VIETNAM AND THE WORLD BANK:
THE INFRASTRUCTURE PARTNERSHIP
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This report was prepared by Mr Alan Coulthart, World Bank Lead Infrastructure Engineer and Dr. Duong Duc Ung, consultant with support from the Bank’s Vietnam Infrastructure Sector Coordinators and members of the infrastructure team. It also reflects the views of counterparts from key Government infrastructure organisations.
The World Bank has been privileged to be part of Vietnam’s remarkable achievements in reducing poverty and graduating to middle income status through sustained high levels of growth over the past thirty five years. Our comparative advantage is the scope and depth of our resources. As the only truly global multilateral development bank we are able to disseminate good practices from all around the world and help adapt them to the specific conditions that pertain to Vietnam.

Substantial progress has been made on the very ambitious objectives we set ourselves of expanding access to infrastructure, removing bottlenecks, facilitating the transition to a market based economy, addressing environmental degradation and supporting sector reform and decentralization. For most countries official development assistance only comprises a small part of total budgetary resources. It was therefore important to ensure that our assistance was used wisely to catalyze change in furtherance of these objectives. We believe that our partnership has been able to achieve this. To elaborate:

The power sector has performed admirably over the past two decades rising to the enormous challenge of meeting sustained annual growth in demand of fifteen per cent per year. No other country in the world has been able to match the speed at which Vietnam has been able to roll out universal electricity coverage from a level as low as 2.5% back in 1976. Eighty million people have gained access to electricity since then. We are proud to have been a part of this through the rural electrification and distribution projects we financed. Vietnam is also to be congratulated on the bold steps it is taking on electricity sector reform with unbundling of the state monopoly, the establishment of a regulator and tariff reform designed to incentivize private sector investment while protecting the interest of the poor. We are pleased to have been able provide advice and experience from other countries on this.

Efficient transport and modern logistics systems are essential requirements to be competitive in the global market place, particularly for countries like Vietnam that have relied on trade to drive growth. Our support has evolved over the past two decades from helping to restore the functionality of Highway 1 to providing funding for the expressway network that will relieve the congestion that it now faces. The contribution that we have been able to make in extending the all-weather rural road network to most commune centres has been a key ingredient to Vietnam’s success in reducing poverty. We are pleased to have been able to help preserve the value of all of these new assets by building capacity for more effective maintenance.

Cities are Vietnam’s engines of growth. Economic focal areas of Hanoi and Ho Chi Minh City alone account for 75% of national manufacturing production. They are however coming under immense
stress by rapidly increasing populations, inadequate spatial planning, environmental pollution and traffic congestion. Rural migration has led to the establishment of informal low income settlements. The new urban upgrading approach that we helped introduce, involving the incremental improvement of basic infrastructure and housing has had a profound impact on the lives of the poor people living in these settlements. The associated environmental improvements have benefitted all city residents. We are glad to see that this approach is being replicated in other cities. We also look forward in the coming years to working with the Ministry of Construction and city governments to improve urban planning and help introduce modern public transport systems.

Water is one of the basic necessities of life. From the outset we have been helping to expand access to safe and reliable water supply, initially in the main cities and subsequently in rural areas. An important part of this has been helping to put water supply provision on a more commercial footing so that efficient services can be sustained. We are proud to have contributed to the achievements made by utilities like the Haiphong Water Supply Company and the way in which the successes achieved there have been replicated by other water companies throughout the country.

Finally we very much look forward to the continuation of our partnership in the future. We see ourselves remaining engaged in all of the main infrastructure sub-sectors. We will redouble our efforts to help leverage more investment in infrastructure from the capital markets, commercial banks and the private sector. This will require, amongst other things important reforms in the infrastructure sectors, including the establishment of clearer legal and regulatory systems to enforce the rights and obligations of contracts and the creation of a level playing field for public and private companies alike. In terms of program delivery we will work with Government to gradually move from a retail or project level approach towards wholesale or programmatic operations. We would also like to increasingly involve local financial intermediaries to help build capacity for financing infrastructure within the country and also to reduce transaction costs. To speed up implementation we look forward to working with Government to introduce new instruments that disburse against outputs and/or results. All of these changes will require putting a greater reliance on Government systems to channel our financing and we are ready to provide the necessary support to enable this to happen.

This report celebrates the huge contribution infrastructure has made to Vietnam prosperity over the past few decades of our partnership. We very much look forward to continue helping Vietnam to consolidate its place as a major player in the world economy in the years to come.

Hanoi, October 26th 2011

Victoria Kwakwa
Country Director
World Bank Vietnam
CHAPTER I

INFRASTRUCTURE’S PLACE IN THE PARTNERSHIP
Support for infrastructure has played a major role in the partnership between the Government of Vietnam (Government) and the World Bank (Bank). Infrastructure accounted for two thirds of Bank investment lending and over 50% of total Bank support (budget support plus investment lending for projects). While funding physical works through credits and latterly loans has been the most tangible feature of the partnership, complementary advisory and analytical assistance (AAA) and capacity building have been of equal importance. AAA amongst other things has helped inform and shape debate amongst key decision makers on important structural reforms, in the various infrastructure sectors. It is also making important contributions to developing policies, legislation and the regulatory frameworks necessary to improve efficiency, enhance transparency, and attract new sources of finance and private sector participation. The capacity building and institutional strengthening components of projects have helped advance sector reform through important measures such as the establishment of the first economic regulator for the electricity sector. They have also been instrumental in putting the operation and maintenance of infrastructure assets and services on a more sustainable footing.

