14. Viet Nam

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INTRODUCTION

Viet Nam is a long, narrow country with an area of 331,000 km^2 and a population in 2005 of approximately 83.6 million. Ravaged by more than 30 years of war and civil conflict since the 1940s, it remains one of the least-urbanized countries in Asia. However, the advent of *doi moi* (renovation) in 1986 triggered the transformation of the nation's economy and accelerated a process of rapid urbanization, much of which is not sustainable. Relevant national statistics are presented in Table 14.1.

Table 14.1: Country Development Profile, Viet Nam

Human Development Index (HDI) rank of 177 countries (2003)^	108
GDP growth (annual %, 2004)	7.50
GNI per capita, Atlas method (current $, 2004)	550
GNI, Atlas method (current $ billion, 2004)	45.1
GDP per capita PPP ($, 2003)^	2,490
GDP PPP ($ billion, 2003)^	202.5
Population growth (annual 2005–2010 %) #	1.28
Population, total (million, 2005)#	83.59
Urban population, total (million, 2005)#	22.34
Urban population percent of total population (2005)#	27
Population largest city: Ho Chi Minh City (2005, million)	5.03
Population growth: 23 capital cities or agglomerations > 750,000 inhabitants 2000#	
- Est. average growth of capital cities or urban agglomerations 2005–2015 (%)	30
- Number of capital cities or urban agglomerations with growth > 50%, 2005–2015	0
- Number of capital cities or urban agglomerations with growth > 30%, 2005–2015	8
Sanitation, % of urban population with access to improved sanitation (2002)**	84
Water, % of urban population with access to improved water sources (2002)**	93
Slum population, % of urban population (2001)**	47
Slum population in urban areas (2001, million)**	9.20
Poverty, % of urban population below national poverty line (1993)**	25.9
Aid (Net ODA received, $ million, 2003)^	1,768.6
Aid as share of country income (Net ODA/GNI, 2003, %)*	4.5
Aid per capita (current $, 2003)^	21.8

GDP = gross domestic product, GNI = gross national income, ODA = official development assistance, PPP = purchasing power parity.

Sources: See Footnote Table 3.1, World Bank (2005); Organisation for Economic Co-operation and Development (2003); United Nations (2004, 2005).

This chapter examines urbanization in Viet Nam and some of the difficulties it poses for sustainability of urban development. Three case studies are presented: Institutional Building in Urban Upgrading in Phu Thuong Ward, Hanoi; Environmental Improvement of Nhieu Loc-Thi Nghe Basin, Ho Chi Minh City; and Urban Upgrading, Environmental Impact Assessment in Van Mieu Ward, Nam Dinh City, Nam Dinh Province. Lessons from the case studies and strategies to improve approaches toward sustainable urbanization are presented in the final part of the chapter.

COUNTRY CONTEXT

National Development Indicators

The modern Socialist Republic of Viet Nam was formed with the reunification of the southern and northern parts of the country at the end of the Viet Nam War in April 1975. The transformation of Viet Nam to a socialist market economy since doi moi has been rapid. Ranked as one of the poorest countries in the world in the 1980s, it now ranks 124th out of 177 countries in GDP per capita (DESA-UN 2005). Since 1986, GDP per capita has increased from less than $100 to $2,490. In the two major cities—Hanoi and Ho Chi Minh City—GDP per capita has increased much faster than GDP per capita in other cities. More than 50% of the country's industrial output is from these two major cities.

The poverty rate remains high. In 2002, the general national poverty rate was 28.9%. This has fallen to 25% and is projected to decline further to 15% in 2010 (Hong Khanh 2005). In rural areas and mountainous provinces, such as Lai Chau, the poverty rate in 2002 was 77%. The urban poverty rate is well below that of rural areas. In the larger cities, the latest figures on poverty rates (set at under $2 per capita income per day) are Ho Chi Minh City (2%), Danang (4%), Hanoi (5%), and Haiphong (12%) (Asian Development Bank [ADB] 2002). The high demand for labor and the growing industrialization of cities are factors contributing to the low level of urban poverty.

