified in ICR as a result of the project, where available. Of the 28 projects with ICRs in FY10, only five reported a number for jobs created. An additional eight projects reported on job creation, however did not give a numerical value to the number of jobs created by the project.

Number of countries supported by the Bank on the enabling environment which have adopted policies, law and/or regulation to promote private participation in infrastructure: As measured by PPIAF and its Sub-National Technical Assistance program's outcomes as of December 2011. This baseline reflects an assessment of 40 countries, out of a total of 126 in which PPIAF has worked.

Number of countries supported by the Bank on the enabling environment which have adopted plans or strategies for private participation in infrastructure: As measured by PPIAF and its Sub-National Technical Assistance program's outcomes as of December 2011. This baseline reflects an assessment of 40 countries, out of a total of 126 in which PPIAF has worked.

## Tiers 3 & 4: Operational and Organizational Effectiveness

	Input indicators	Baseline		Progress		FY15 Projection	Source
		Value	FY	Value	FY		
Pillar 1	Percentage of infrastructure portfolio with satisfactory environment and social safeguards compliance	96	FY10			90 -100	ICR review
	Percentage of infrastructure projects that are gender-informed		FY10			100	PRMGD
Pillar 2	Percentage of new transformational infrastructure projects	20	FY08-11			25-30	Project Document review
Pillar 3	IFC Mobilization ratio for infrastructure (%)	0.875	FY10-11			0.75-1.00	IFC
	Additional funding mobilized from other sources for IBRD/IDA infrastructure projects (excluding government's counterpart funding) (million US\$)	4,000	FY11			5,000-8,000	World Bank
	Additional funding mobilized from private sources for IBRD/IDA infrastructure projects (excluding government's counterpart and other public sector funding) (million US\$)	700	FY11			1,000-1,400	Project Document review
	Number of MIGA guarantees issued for infrastructure	8	FY11				MIGA
	Infrastructure as a percentage of MIGA portfolio	43	FY11			50	MIGA
	Number of Bank PPP projects approved	19	FY10			25-40	GET PPP
	Number of IFC PPP advisory activities completed	20	FY08-11			35-45	IFC
	Number of Bank PPP advisory transactions completed	18	FY10			30-40	Bank
	Number of PPIAF PPP advisory transactions completed	59	FY10			60-70	PPIAF
	Number of South-South knowledge exchanges <sup>x</sup>	(3)	FY11			(10)	WBI
Effective-ness	Number of joint WBG projects approved	4	FY11			10-15	Project Document review
	Satisfactory Bank infrastructure operations outcomes at completion as rated by IEG (%)	82	FY09			80-85	CSC/IEG
	IFC infrastructure projects rated successful (%)	72	FY11			75	IFC
	Gross disbursement for Bank infrastructure operations (billion US\$)	27	FY11			25-30	CSC
	Disbursement ratio for Bank infrastructure operations (%)	17	FY11			15-20	CSC
	IFC infrastructure lending commitments (billion US\$)	3.16	FY11			3.3-3.8	IFC
	Number of WB infrastructure staff	667	FY11			650-700	World Bank
	Number of IFC infrastructure staff	211	FY11			200 -250	IFC
	Average cost of preparing a Bank infrastructure lending project (average, US\$1,000)	336	FY11			336-400	CSC
	Average annual cost supporting Bank infrastructure project implementation (average, US\$1,000)	89	FY11			80 -100	CSC

K Knowledge Indicator:

CSC Corporate Score Card (definitions as agreed with CODE); SDV Social Development; PRMGD Poverty Reduction and Economic Management Gender and Development unit; IFC International Finance Corporation; MIGA Multilateral Investment Guarantee Agency; GET PPP Global Expert Team on Public Private Partnerships; PPIAF Private Participation in Infrastructure Advisory Facility; WBI World Bank Institute. Projections reflect the range of current expected client demand.

Indicator Definitions:

Infrastructure portfolio with satisfactory environment and social safeguards compliance: As measured by Safeguard rating in ICR, sometimes included as part of Bank Super-vision rating.