The Bank provided over $7 billion for infrastructure from 1994 to 2011. The allocations to each of the infrastructure sub-sectors are presented in Table 1 below (Annex 1 provides a list of the projects and programs supported in each sub-sector). The power sub-sector received the highest proportion of lending over the partnership period. This was required to meet the high capital expenditure requirements for generation, transmission and distribution facilities that were necessary to meet Government’s ambitious objective of achieving universal electricity access while at the same time keeping pace with huge increases in demand arising from rapid economic growth. While the investment needs of the power sector remain high it seems likely that the transport sector will require higher levels of support in the future to enable completion of the expressway network and further support for more efficient multi-modal transport systems. Urban development has also received more attention in recent years with urban transport and the upgrading of low income areas emerging as new priorities. There has been sustained support for water and sanitation over the entire partnership period. It seems likely with increasing levels of water pollution in urban areas that the trend of increased support for sanitation investments will continue.

Government’s request in 2009 that the Bank’s financing of infrastructure should be scaled up to both support continued economic growth and as a stimulus response to the global financial crisis indicates that infrastructure is likely to remain a key element of the partnership for the foreseeable future.

All of this investment played an important enabling role in Vietnam’s truly remarkable achievement of reducing poverty from 58% to 16% and sustaining an average economic growth rate of 7.3% between 1990 and 2010. Direct infrastructure interventions enhanced poor people’s lives by providing access to basic services.

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1 For the purposes of this report infrastructure covers the power (largely electricity), transport, urban, water and sanitation, and information and communication technology sub-sectors.
such as water and sanitation, electricity, and the mobility to reach social services and places of employment. Infrastructure is also making a significant contribution towards achievement of all eleven of the ambitious Vietnam Development Goals (VDGs) set by Government. For example, the health related VDGs depend on reliable access to safe water, good sanitation to prevent the spread of disease, and electricity for the storage of sensitive drugs and vaccines. Universal primary education can only be attained if there are roads to enable children and their teachers to reach schools.

The poor also benefitted indirectly from the investments in economic infrastructure including electricity networks, roads, railways and ports that facilitated Vietnam’s high rates of growth through the employment that it generated and the redistribution of wealth that arose from it. Countries like Vietnam and China that have invested heavily in such infrastructure in their early stages of transformation from agricultural to industrialized economies have been able to achieve major reductions in poverty levels.

There have been three phases of Bank support. The first phase concentrated on restoring strategic infrastructure assets that had been degraded by the years of war and isolation. The second phase was to support Government’s policy of inclusive and equitable growth and the third phase is facilitating continued rapid economic growth and mitigating its negative consequences. Phase 1 is largely complete while Phases 2 and 3, which overlap each other, are still under way.

The Bank’s comparative advantage in providing support for infrastructure is its global knowledge and convening abilities. It is the only multilateral development bank that provides worldwide coverage. This enables the Bank to collect and disseminate good practices from around the world. For example, experience gleaned from successful bus rapid transit systems in Colombia and Brazil is being used to guide the

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2 The VDGs are based on the Millennium Development Goals

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<th>Sector</th>
<th>Amount (million)</th>
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introduction of similar systems in Hanoi, Ho Chi Minh City, Haiphong and Danang. The Bank’s pre-eminent international reputation also gives it strong convening power. Amongst other things this has enabled the Bank to take the lead in promoting more effective aid coordination through government/donor partnerships in the infrastructure sector.
CHAPTER 2

GOALS AND OBJECTIVES
Over the past decade the Bank has aligned its Country Partnership Strategy (CPS) to the goals of Government’s five year Socio-Economic Development Plans (SEDP). The common goal for the past five years has been to “Sustain high economic growth to reach middle-income status while improving social achievements, upholding social coherence, and sustaining the natural resource base.” The Bank set the following objectives for the contribution that its infrastructure program should make towards achievement of this goal:

a) Reducing poverty by expanding access to infrastructure
b) Promoting economic growth by removing infrastructure bottlenecks;
c) Promoting economic growth by supporting the transition to a market economy;
d) Addressing climate change and the environmental impacts of rapid growth; and
e) Supporting sector reform and decentralization.

A further important objective of the Bank has been to make its support for infrastructure transformative and catalytic. In other words it should go beyond simply providing finance for much needed infrastructure by influencing the way that Government and others make their investments. The strategy has been to introduce and demonstrate new policies and ideas that can be adapted to the specific needs and circumstances of Vietnam and then replicated.

The following sections summarize the partnerships achievements so far against each of the objectives and highlight successful transformative and catalytic initiatives.

A. Reducing Poverty

This was in direct support of Government’s enlightened policy to promote inclusive and equitable growth. All infrastructure projects make a contribution towards reducing poverty. In the case of investments in economic infrastructure such as large power stations, the national electricity system (transmission and distribution) and the national highway network, the impact on poverty reduction is indirect, a consequence of the economic growth that the investments stimulate. Investments in social infrastructure such as expanding access to rural energy, rural transport and water and sanitation in both urban and rural areas have a more direct impact on poverty. As most of the poor in Vietnam live in rural areas, with the poorest and most vulnerable living in the remotest parts of the country, Bank support has put emphasis on expanding access to rural energy and transport. The rapid pace of urbanization arising from rural to urban migration as people moved in search of employment and better prospects also created challenges in Vietnam’s cities in towns. Municipal and provincial authorities have been challenged to keep pace with the increasing demand for the provision of basic urban services, especially water and sanitation and to ensure adequate housing and shelter for all citizens. These therefore also became important areas for Bank assistance.

The two Rural Energy Projects supported by the Bank contributed to Vietnam’s outstanding achievement of expanding electricity access from only 2.5% of the population in 1976 to almost
universal coverage by 2011. More than 80 million people were connected over this period with significant beneficial impacts on the quality of their lives (see Box 1). This is one of the highest access levels of any country at Vietnam’s stage of development. In the transport sector the main objective of the Bank’s support for the series of three Rural Transport Projects was to improve access to government services (education, health, agricultural extension etc), markets, and places of employment. Government’s objective of completing the provision of basic access to every commune and providing year round access on 90 percent of rural roads is close to being achieved. Research carried out since 2000 has shown that this investment in rural access has had major impacts on poverty alleviation, social participation, school attendance, and health services.