National economic policy has focused on the development of manufacturing industry, services, agriculture, tourism, and retail sales. The annual growth (GDP) in 2004 was about 7.5%, due to sound economic management and generally low inflation. The forecast for average inflation in 2005 was 6.0% (World Bank 2005a). The employment structure of the economy is expected to change significantly between the present and 2020. Employment in the manufacturing and service sectors is expected to increase to 41% and 49%, respectively, with a 10% reduction in the agriculture sector.

National government economic policy supports the development of six sectors: state, collective, private, private capitalist, state capitalist economies, and foreign investment. A range of incentives and new laws has been provided to encourage the development of new enterprises and private citizens to invest in these sectors. Under the national economic strategy, the country is divided into six economic regions and three focused economic zones. Each region has the power to mobilize resources for development, including an open economic mechanism, to develop infrastructure and other services to support investment in agriculture, manufacturing, and tourism development to meet the growing demands of domestic and international markets. The national Government has given high priority to supporting the development of focused economic zones, and facilitates and invests appropriately in these.

The Government continues to reform the national finance and monetary system to ensure more equitable distribution of public revenues. This includes the adoption of a more unified and simpler sector taxation system, completion of the decentralization procedures relating to financial management in regions and cities, and the promotion of creativity and innovation in local authorities and industries to enhance the decentralization process.

The rapid growth and transformation of the economy have placed enormous pressure on Viet Nam's urban systems. With much of its infrastructure severely damaged by war, the focus of government policy has been to restore and develop the capacity of urban services to support industrialization, especially modern industrial estates and transportation facilities located on the periphery of cities. Unfortunately, the lack of attention paid to urban management, poor plan implementation, and lack of development control have resulted in the development of cities that lack structure and basic services—especially housing, water supply, and transport—to meet the growing needs of rapidly growing urban populations. Consequently, environmental conditions in Vietnamese cities began to deteriorate rapidly throughout the 1990s.

The first urban settlements in Viet Nam were built more than 2,000 years ago. Hanoi and Ho Chi Minh City (formerly Saigon) have a history as trading centers dating back 1,000 years. French colonial interests in the 18th and 19th centuries led to the development of expanded urban trading centers, but the economy was still backward and largely based on subsistence agriculture. After independence in 1945, the urban centers developed gradually but were severely disrupted and, in some cases, damaged by the ravages of war. Since reunification in 1975, the country has developed rapidly and urban centers have developed in all respects (Nguyen 2002).

About 27% of the population or 22.34 million people (World Bank 2005b) live in urban centers composed of a few major cities and many towns. Viet Nam has an urban network of 716 cities and towns (Tran 2004). Urban

areas include the national capital city, Hanoi, and the capitals or centers of regions, provinces, and districts. The definition of urban in Viet Nam is any settlement with more than 4,000 people and where the percentage of non agriculture sector employment is greater than 65%. Urban areas are classified into six categories: special city and categories I, II, III, IV, and V (Government of Viet Nam 2001).

Table 14.2 gives the names of the regional centers. Two cities dominate the country—Hanoi (population: 3 million) and Ho Chi Minh City (5 million). In addition to these cities are 15 cities with populations exceeding 250,000 and 74 with populations of more than 50,000.

Besides these urban areas, there are also centers of general or sectoral economic development importance (industrial, agricultural, tourism, mining regions, etc.), and special administrative economic zones (special economic zones, concentrated industrial areas, etc.), many of which lie outside, but are part of, urban conurbations. About 90 industrial parks, 22 new towns, and 18 border gate economic zones are included in the national urban system (Tran 2004).

Prior to doi moi, there was a lack of clarity on policies related to rural and urban development. Less than 18% of the population was urbanized. Since the rate of urbanization was low, the process was not seen as creating significant difficulties for a nontechnological society. Development planning was highly centralized, based largely on eastern European ideas grounded in planned economies and physical master planning.

Post-renovation, the urbanization process has been influenced by open-door market economic policies, the overhaul of policies relating to land and housing, and greater state support for urban planning, which stimulated urban growth in the whole country. These changes instigated calls for greater decentralization and transfer of economic development and infrastructure development responsibilities to provincial and municipal government systems. Viet Nam lags well behind other Asian countries in this respect.