Percentage of infrastructure projects that are gender-informed: Based on a desk review at the design stage of four dimensions: (i) analysis of gender issues at design, (ii) actions considered to ensure the inclusion of women in project benefits, (iii) ex-ante impact assessment of potential benefits of the operation for women's empowerment and (iv) development of a sound monitoring and evaluation system. Each dimension is rated on a scale of 1 to 6 ("highly satisfactory" to "highly unsatisfactory") and the overall rating for a lending operation is the mean of the four dimensions' scores. A project is rated as 'gender-informed' if its average score is between 1 and 3.

Transformational infrastructure projects: The Bank will use multiple criteria, including but not limited to, projects integrating other dimensions than those considered under a traditional cost-benefit analysis<sup>39</sup> in the decision-making framework (e.g., preservation of natural capital, vulnerability to natural disasters, macro-policy goal of job creation, innovation/industrial policy; regional development); projects involving multiple sectors or working on the nexus between sectors; projects involving more than one country; and projects identified as high-risk/high-reward in ORAF.

Additional funding mobilized from private sources for IBRD/IDA infrastructure projects (excluding government's counterpart and other public sector funding): Project financing that comes from private sources. Does not include financing from other public sector donors. Calculated based on project financing data retrieved from project appraisal documents.

Additional funding mobilized by IBRD/IDA Bank from other sources (excluding government's counterpart): Project financing that comes from public and private sector donors, excluding government counterpart funding. This figure is calculated based on project financing data retrieved from project appraisal documents.

# ANNEX D

## Outcomes of the G20 Summit in Cannes on Infrastructure

**In November 2010, the G20 Summit in Korea identified infrastructure as critical to reduce the development gap in the world.** It established the High Level Panel on Infrastructure Investment, which consisted of leaders from the private sector, public sector and international financial institutions. The Panel was mandated to prepare recommendations for the G20 to scale up and diversify financing for infrastructure needs in low-income countries, including from public, semi-public and private sector sources, and identify, with multilateral development banks, a list of concrete regional initiatives. The High-level Panel on Infrastructure Investment submitted their recommendations to the G20 Development Working Group. Multilateral Development Banks also contributed to the G20 preparation process, by drafting several analytical pieces, including an MDB Action Plan. The outcome of this engagement with the High-Level Panel on Infrastructure Investment and MDBs is contained in the Final Declaration of the G20 - Building our common Future: Renewed Collective Action for the Benefit of All.

**The G20 Summit in Cannes in 2011 reaffirmed the importance of infrastructure for growth and job creation in developing countries.** The Strategy Update is fully aligned with this notion, emphasizing infrastructure's role in potentially accelerating growth in developing countries, and even changing the development trajectories of client countries.

**The G20 stressed the need for MDBs to focus on leveraging resources for infrastructure projects, including private sector.** The Strategy Update concurs with this thrust, by bringing private sector financing at the core of the Group's future engagement in infrastructure (e.g., reform of the Bank guarantee instrument, to expand its use to IDA-only countries, and ramp up of IFC and MIGA infrastructure business). Leveraging the World Bank Group's resources by mobilizing the private sector and others is critical to maintaining the Group's level of engagement in infrastructure.

**The G20 called for the scale up of regional projects.** The Strategy Update calls for the scale up of transformational projects, including regional projects. While the High-Level Panel established criteria to identify exemplary investment projects in cooperation with MDBs and highlighted 11 projects that have the potential to have a transformational regional

impact by leading to increased integration and access to global markets, the G20 did not commit additional funding to support those projects. Instead, it encouraged MDBs to prioritize them. The Strategy Update features four of these regional projects (e.g., Inga Hydropower Site, North-South Corridor, EAPP Ethiopia-Kenya interconnector, WAPP: CLSG interconnector).

**The G20 recognized project preparation funding as an important element in order to deliver these projects.** Given existing capital constraints of MDBs and the evolving fiscal situation of bilateral donors, enhanced project preparation funding will, however, have to derive from the increased effectiveness of existing resources. In this context, the Bank launched a mapping of available funding for project preparation in existing Project Preparation Facilities, with the view of identifying where opportunities exist to increase efficiency.

**The G20 identified bottlenecks and established new mechanisms to unlock public and private sector financing in low-income countries (e.g., High Level Panel Fellowship Program and the Sokoni Africa Infrastructure Marketplace).** The Group will complement these efforts as follows: scaled-up support for the enabling environment (e.g., investment climate and legal and regulatory frameworks to foster new entry and competition into infrastructure sectors); local capacity building (e.g., through the public-private partnerships practitioners' networks); harmonization of procurement rules, support for the Construction Transparency Initiative (CoST); and infrastructure data benchmarking (e.g., replication of the Africa Infrastructure Country Diagnosis in SAR).