**Box 1: Impacts of Rural Electrification on Households**

Rural electrification has resulted in a better quality of life for many rural families. Electrification relieved the financial burden on rural households by reducing their reliance on kerosene for lighting and batteries for operating larger communication devices. The increased ownership of time-savings home appliances, in turn, meant less time dedicated to household chores and more spare time for reading, socializing, and leisure, as well as productive activities. Moreover, the availability of electricity contributed to greater school enrollment for rural youth, increased farm productivity, and higher household incomes.

In urban areas the Bank’s support for the rehabilitation and expansion of municipal water supplies has resulted in 2,400,000 people benefitting from improved water supplies. Several million more people will benefit from other projects that are under way. This made an important contribution towards the achievement of Vietnam Development Goal 7. Vietnam is one of the few developing countries that have already reached their MDG target for water coverage.

In response to the rising occurrence of overcrowded, low-income settlements in cities and towns the Bank worked with Government
to introduce the concept of incremental improvement, or the urban upgrading of these areas. Instead of simply demolishing the settlements a new approach was introduced that maintained the communities’ social fabric and facilitated the gradual improvement of whole neighborhoods with improved services and access. The Vietnam Urban Upgrading Project is described in Box 2 below. The upgrading approach to improving the lives of the urban poor has been codified as a national strategy in Vietnam and is a part of the new urban planning law. Work is currently under way to extend the methodology to a further nine cities throughout the country.

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**Box 2: The Vietnam Urban Upgrading Project**

**Approach**

The Vietnam Urban Upgrading Project, launched in 2004 alleviates poverty in urban areas by improving the living and environmental conditions of the urban poor using participatory planning methods, and influencing planning processes so they become more inclusive and pro-poor. The project: upgrades basic tertiary infrastructure and other services in low-income areas; provides affordable housing to low-income families for whom resettlement is unavoidable; enables housing improvements through a loan program; and provides technical assistance to improve land administration processes in the project cities.

**Results**

Over 200,000 low-income people have already benefitted directly from improved basic tertiary
infrastructure and social infrastructure facilities including health centers, kindergartens, community centers and primary schools.

**Project Highlights:**

- Major drainage and wastewater works have been completed in several cities benefiting over 400,000 additional people.

- Over 36,000 housing improvement loans have been made to low-income households in targeted communities with 95 percent repayment rates.

- Households with valid land-use certificates have increased from about 50 percent before the project to over 80 percent in targeted communities.

- Property values in upgraded low-income communities have increased 2 to 4 times.

- Phase 2 is under way and will include upgrading of low-income areas with over 600,000 additional people, plus major investments in drainage and flood control, waste water collection, canal improvements and road networks.

- All told, about 1,865,000 residents are expected to benefit directly, and another 1,070,000 residents will experience indirect benefits from the project.

**Bank Contribution**

The Bank contributed US$382.47 million.
The Bank put emphasis on ensuring that the benefits arising from large infrastructure investment are sustained by strengthening the capacity of the companies and organizations responsible for their operation and maintenance. In some cases this involved supporting Government to put more effective institutional arrangements in place. Importance was given to nurturing a service culture in the companies responsible for delivering infrastructure services, something that had been absent prior to the doi moi reforms. An essential part of this was the introduction of demand responsive participatory methods to enable beneficiaries to have a say in the level of service that they wanted and, more importantly, were willing to pay for.

Strong efforts were also made to improve the financial viability of service providers by, for example working with central government and local governments on the reform of tariff policy. The work undertaken with Haiphong Water Supply Company under the Water Supply Project was a particular success, transforming it from an entity that was unable to meet its obligations to one of the best performing public water companies in the developing world See Box 3 below. This had transformative effects throughout the country with other water companies replicating many of Haiphong’s successful initiatives. The Red River Delta Rural Water Supply and Sanitation Project also introduced an important innovation in the rural water sector by piloting a new “enterprise” model to manage rural water supply facilities on a commercial basis for the first time in Vietnam. This model is likely to be replicated in other provinces.

**Box 3: Improving water supply in Haiphong – the “Phuong” model**

In the summer of 1993, the city of Haiphong was faced with an acute water shortage. The situation was so bad that it led to social unrest. The city government responded by changing the management team of the Water Company and gave a clear mandate to the new director to produce results. The director worked hard to change the corporate culture with service delivery and accountability becoming the highest priorities. Training of utility staff, through the Bank Water Supply Project that was jointly fund by the Bank and Finnish Government made an important contribution to this change process.

The most fundamental change was decentralizing much of the responsibility for water delivery and customer relations to the ward or “Phuong”, the lowest administrative level in the city. This involved improving the distribution system in each Phuong with funding from the Water Supply Project by repairing leaks and arranging it in such a way that the bulk water supply to the Phuong could be accurately measured. The Company assigned staff to the Phuong administration to provide a rapid response to customer complaints. Arrangements were made with the Phuong authorities to collect water bills using an incentive scheme. Initially this model was tested in one Phuong and once this proved to be successful it was gradually rolled out to all phuongs in the city. In parallel the company developed internal processes and systems in which performance is linked to measurable indicators and staff are rewarded accordingly. Once the phuong model proved to be successful and confidence in the company management was established, regular tariff increases were approved and the company was given increased autonomy. Within a decade Haiphong had become the top performing water company in Vietnam and it was highlighted in a Bank publication, “Characteristics of Well-Performing Public Water Utilities” as one of the best performing public utilities in developing countries.
B. Promoting economic growth by removing infrastructure bottlenecks

The main contribution that the Bank made to Vietnam’s high level of economic growth was in removing bottlenecks in the energy and transport sectors. Goods cannot be manufactured and crops and other foodstuffs cannot be processed without energy. Efficient and reliable transport and logistics are essential for delivering the inputs to, and outputs from production. Vietnam had to overcome immense challenges to reach its current place in the highly competitive global economy. In the initial stages it had to quickly restore degraded infrastructure assets to a functional state and then progressively expand their capacity to keep pace with the rapidly growing demands of industry and commerce. The pace of growth, particularly the demand for power put huge pressure on government and its institutions both in terms of mobilizing the finance required and in delivering the necessary infrastructure facilities before demand outstripped supply.