Viet Nam's Urban Development Strategy

Viet Nam was one of the Asian countries least affected by the 1997 financial crisis. The collapse of property markets in cities, such as Bangkok and Jakarta, and the growing concern about the dominance and vulnerability of Ho Chi Minh City and Hanoi as the country's centers of manufacturing led the Government of Viet Nam to place a stronger emphasis on regional development, especially decentralization policies.

In 1998, the Prime Minister (MoC 1999) outlined the framework for a Vietnamese Urban Development Strategy to be fully implemented by 2020.

For the planning and management of the urban development system, the country has 10 regions (Nguyen 2003). Table 14.2 explains the numbered regions and indicates the major city in each region.

Table 14.2: Regions and Regional Centers in Viet Nam

No.	National Urban Systems Region	Regional Center
1	North focal region of Red River, including Hanoi	Hanoi
2	South focal region and Dong Nam Bo	Ho Chi Minh City
3	Central focal Region and Trung Trung Bo	Da Nang
4	Plateau region of Mekong River	Can Tho
5	Nam Trung Bo	Nha Trang
6	Tay Nguyen (highlands in the central region)	Tay Nguyen
7	Bac Trung Bo	Vinh
8	Viet Bac	Thai Nguyen
9	Tay Bac and midland of Viet Tri City	Bac Bo
10	Rest of Tay Bac	Hoa Binh

Each region has a special policy for development based on its specific characteristics in regard to the natural environment and socioeconomic conditions. The policies for decentralization empower regional and local governments to provide a wide range of urban and rural services. For example, the Construction Law (2003) allows provinces, districts, and commune-level authorities to approve planning projects within their areas (National Assembly 2003). These policies cater to all sectors—private sector, non-government organizations (NGOs), and state sector—to be engaged in the decision-making process. However, due to weaknesses in institutional capacity, many authorities are not able to fulfill their tasks successfully and continue to rely on central Government to plan and deliver essential services.

The 2020 Urban Development Strategy provides the basis for managing urbanization in Viet Nam. The directions outlined by the strategy are summarized below:

- Urban development is to be more equitably distributed and related to the development levels of the labor force nationwide. Effort should be concentrated on developing technical and professional skills to promote the development of dynamic and specialized urban centers that are much more capable of responding to changes in markets and reduced levels of government support.
- A hierarchy of large-, medium-, and small-sized cities is to be developed, recognizing the need to create the balance of development

between regions and combining the process of promoting urbanization with new rural development.

- The functions of municipalities are to be outlined in law according to an urban system at the national, regional, and local levels, with set targets related to economic, demographic, social development, and environmental protection defined according to the grade and type of government.
- Policies and mechanisms suitable to local circumstances are to be created, allowing cities and regions to mobilize resources for urban development and to ensure orderly urban development and control in accordance with urban planning and legal regulations.
- Urban planning and construction must be more strategic and provide for appropriate short- and long-term development. Local governments need to be better managed and organized to improve the protection and conservation of varying environmental habitats, maintain urban ecological balance, and protect urban areas from natural disasters and environmental pollution and industrial accidents.
- Feasible plans, programs, or projects that will continue to fund improved capacity and socioeconomic conditions in local municipalities are to be made. Economic and technological resources should be used to create the driving forces for urban development based on city size. Economic development should be structured based on the natural and socioeconomic advantages of the urban region concerned.

The strategy also provides for minimizing the use of agricultural land for urban purposes, especially land for cultivating rice, by maximizing the use of vacant or underutilized urban land, and encouraging the use of hilly land. It is intended that all urban development must include the simultaneous provision of complementary social facilities and physical infrastructure.

Urbanization Development Issues

Population Growth and Urbanization

Table 14.3 shows national and urban population statistics, together with estimates of annual percentage growth rates for 5-year intervals since 1951. Urban population growth rates have varied significantly over this period. During the Viet Nam War, urban centers—particularly those in the south—grew as rural populations fled to the relative safety of cities. By the late 1980s, with declining economic conditions, urbanization rates fell dramatically to less than 1% in 1989. By the mid-1990s, the impact of the doi moi economic reforms led to

a rapid influx of direct foreign investment—especially into new manufacturing industries located in large industrial estates on the outskirts of the country's two major cities. This led to a second wave of urbanization, which has continued to rise, except for a small fall following the Asian financial crisis.