# END NOTES

- <sup>1</sup> See World Bank Group Infrastructure Strategy Update – Issues and Concept Note (CODE2011-0030/1, June 15, 2011).
- <sup>2</sup> See for example, Roller and Waveman (2001 for OECD countries, Calderon and Servén (2003) in LCR countries, Donaldson (2001) in India.
- <sup>3</sup> See Calderon, Cesar and Luis Servén, 2010. Infrastructure and Economic Development in Sub-Saharan Africa. *Journal of African Economies*, Vol. 19, Issue Suppl 1, pp 113-187; or Calderon, Cesar et al, 2011. Is infrastructure capital productive? A dynamic heterogeneous approach. Policy Research Working Paper.
- <sup>4</sup> See Calderon, 2009.
- <sup>5</sup> See Justin Yifu Lin, 2011. Bridges to Somewhere. *Foreign Policy*.
- <sup>6</sup> See Infrastructure for Low-Income Countries – Background Paper for the G20 by the MDB Working Group on Infrastructure, June 2011. Outside Sub-Saharan Africa, where there was a concerted effort to undertake a collection of information on infrastructure, there is no firm data on how much countries are actually investing in infrastructure.
- <sup>7</sup> Since 2007, about 166 infrastructure funds, with approximately \$110 billion in commitments were raised globally. However, only 15 percent of these funds were targeted towards developing countries. The IFC launched an infrastructure fund with a target size of \$1 billion that aims at raising funds from sovereign and pension funds and other institutional investors.
- <sup>8</sup> Sovereign Wealth Funds, which are funds investing state-owned profits from fiscal surpluses, official foreign current operations, the proceeds of privatizations, or receipts resulting from exports, of commodities such as oil, diamonds and copper, held more than \$3.2 trillion in financial assets at the end of 2008. Relatively few investments went to emerging economies and were targeted towards infrastructure investments.  
  
Example include the China-Africa Development Fund, an equity fund that invests in Chinese enterprises with operations in Sub-Saharan Africa, reportedly invested nearly \$540 million in 27 projects in Sub-Saharan Africa that were expected to lead to total investments of \$3.6 billion in 2010. See Shendy, Riham, Zachary Kaplan, Peter Mousley, 2010. Towards Better Infrastructure – conditions, constraints, and opportunities in financing Public-Private Partnerships – Evidence from Cameroon, Cote D'Ivoire, Ghana, Kenya, and Senegal.
- <sup>9</sup> See New World, New World Bank Group: Post-Crisis Directions, Development Committee, April 2010.
- <sup>10</sup> See World Bank Group Sustainable Infrastructure Action Plan, FY08-11 (CODE2008-0028, March 21, 2008).
- <sup>11</sup> See Development Committee, Review of IBRD and IFC Financial Capabilities (DC2010-0005).
- <sup>12</sup> This adjustment resulted from the front-loading assistance during the global crisis.
- <sup>13</sup> See United Nations, Rio Plus 20 United Nations Conference on Sustainable Development.
- <sup>14</sup> See Transport: Safe, Clean, and Affordable... Transport for Development (2007); Water: Sustaining Water for All in a Changing Climate (CODE May 2010); ICT: World Bank Group ICT Sector Strategy (under preparation); and Energy: Energizing Sustainable Development: Energy Sector Strategy of the World Bank Group (under preparation).
- <sup>15</sup> Total investments in infrastructure consist of: (a) new investment resulting from the variation in infrastructure stocks between 2000 and 2005, valued at unit costs; and (b) requirements for maintenance, resulting from multiplying stocks of 200 by a depreciation rate. Infrastructure sectors include paved and unpaved roads, rails, ports, electricity generation and electrification, fixed and mobile communications, and water supply and sanitation. The curve is obtained by a three-degree polynomial trend.
- <sup>16</sup> See Calderon, 2010.
- <sup>17</sup> See World Development Report, 2011. Conflict, Security and Development (283).
- <sup>18</sup> See IFC, 2011. Development Finance Institutions and Infrastructure: A Systematic Review of Evidence from Development Additionally. Institute of Development Studies and Engineers Against Poverty.
- <sup>19</sup> See World Development Report, 2011. Conflict, Security and Development (158-161).
- <sup>20</sup> See Bank, 2006. Scaling Up Infrastructure: Building on Strengths, Learning from Mistakes.
- <sup>21</sup> See IEG, 2011. Evaluation on Capturing Technology for Development; and IEG, 2010, Water and Development – An Evaluation of World Bank Support, 1997-2008.