When the partnership started much of the power sector infrastructure was old, overstretched and inefficient. More than $1 billion’s worth of Bank support provided through the Power Sector Rehabilitation, Power Development, the First and Second Transmission and Distribution Projects and latterly the Rural Distribution Project was directed at removing bottlenecks through rehabilitation and reinforcement. This supported all components of the network from generation to low voltage distribution. The investments helped ensure the more efficient and reliable delivery of power to where it was most needed. For example completion of the 500kv north – south transmission backbone enabled comparatively low cost hydropower generated in the north and centre to be transferred to the concentration of industrial and commercial centres in the south of the country.

In the transport sector the First and Second Highway Rehabilitation Projects approved in 1993 and 1996 respectively resulted in the rehabilitation of 720km of key sections of Highway 1 leading south from Hanoi and south from Ho Chi Minh City. Given that these two cities and their hinterlands are the main centres of industrial and manufacturing activity, restoring the effective functionality of Highway 1 was a key driver of national economic growth. The Bank is now engaged in the next stage of modernization of Vietnam’s transport system by supporting the development of a national network of expressways. The current priority is the north to south expressway running parallel to Highway 1 to relieve the traffic growth that has overwhelmed Highway 1 since it was rehabilitated.

A critical ingredient of Vietnam’s continued evolution into middle income status is the provision of modern logistics to facilitate trade-
led growth and efficient distribution. Towards this end in addition to supporting increased capacity of the national highway network the Bank has supported three projects to enable the more efficient transfer of goods from roads to inland waterways and seaports: Inland Waterways, Mekong Delta Transport Infrastructure and Northern Delta Transport Development. These projects promote multi-modal transport to take advantage of the lower costs of waterway transport particularly for bulk goods.

Traffic congestion has been one of the most pernicious problems arising from the combination of high economic growth and rapid urbanization. It increases the cost of doing business in the country’s main commercial centres thereby undermining Vietnam’s competitiveness. The Bank is helping to address this problem through Urban Transport Projects in Hanoi and Haiphong and further projects are being developed for Ho Chi Minh City and Danang. Good urban planning is an integral part of developing efficient transportation, particularly at this time of rapid urbanization. The Bank is therefore providing advice on this to the Ministry of Construction and Municipal authorities through technical assistance included in projects and stand alone analytical and advisory activities (more on this below).

Over the years of engagement the Bank has been consistently fostering a stronger maintenance culture for infrastructure. This seeks to ensure that the full value of the huge investments made is secured throughout their full design life. In the case of the Road Network Improvement Project the main objectives were to demonstrate new and more effective ways of carrying out maintenance and to strengthen the capacity of road agencies to plan and manage maintenance.

C. Promoting economic growth by supporting the transition to a market based economy

Vietnam needs to mobilize more funding for infrastructure from non-budget sources, including the domestic and international capital markets and commercial banks. Experience from elsewhere in the world demonstrates that private
sector participation in the financing, design, construction, and operation of infrastructure can be very cost effective. It encourages innovation and generally leads to the delivery of higher levels of service. Amongst other things this requires a transparent and independently adjudicated legal system to enable disputes to be fairly resolved. Private companies need to be able to predict their costs and revenues with a reasonable degree of accuracy. They also need to be able to compete on an even playing field with state owned enterprises. In the absence of some or all of these requirements the private sector, large international companies in particular will either decline to become involved or may require a very high risk premium. Some progress has been made but more needs to be done to attract the volume of funding and level of private sector engagement that Vietnam needs to remain competitive in the global market place.

From the perspective of the private sector the main constraints are: (a) the lack of a clear signal from government on the role that the private sector should play (some progress has been made in the power sector with the local private sector investing in small and medium sized power plants, but the construction of several large power plants has been allocated to state owned enterprises rather than opened up to competition – see more on this below) ; (b) the continued dominant role played by powerful state owned enterprises and delays and lack of clarity on how to transform them to fully commercial enterprises (equitization); and (c) tariffs for infrastructure services being set at levels that are in many cases well below the full cost of production.

From the Government’s perspective the main concerns associated with greater private sector involvement is: (a) the perceived loss of control over important strategic interests; (b) the contingent liability of providing the sovereign guarantees often required by international investors; and (c) the lack of experience and expertise in negotiating with large international corporations.

The Bank has worked extensively with Government on the power sector reform agenda to address these issues with a view to strengthening electricity supply security and ensuring that electricity prices are competitive. This will be achieved by attracting a broader range of participants to invest in and modernize the management and operation of the electricity industry; and through transition to electricity tariffs that incentivize investment on the supply side, and provide pricing signals for the efficient use of electricity on the demand side. Progress has been made with 30% of the ownership of power generation now lying outside of Vietnam Electricity (formerly Electricity of Vietnam, EVN) through a combination of divestiture and entry into the market by other players. However a significant part of this has been through contracts for power plants negotiated directly with the large state owned energy enterprises Petro Vietnam (oil and gas) and Vinacomin (coal) rather than awarded through competition.

To encourage private sector participation in the energy sector the Bank provided a $75 million partial risk guarantee in 2002 for a 715 MW gas fired power station, Phu My 2.2 that was awarded through international competitive bidding (see Box 4 for details). The Bank Group’s Multilateral Investment Guarantee Agency (MIGA) facilitated the closure of the financing of a second similar sized power plant, Phu My 3 by providing
guarantees to the private sector developers and financiers. Given the considerable savings that derived from awarding Phu My 2.2 on a competitive basis it has been somewhat disappointing that Vietnam Electricity did not replicate this approach to a greater extent than has occurred. While it took a considerable time to finalize the Phu My 2.2 contract, this was to be expected with an approach that was so new to Vietnam. The lessons learned from Phu My 2.2 should have enabled subsequent transactions to be processed in a shorter time.