Table 14.3: Population Growth and Urbanization in Viet Nam, 1951–2005

Year	National Population ('000)	Annual Growth Rate (%)	Urban Population ('000)	Annual Urban Population Growth Rate (%)	Urban Population (% of Total Population)
1951	23,061	0.5	2,306	1.5	10.0
1955	25,074	2.1	2,748	4.4	11.0
1960	30,172	3.7	4,527	10.0	15.0
1965	34,929	2.9	6,008	5.7	17.0
1970	41,063	3.2	8,517	7.0	20.7
1975	47,638	2.8	10,242	3.7	21.5
1980	53,722	1.8	10,301	2.0	19.2
1985	59,872	2.1	11,360	2.3	19.0
1989	64,376	1.0	12,740	0.6	19.8
1999	76,325	1.9	18,000	4.1	24.0
2004	82,100	1.5	21,000	3.3	25.8
2005	83,590	1.8	22,340	6.4	27.0

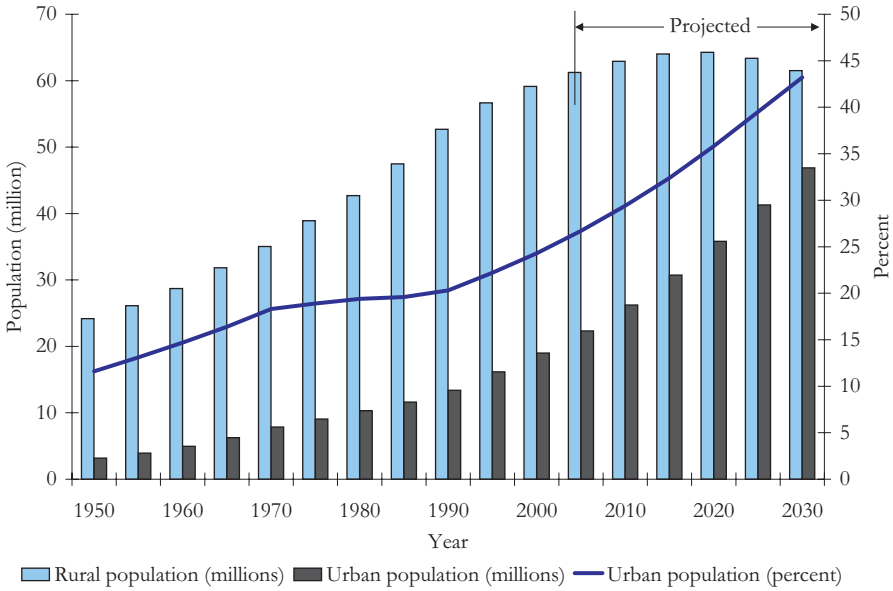
Sources: Viet Nam Annual Statistical Directory and World Bank 2005b (for 2005).

Urbanization rates of more than 5%/year have significant implications for the country. The 2005 urban population was 22.3 million (27.0%) and is predicted to reach 26.2 million (29.4%) by 2010 and 35.8 million (36.0%) by 2020. By 2030, the population of Viet Nam's cities is expected to reach 47 million, or more than double their current size (Figure 14.1). By then, almost 50.0% of Viet Nam's population is expected to live in urban centers.

Land under urban development is expected to reach 2,430 km^2 (0.74% of Viet Nam's total land area) with 80 m^2 per capita by 2010. This is projected to increase to 4,600 km^2 or 1.4% of Viet Nam's total land area, with an average of 100 m^2 per capita by 2020. The population of urban centers is growing at 1.15 million a year, with almost 100 km^2 of mainly rural farmland being converted into urban use annually (Tran 2004). By 2030, the absolute growth of urban populations can be expected to rise to over 1.7 million a year, with an expected conversion of land into urban purposes increasing to 170–200 km^2 a year as densities in newly developed urban areas fall in line with the trends in other Asian countries.