<sup>22</sup>See IEG, 2011. Approach Paper on Sustainable Infrastructure Services and the World Bank Group Phase I, Transport Sector.

<sup>23</sup>See also IEG, 2010. World Bank Country-Level Engagements on Governance and Anticorruption.

<sup>24</sup>CoST adopts a multi-stakeholder framework, similar to the EITI, where participation by countries and members of the multi-stakeholder groups is voluntary. The Bank has already committed \$0.5 million for three years. A Pilot Phase began in 2008 with eight participating countries: Ethiopia, Guatemala, Malawi, Philippines, Tanzania, United Kingdom, Vietnam and Zambia. With an additional \$5.5 million per year from G20 members, the Cost initiative will be expanded to 25 new countries over the next five years.

<sup>25</sup>See Nidumolu R. and al., Why Sustainability is now the key driver of innovation, Harvard Business Review, September 2009, pp 57-64.

<sup>26</sup>See World Bank, 2011. Modernizing The World Bank's Guarantee Instrument: Approach Paper. See also, IEG, 2009. World Bank Group Guarantee Instruments.

<sup>27</sup>See Private Sector Development Strategy – Mid-Cycle Implementation Progress Report, 2009.

<sup>28</sup>See OECD Principles for Private Sector Participation in Infrastructure, 2007, OECD.

<sup>29</sup>Gassner K, Vipul Bhagat, 2011. G20 Presentation on PPP.

<sup>30</sup>In order to contribute to enhancing local capabilities, the High-Level Panel on Infrastructure advocated for the creation of a G20 fellowship program, involving LICs, especially in Africa and private sector companies in G20 countries engaged in PPPs (such as financiers, concessionaires, contractors, and operators), to help strengthen PPP units, supervision capacity and private sector capacity in LICs. Such an exchange program, especially designed for local project teams, would aim at training individuals from LICs and provide them with experience from G20 countries. LICs would send an individual for training at private sector institutions in G20 countries for a one-year period. In exchange, individuals from G20 countries with PPP experience would be sent to LICs to work in public and private institutions for a one-year period. Each participating G20 country would be responsible for identifying private sector companies that are involved in infrastructure, project finance,

capital markets development, construction or infrastructure operation activities and inviting them to participate in this program. Bank, private equity firms, concessionaires, contractors and operators would form the core institutions at the outset, although other institutions could be included as the program evolves, notably consulting, audit, or law firms. Source: High-Level Panel on Infrastructure, Recommendations to G20 (final report), October 2011.

<sup>31</sup>See Private Sector Development Strategy – Mid-Cycle Implementation Progress Report, World Bank 2009.

<sup>32</sup>PPIAF finances assistance with non-transaction, upstream activities, like feasibility and option studies, contingent liability diagnostic, legal-regulatory reform and policy change, while IFC provides more downstream transaction assistance needed to close or restructure deals.

<sup>33</sup>The mentioned activities are tentative and their confirmation will depend on the evolution of the very fluid political situation in the region.

<sup>34</sup>See CODE2011-0030/1, June 15, 2011.

<sup>35</sup>See IEG, 2010. Phase 1 – The World Bank Group's Response to the Global Economic Crisis.

<sup>36</sup>See IEG, 2010. Safeguards and Sustainability Policies in a Changing World. An independent Evaluation of World Bank Group Experience.

<sup>37</sup>Results based on a review of all Project Appraisal Documents for infrastructure sectors over FY06-07 (pre-SIAP) and FY09-10 (post-SIAP). Methodology based on a set of 25 environmental and social proxies/indicators.

<sup>38</sup>See DC2011-0014.

<sup>39</sup>See also IEG, 2010. Evaluation on Cost-Benefit Analysis in Bank Projects.



# TRANSFORMATION THROUGH INFRASTRUCTURE



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