**Box 4: Phu My 2.2. – The privately financed power station awarded on a competitive basis**

The 715MW gas-fired Phu My 2.2 power project is part of a large power complex built to take advantage of offshore gas resources from Vietnam’s Nam Con Son field. It was the first private infrastructure build-operate-transfer (BOT) project in Vietnam for which the project sponsors were selected through international competitive bidding. The Bank helped the government finance the first phase of the Phu My 2 power project as a public project and assisted develop the second phase as a 20 year BOT project by financing the government’s preparation of bidding documents and offering an IDA Partial Risk Guarantee (PRG) as an option to all the bidders. The offering of the PRG enhanced competition and resulted in Government receiving very competitive tariff proposals that were around 50% lower than tariffs for power plants that were being awarded at the time on a negotiated basis.

The project had a total financing requirement of just over US$400 million that was funded at a debt-equity ratio of 75:25. Financial closure was achieved in December 2002 and commercial operation started in early 2005. The Bank’s Partial Risk Guarantee covers scheduled debt service payments of principal and interest to the project’s commercial lenders against possible default of payments on the BOT contract.

The Bank has been working with the MOF and MPI initially to develop policies that foster the necessary enabling environment to attract the private sector and subsequently to draft legislation, prepare implementation guidelines and build specialist capacity. As a result of this work Government has requested the Bank to develop a pilot Public Private Participation (PPP) transaction for a section of the national expressway network from Dau Giay to Phan Thiet. It is intended that Bank funding will be used for “viability gap financing” to reduce the investment cost to a level that can be covered by toll revenues that are affordable to road users. In this way a relatively small public sector investment can leverage a much large amount from the private sector. The Bank has also been supporting Government’s strategy of introducing greater
competition in construction and maintenance works by for example piloting performance based highway maintenance contracts that are awarded on a competitive basis.

At the sub-national level the Bank has been providing support to help mobilise additional sources of finance through borrowing from commercial banks, the capital markets and bond issues. This is particularly important given that Vietnam’s cities are its main engines of growth. Hanoi, Ho Chi Minh City and their hinterlands account for some 75% of national manufacturing production. As a result of their success at attracting commercial investment they have to cope with the increasing demands arising from high levels of inward migration, increasing levels of environmental pollution and choking traffic congestion. The Bank is supporting Ho Chi Minh City, Hanoi and other provincial governments to leverage commercial funding for infrastructure investments through the Local Development Investment Fund Project. Other innovations at the sub-national level include support for a performance based contract to reduce non-revenue water in Ho Chi Minh City in which a significant part of the contractor’s remuneration depends on the amount of water saved. A pilot to stimulate the interest of the local private sector to invest in the Design, Build and Operation of water supplies for small towns was successfully undertaken in two medium sized towns in Haiphong and Bac Ninh.

While there are some encouraging green shoots much more could be done if a less cautious approach to private sector participation was adopted. Experience from other countries indicates that the private sector’s greater efficiency would result in lower costs. It would also provide an effective benchmark against which public sector service providers could be measured and held to account. An important step towards improving sector performance is clear delineation of the ownership of infrastructure, the responsibilities for operating it and regulation of its operation. Establishment of the Electricity Regulatory Authority of Vietnam (ERAV) as the economic regulator of the power sector has been a significant first step to demonstrate the benefits of this approach. Replicating this step in other sectors would be an important step in establishing objectivity in infrastructure service provision.

These are complex issues that will need to be overcome to enable Vietnam to attract the levels of funding from the local and international capital markets and interest from the private sector that are essential to enable the high levels of economic growth to be maintained. Government and the Bank will continue working together to find ways of addressing these challenges.
D. Addressing climate change and the negative environmental impacts of rapid growth

Vietnam’s high rate of economic growth has come at a price in terms of environmental degradation. The increasing concentrations of people and industries, the huge increase in motor vehicles and increased reliance on coal fired power that has occurred over the past two decades have taken their toll on air and water quality. This is particularly evident in Vietnam’s rapidly growing cities.

A study on the Economic Impact of Sanitation carried out by the Bank’s Water and Sanitation Program concluded that economic cost of environmental pollution in Vietnam was $780 million per year arising from additional health care, losses of land and water resources and impacts on tourism. There are therefore strong economic as well as social welfare arguments for dealing with the ravages of environmental degradation.

In recognition of this problem the Bank has provided extensive support for urban environmental sanitation over most of the past two decades. The Three Cities Sanitation project approved in 1999 addressed water pollution, flooding, and solid waste management in Danang, Haiphong, and Halong. This introduced modern wastewater treatment facilities and sanitary landfills for the safe disposal of solid waste, including medical and other hazardous wastes for the first time in Vietnam. The storm drainage facilities helped reduce the flooding that is an all too common feature of life in Vietnam’s cities during the rainy season. The Ho Chi Minh City Environmental Sanitation Project approved in 2001 enabled the construction of a 3 metre diameter tunnel to intercept the wastewater of around 1.2 million people living in the central area of the city. The intercepted wastewater is discharged by one of the largest pumping stations in South East Asia via a tunnel under the Saigon River where it will initially be dispersed through a carefully designed diffuser into the river. Design of a second phase to treat the wastewater has recently started. These two projects set the benchmark for subsequent sanitation projects supported by the Bank and other donors including the Coastal Cities Environmental Sanitation Project and the Danang Priority Infrastructure Investment Project supported by the Bank.

Ho Chi Minh City Environmental Sanitation Project – wastewater tunnel

Vietnam is also beginning to experience the impacts that rapid industrialization has had at the global level on climate change. It has been identified as one of the countries most vulnerable to rising sea levels because the majority of its population and much of its major infrastructure assets are located in the low lying deltas and coastal areas that are susceptible to flooding. Being located in the equatorial typhoon zone it is also suffering the consequences of the
increasingly frequent and more intense storms that appear to be a consequence of global warming. The Bank is supporting Vietnam through mitigation measures to reduce greenhouse gas emissions and by working with city authorities in Ho Chi Minh City, Hanoi, Can Tho and Dong Hoi help strengthen their resilience to climate related disasters.