Rapid urbanization poses a major threat to the loss of land for food production in Viet Nam. The conversion of agricultural land for

Figure 14.1: Trends in Urban and Rural Population, Viet Nam



Source: DESA-UN. 2005.

residential and industrial purposes is also having a major impact on the natural environment and rural landscape. Land clearance and industrial development are evident on the outskirts of large cities, along major trunk roads, and in provincial towns. According to a report by the Ministry of Natural Resources and Environment (MONRE 2005), there are 192 major industrial zones and clusters in 13 provinces, which resulted in 292.14 km^2 of land being converted into urban use since 1990, of which 84% was previously used for agriculture. (Land Tenure, Administration, and Management)

Although the state officially owns land, the management of land tenure and administration is inefficient. Improvements are being made to accelerate the issue of leases for development. Most land transactions in urban areas take place informally and are based on records of ownership established in the French colonial era. Many areas on the periphery of cities are developed for residential purposes without approval, often with the knowledge of public officials.

The uncertainty in land tenure and administration creates uncertainty in land markets, which leads to high levels of speculation, differential land prices—especially between land with development approval and land sold

informally—and an unwillingness among residents in slum areas to invest in improvements to their dwellings and local infrastructure. The Government has undertaken reforms to the land management and administration systems, but not to the same extent as in the Lao People's Democratic Republic (Lao PDR) and Cambodia.

Urban Infrastructure

Urban infrastructure in all Vietnamese cities is inadequate and generally well below the standard of more industrialized and developed countries. The development of social infrastructure in residential areas is also inadequate and, in many cases, poorly planned. The spontaneous way in which infrastructure is provided results in leapfrogging of development, with new residential and peri-urban areas often waiting many years for physical and social infrastructure to be provided.

The general status of infrastructure in urban areas can be described as follows:

- Transportation networks and services in urban and suburban areas are still poorly developed. The failure to plan and protect road reserves impedes the connection, efficiency, and convenience of movement between urban and rural areas, as well as access to recreation and entertainment activities. In big cities, public transport provides a very small proportion of passenger trips, with high motorcycle ownership levels contributing to traffic congestion. Land area dedicated to transportation use is very small, especially parking spaces, which accounts for less than 5% of the total. Improvement to the arterial road networks is expensive; housing and commercial developments have not been set back from the road and are instead built up to the edge of road reserves. Improvements to roads can involve substantial demolition with high levels of compensation demanded. This is despite most dwellings being constructed without a building permit.
- More than 93% of urban areas have access to potable water (World Bank 2005b). However, the reliability of water supply remains a problem, with most cities having reached capacity limits on distribution and in need of major augmentation to supply sources. Poor rural catchment management has led to the contamination of urban water supply sources. The often sporadic and uncontrolled nature of urban development has made the improvement of water supply for domestic and industrial use difficult. System loss of water is high, due to the aging infrastructure and poor quality construction and supervision of

new infrastructure. Theft of water remains a problem, especially in larger cities.

- More than 84% of urban populations have access to basic sanitation services; however, this falls to less than 50% in poor districts of major cities (World Bank 2005b). Only 41% of urban areas have reticulated sewerage. The sewerage system relies heavily on local systems, which cause waterlogging and environmental pollution of local wells. The high density of development and the incremental additions to dwellings make the planning of sanitation services difficult, often leading to an overload of sanitation systems.
- Electricity supply is much improved although provision is still unstable. Consumption is low at only 107 kilowatt hours (kWh) per capita (MoC 1999). As incomes rise, there has been a growing trend toward air conditioning in modern dwellings, which adds to the demand for electricity. The Government is taking steps to improve the supply of electricity; however, the lack of planning and protection of infrastructure corridors from encroachment by housing and other forms of development creates significant problems for authorities responsible for improving the quality of electricity supply in inner urban areas. Many inner city areas rely on overhead cable supply that is old and often in a dangerous condition, which can lead to localized blackouts.

Urban planning and management generally lag behind the development process. Under pressure to meet the demand for urban infrastructure services, quantity is often forgone at the expense of quick provision of services with little or no consideration given to future changes in demand. The institutional structures and method of delivery and management of services are still largely unreformed. The lack of an efficient land administration system and measures to manage land, housing, and construction activities, combined with the lack of integration between government agencies and different localities, undermines the capacity of many cities to adopt more sustainable approaches to urban development.