In the energy sector the Bank is supporting Government the adoption of renewable sources of power, improve energy efficiency and promoting demand side management. Technical assistance provided to the Ministry of Industry and Trade resulted in adoption of a policy that created incentives for renewable generation projects up to 30 MW. This has initiated investment, mainly from the local private sector, in 76 small hydro plants with a total capacity of 727 MW within two years of the policy being adopted. For energy efficiency the Bank was able to bring international knowledge and practical experience to support preparation and implementation of the Energy Efficiency and Conservation Law and the National Energy Efficiency Program. Demand side management is being addressed through advice on electricity tariff reform.

In 2011 the Bank approved support for the 260 MW Trung Son Hydropower Project. In addition to providing construction finance, the project seeks to demonstrate good international practice in mitigating social and environmental impacts and in improving dam operating safety (see Box 5).

Box 5: Emerging Lessons from Trung Son Hydropower Project

The Trung Son project preparation experience offers a range of lessons that can be useful for preparing good sustainable hydropower projects. Takeaway recommendations include:

- However tempting it is to cut corners to accelerate project preparation thorough baseline analyses of technical, economic, financial, social and environmental aspects are essential because they inform much more than the relatively straightforward question of project viability.

- Teams, clients and key stakeholders all stand to gain if environmental and social safeguards are seen as a development opportunity and not simply a matter of mandatory compliance.

- Be flexible in preparation and be prepared to revisit parts of the project design to incorporate new information that emerges along the way. Put in place and implement a communications plan. Be transparent and share information early on. Unless there is an overriding reason not to disclose, make it available to the public.
In terms of adaptation, measures are being taken to reduce the vulnerability of cities and also the national road network to flooding from higher intensity rain storms. This includes increasing the capacity of urban drainage systems and ensuring more effective maintenance arrangements are put in place. In the case of roads, embankments are being reinforced to withstand flooding, levels are being raised and the capacity of drainage structures increased.

The Bank has undertaken several regional AAA studies including The Winds of Change - East Asia's Sustainable Energy Future looking at how best to adapt to the consequences of climate change and the most effective ways of mitigating the expected impacts. This concluded that there is an economic case for transitioning to a lower carbon growth path. It does however require very high levels of investment and follow-on studies are under way to identify ways in which Green Finance could be mobilized to enable this to happen. The Ecological Cities as Economic Cities Initiative is a further regional activity in which the Bank is supporting more sustainable development. Pilot work is under way on this in Haiphong. Considerable work is also being carried out on urban resilience to better prepare cities (the physical infrastructure, the local government and the readiness of residents themselves) to plan for and deal with the consequences of more frequent and severe natural disasters.

The worst impact from the huge increase in motor vehicles is serious air pollution in the form of particulates, ozone and carbon monoxide in Vietnam’s cities. On a positive note Vietnam, with support from the Bank successful phased out lead from gasoline more than a decade ago removing a serious hazard to children’s health. The remaining pollution from vehicles need to be addressed by controlling emissions from older diesel engine vehicles and two stroke motor bikes, promoting greater use of non-motorized transport, and reducing traffic congestion through more extensive public transport and better traffic management. The Bank is supporting the latter through the Hanoi Urban Transport and the Haiphong Urban Transport Projects. Similar projects are currently being prepared to promote modern public transport systems in Danang and Ho Chi Minh City. Environmental pollution of waterways by boats through the illegal disposal of human waste, spillages of fuel and lubricants and the poor unloading practices of commodities such as coal and construction materials is being addressed in the Mekong Delta and Northern Delta Transport Projects.

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Cities Initiative is a further regional activity in which the Bank is supporting more sustainable development. Pilot work is under way on this in Haiphong. Considerable work is also being carried out on urban resilience to better prepare cities (the physical infrastructure, the local government and the readiness of residents themselves) to plan for and deal with the consequences of more frequent and severe natural disasters.

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The high incidence of road accidents is a further negative consequence of rapid economic growth. Vietnam has one of the world’s highest rates of road accident fatalities. This has resulted from the rapid growth in traffic, increased vehicle speeds as road surface conditions have improved and often lax control in licensing drivers. The Vietnam Road Safety Project approved in 2005 was the first ever standalone project approved by the Bank that focused exclusively on road safety. In 2009 Vietnam achieved an important milestone with the successful introduction and enforcement of mandatory use of helmets on motorcycles. This is expected to significantly reduce the number of fatalities and incidence serious head trauma injuries.

E. Supporting sector reform and decentralization

Support for infrastructure sector reform has been a major part of the Bank’s engagement with Vietnam. In the power sector this has involved supporting Government’s decision to unbundle EVN’s monopoly to introduce competition and eventually provide more choice for consumers. The Bank has supported the reform agenda over several years through technical assistance and analytical and advisory activities much of which was delivered through the System Efficiency Improvement, Equitization and Renewables
Project (SEIER). This included help with drafting the Electricity Law that came into effect on July 1, 2005 and the Power Market Roadmap approved by the Prime Minister in 2006. These provide the directions for the sector reform that will gradually be rolled out over the next 20 years. The Bank is currently supporting the reform process through a series of three Power Sector Reform Development Policy Operations (DPOs). The first of these was approved in 2010 and progress in achieving policy actions is already well advanced on the second. These are supporting the: (i) introduction of competition starting at generation, later moving to the wholesale market, and eventually retail supply competition, in order to allow prices to be formed in a competitive and transparent way; (ii) restructuring of the sector to create arrangements that enable market conditions and competition, and eliminate conflicts of interest due to cross-ownership between buyers and sellers; (iii) introduction of electricity tariff setting regulation that reflect efficient costs and improve the targeting of subsidies for the poor; and (iv) improving efficient use of electricity on the demand side.

The Bank’s has also helped promote and pilot community engagement in the planning and implementation of a number of projects. Amongst other benefits this has resulted in the provision of infrastructure services that are better matched to people’s needs and what they can afford. Examples include the Red River Delta Rural Water Supply Project and the Vietnam Urban Upgrading Project. Community involvement in supervision of projects such as the Third Rural Transport Project has helped address corrupt practices and brought increased pressure on contractors to deliver on time and to budget.

One of the most important and initially rather contentious areas of policy reform that the Partnership has had to address has been in relation to involuntary land acquisition and resettlement. In a densely populated country like Vietnam resettlement and land acquisition is a feature of most infrastructure projects. The policies of Government and the Bank were very different in the early stages of the partnership which led to difficulties. However, over the years with increasing knowledge and understanding by each partner of the issues faced, the policies have gradually converged. The main challenge now is to build awareness and capacity in the agencies responsible for implementing projects.

Urban planning is another important area in need of urgent reform in Vietnam. The current top down rigid and prescriptive approach to city master planning needs to be changed. The heavy reliance on technical criteria and design norms needs to be replaced by a more dynamic and flexible approach that is better attuned to rapidly changing market trends and socio-economic demand. The planning process needs to become more inclusive and transparent. The City Development Strategies (CDSs) for Can Tho and Halong that were piloted by the MOC with Bank support in 2007 introduced many of these modern planning concepts. More recent analytical work is set to move this forward such as the Urbanization Review and the Eco2 cities work in Ho Chi Minh City and Haiphong. It is also important that Vietnam should take account of and learn from the planning mistakes made by other cities and countries in terms of avoiding excessive urban sprawl and taking careful account of social aspects when redeveloping low income communities.

Progressive decentralisation from central line ministries to local governments in the provinces,
districts and communities has been a significant part of the doi moi reforms. On the positive side it promotes increased accountability by bringing decision making closer to the people. It has however created challenges, particularly in the initial stages, given the lack of experience at sub-national government levels. Recognizing this, one of the main priorities of Bank projects implemented by sub-national governments has been to help build capacity through technical assistance. This has been particularly important for urban development, water and environmental sanitation that became local government responsibilities in the early stages of the partnership.
CHAPTER 3

FUTURE DIRECTIONS FOR THE PARTNERSHIP
Given the level of investment needed to sustain Vietnam’s high level of growth infrastructure will continue to account for the largest share of Bank lending. Vietnam will remain eligible for concessional IDA financing over the next few years. IBRD lending will increase and most will be used for infrastructure. As Vietnam transitions to a more market-based economy with the private sector increasingly a driver of growth, IFC and MIGA are expected to become increasingly involved in the infrastructure sector. To encourage greater private sector participation MIGA has developed a new instrument to provide cover against regulatory risk to supplement its traditional political risk guarantees.

Over the coming years the Bank will continue to seek to make its support transformative and catalytic. In furtherance of this the program will become less dispersed through consolidation and more selective to sharpen its strategic focus. The Bank will concentrate its support in areas where the likelihood of sustained impact through replication by Government and/or the private sector is judged to be high. This will include gradually moving away from a “retail” model of supporting largely standalone sector investment projects to a more “wholesale” approach based on programmatic operations. Government’s National Target Programs such as the Rural Water Supply and Sanitation Program that has been supported by bilateral donors for a number of years may prove to be effective instruments for this. New approaches including results based and output based disbursement will also be introduced. Development policy loans are likely to be used to a greater extent than at present to promote infrastructure sector reform. The Bank will seek to increasingly work through local financial intermediaries to develop capacity for infrastructure financing within the country and to reduce transaction costs. Moving to these new instruments will require an increased reliance on Governments fiduciary and procurement systems to channel Bank funding. The Bank will therefore work with Government to strengthen them.

The Bank will align its future support to Government’s development vision for the next decade as laid out in its Socio Economic Development Strategy (SEDS) for 2011 to 2020. The Bank’s infrastructure program will be closely aligned to two of the three “breakthrough areas” identified defined in the SEDS: (i) infrastructure development; and (ii) improving market institutions. The Bank’s Country Partnership Strategies (CPS) will continue the practice of supporting Government’s five year Socio Economic Development Plans (SEDPs) that will translate the SEDS into action.

Vietnam’s graduation to middle income status is having an impact on its competitiveness by increasing the cost of labour and other production inputs. This coupled with the recent global financial crises is making it difficult to sustain the high levels of economic growth that drove prosperity over the past two decades. A further negative consequence has been on the sustainability of natural resources. Fast growing urban areas and the rapid proliferation of industrial zones has resulted in serious water and air pollution. The opportunity derived from Vietnam’s rising affluence has not been equally distributed. People living in more remote rural areas, ethnic minorities in particular, have not shared in the benefits of growth, including access to basic infrastructure services, to the same extent as others.
These three issues, competitiveness, sustainability and opportunity will be the pillars around which the Bank's investments and policy support are organized in the Bank's CPS program for 2012 to 2016. These pillars will be interwoven with three complementary cross cutting themes necessary for effective development. These are: (i) strengthening governance, (ii) supporting gender equity, and (iii) improving resilience in the face of natural hazards and the impact of climate change.

**Competitiveness**
Considerable challenges remain in improving the quality, sustainability, and reliability of energy, water, and transport infrastructure. In the energy sub-sector, through a complementary mix of development policy operations and sector investment loans the Bank will continue to support transmission and distribution with an emphasis on issues of operational efficiency, market competition, and transparent and cost reflective electricity pricing. The IFC will focus on promoting energy efficiency.

Support for a more competitive transport sector will include funding for the expressway network. This will include an innovative PPP transaction in which Bank funding will be used to leverage significantly higher levels of private finance. Continued support will be given to multi-modal transport systems to help deliver the optimal transport mix between roads, waterways and coastal shipping. Investment funding will be complemented by technical assistance in the areas of trade facilitation and the development of institutional and regulatory frameworks for multi-modal transport and logistics. Continued attention will be given to helping improve capacity for more effective road asset management and better project and contract management and developing.