Residential Development

Viet Nam has one of the highest urban residential housing and population densities in Asia. Historically, the pattern of development was determined by the property tax system, which was levied on the width of street frontage and the desire by landowners to maximize yields from land development. The pattern of urban development outside the more formally and mainly colonial planned areas of cities is one of very narrow streets, with plot frontages ranging from

2.5 meters (m) to 5 m, many less than 35 m^2 in area and ranging from two to five storeys in height. The total area of housing stock in urban areas is estimated at 80 million m^2. This corresponds to 5.8 m^2 per capita (MoC 1999).

The lack of planning, failure of developers to fully service new residential areas, and ineffective control over building construction have led to uncertainty in land markets and high levels of speculation. The slum population in urban areas in 2001 was 9.2 million, accounting for 47% of urban population (World Bank 2005b). With little provision given to public open space and the needs of modern transport access, conditions in many Vietnamese cities and towns are overcrowded and congested. Improving the conditions of many inner city areas has been a major challenge, particularly for road, housing, and waterway systems.

Urban Governance and Policies

The weakness and unwillingness of local governments in Viet Nam to take control of urban development has led to much indecision on how to address serious urban development problems. There have been tensions in central and local governments about:

- conservative versus more innovative approaches to addressing urban problems;
- upgrading versus redevelopment and new building involving clearance;
- benefits of urban development to society, community, and the private sector, and the extent to which developers should contribute to the provision of community infrastructure and services;
- demand for urban services and financial capacity and willingness of governments, business, and communities to pay for these;
- urban development and protection of agricultural land; and
- urban development and environmental protection.

Most local governments have a poor understanding of the nature and causes of urbanization. Some municipalities understand urbanization simply as a process of migration to towns resulting from overcrowding in the countryside. Few appreciate that urbanization is being driven by major structural changes in the economy and by powerful forces resulting from globalization and foreign direct investment. Many local governments lack the necessary skills to develop appropriate policies responsive to the development of a market economy. There are still strong ideological differences in national and local governments over the extent to which the state should control development or hand over greater responsibility for urban development to the private sector.

Urban Environmental Management

The increasing industrialization of Vietnamese cities has led to increased environmental management problems. The levels of air and water pollution in all cities continue to increase as do problems with urban sanitation and waste management. Industrial pollution is causing damage to waterways and estuaries. In many low-lying cities in the Red River and Mekong River deltas, canals have become heavily polluted by urban wastes. The pace of urbanization has proved overwhelming for local governments, leaving most unable or unwilling to enforce environmental controls and provisions to ensure proper treatment of wastes and emissions.

Motorcycles have become the dominant form of transport in cities. Motorcycle ownership rates in Viet Nam are the highest in Asia: one motorcycle per five urban inhabitants. The rise in this form of transport has led to an overall increase in traffic congestion and vehicle emissions.

The Role of International Aid in Supporting Regional Development

Viet Nam is a significant recipient of official development assistance (ODA) involving grants loans and other forms of credit from international development banks. In 2003, the money received from international aid (net ODA) was $1,768.6 million, or $21.8 per capita. Aid as a share of country income (net ODA/gross national income) was 4.5% (World Bank 2005b). ODA is used for technical assistance, especially for urban development and decentralization programs and budget support. ODA is channeled from the central Government to programs at the provincial, district, and ward levels. The primary ODA agencies are the World Bank and ADB, and bilateral agencies, such as the Australian Agency for International Development, Canadian International Development Agency, Danish International Development Assistance, Finnish International Development Agency, Swedish International Development Cooperation Agency, Korean International Development Agency, and Japan International Cooperation Agency.

ODA committed for 2006 is $3,747.9 million. This assistance will be mainly used for fulfilling the basic reform of state enterprises and alleviating poverty. The biggest bilateral donors are Japan ($835.6 million), France ($397.7 million), PRC ($200 million), Germany ($114.7 million), and Republic of Korea ($105 million). ADB is committed to support Viet Nam to the sum of $539 million, while the World Bank and United Nations Development Programme (UNDP) have committed $750 million and $69.1 million in aid, respectively (Hong Phuc 2005).

Since 1993, the World Bank has committed $5 billion to support more than 40 development projects to help the Government reduce poverty by providing technical expertise and financing for agriculture, infrastructure, health programs, schools, and other essential needs. The projects have been conducted both for the rural and urban poor (World Bank 2005a). In World Bank projects, Viet Nam authorities manage the implementation, which requires cooperation of different groups, including communities and civil societies. The criteria of the World Bank, including social and environmental standards, must be met.