Emphasis will be given to improving the quality and efficiency of water supply, as well as integrated providing support for urban development initiatives in larger cities, covering urban planning, municipal management, and the integration of major infrastructure and basic services to make these cities more attractive venues for investment. Priority will be given to investments in urban transport infrastructure and mass transit systems and the nexus that exists between spatial planning and urban transport development. Project design will be informed by ongoing programmatic AAA on urban development. The World Bank Institute, the capacity building arm of the Bank, will support the program with capacity building in urban planning and management for city officials.

The Bank will support the Government’s overall plan to scale up infrastructure investment by helping to mobilize funding from the capital markets, commercial banks and the private sector. Support for power sector reform will continue through the ongoing series of development policy operations. The IFC will provide complementary support for PPP transactions by providing advisory services and, where appropriate, investment. Technical assistance will also be extended to look at potential reforms in the gas sector including an assessment of the feasibility of importing liquid natural gas (LNG) as an alternative and cleaner burning source of energy.

**Sustainability**
The Bank will support measures to reduce environmental pollution to mitigate adverse
health and economic impacts and improve the physical environment. Continued support will be given to urban sanitation through investments in infrastructure to collect and treat wastewater and solid waste in the largest cities where pollution levels are highest. This will be complemented by a stock-taking exercise of the policies and practices for wastewater management in Vietnam over the past decade to help the Ministry of Construction prepare authoritative guidance for sub-national authorities on the best practices for Vietnamese conditions. The low air quality in Vietnam’s cities will be addressed through urban transport projects to introduce modern public transport systems using buses operating on compressed natural gas. Support will also be given for the safe disposal of hospital waste and the better management of wastewater from industrial parks. In the energy sector support will continue on demand side management and to promote greater energy efficiency. Subject to assessment of the viability of LNG as an option for power generation, support may be provided for the development of efficient gas fired power plants as a lower carbon option to increased use of coal.

**Opportunity**

The Bank will continue to support the provision of basic infrastructure for the poor and vulnerable in rural and urban areas. This will build on the existing engagement in rural transport to connect communities with improved all-weather roads. It will strengthen management and maintenance of the rural road network in provinces throughout northern and central Vietnam. Support will also be provided to sustainably increase access to water supply and sanitation in rural areas, in this case building on the experience gained on the Red River Delta Rural Water Supply and Sanitation Project and the Government’s own National Target Program. Work is under way to pilot a new results based instrument that should enable benefits to be delivered faster than in the past. In urban areas the approach of improving low income areas by upgrading basic infrastructure and facilitating the incremental improvements to housing that was introduced through the Urban Upgrading Project will be extended to other cities and towns. The Bank will also support the Ministry of Construction and sub-national governments to mainstream the approach at the national level by amongst other things disseminating the excellent results already achieved.

**Cross Sector Themes**

In terms of governance the Bank will integrate into its projects measures to strengthen institutional
capacity, promote beneficiary participation, increase transparency and accountability and eliminate corruption. The Bank will continue to work with Government to find a solution to the problem of highly indebted dependent state owned construction companies. The existence of these companies in their current form creates conflicts of interest and distorts the market by limiting opportunities for private sector involvement. Their lack of resources is a major cause of the poor quality and delayed implementation of many infrastructure works. This needs to be addressed to enable Vietnam to move forward to full middle income status.

A gender equity lens will be applied to the design of infrastructure projects to identify opportunities to integrate gender more systematically into Bank operations, as was done in the case of the Third Rural Transport Project (see Box 6). Women have also been very active participants in the Bank supported urban upgrading and rural water supply and sanitation projects that engage beneficiary communities in a highly participatory way.

**Box 6: The role of ethnic minority women in road maintenance**

This was built on a win-win solution of matching the interests of poor women in ethnic minority communities wishing to supplement their household incomes and local authorities who were faced with the difficulty of finding contractors for routine road maintenance who were willing to work in remote areas. More than 1,500 ethnic minority women were trained through the Third Rural Transport Project that was jointly funded by DFID and the Bank. Across the rural road network in the mountainous northern provinces of Vietnam, groups of 10-30 women are paid to maintain 1-2 km sections of road. As a result, women have achieved increased economic power and greater voice in community decision-making and a more visible role in managing affairs at the household level.

All Bank infrastructure projects will undergo review during preparation to ensure that they are resilient to climate change. Specific Bank support for climate change mitigation will include policy dialogue, investments and a more specific focus on enhanced energy efficiency – including through the development of renewable energy sources, demand-side energy efficiency measures.
(including tariff reforms), providing capital lines and advisory services through IFC, as well as raising awareness and strengthening of the regulatory environment, and analysis of low-carbon growth strategies.

The Bank looks forward to remaining engaged in partnering with Government on infrastructure to address the various challenges identified in this report. We are confident that Vietnam will build on the enormous achievements that it has made over the past 35 years and cement its place as a major player in the world economy over the coming years.
CHAPTER 4

WORLD BANK SUPPORT FROM 1994 TO 2011
### Vietnam: Transport Sector Lending 1994 to 2011

<table>
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<tr>
<th>Project ID</th>
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### Vietnam: Power Sector Lending, 1995 to 2011

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### Vietnam: Water Supply & Sanitation Sector Lending, 1997 to 2011

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Vietnam: Urban Development Sector Lending, 2004 to 2011

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<td>P094055</td>
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<td>Local Development Infrastructure Fund Project</td>
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<td>Danang Priority Infrastructure Investment Project</td>
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<td>P104848</td>
<td>2007</td>
<td>Ho Chi Minh City Infrastructure Fund Development Project</td>
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<td>P070197</td>
<td>2004</td>
<td>Vietnam Urban Upgrading Project</td>
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<sup>1</sup> Urban transport projects are managed by the Bank’s transport unit in Vietnam. They have a major impact on urban development so for the purposes of this report they have been covered in the urban development section.