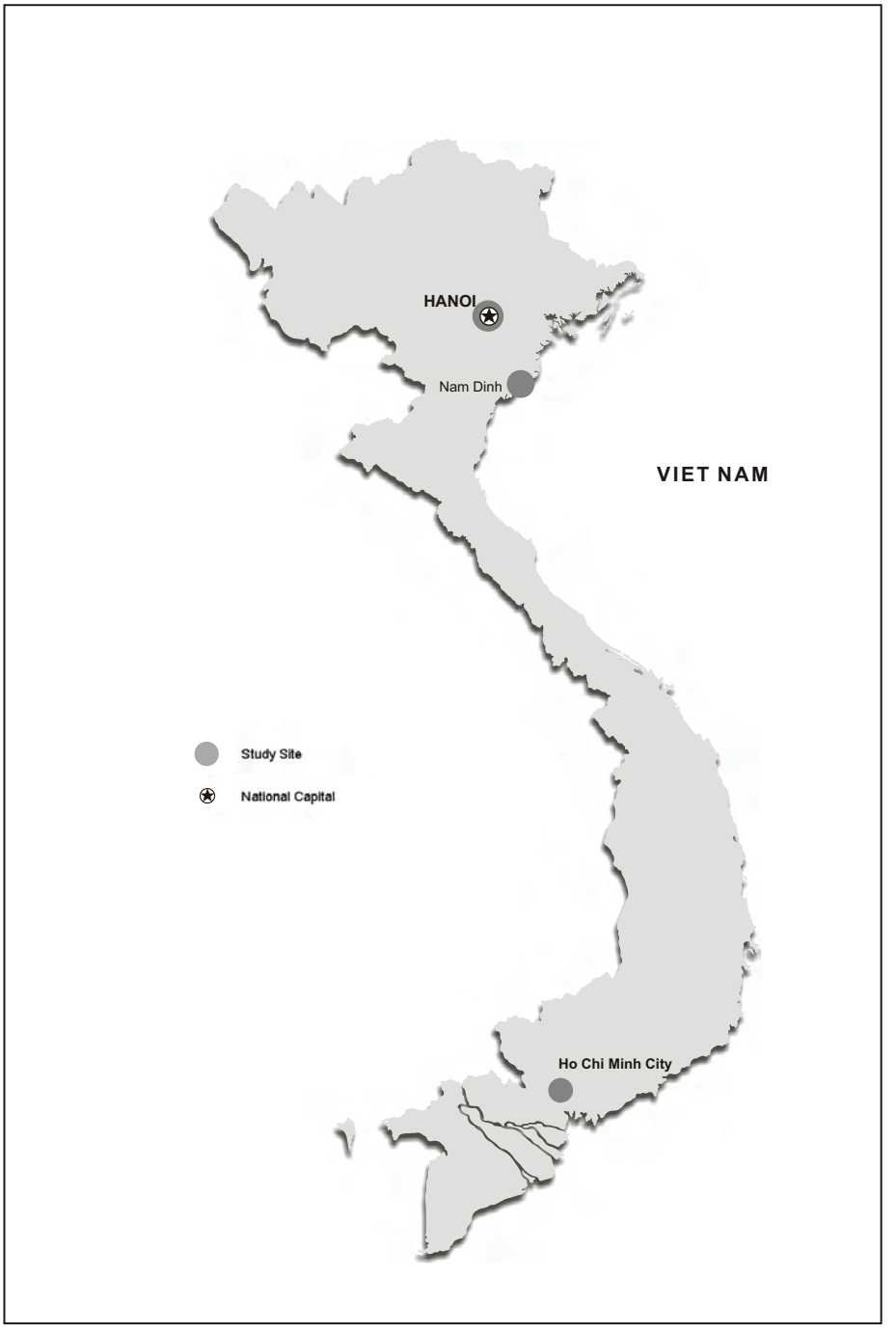
Assistance from ADB is utilized mainly for promoting pro-poor economic growth, inclusive social development, and good governance. ADB guidance is concentrated largely into private sector development, regional cooperation, and environmental sustainability, especially in the Central Region, where the incidence of poverty remains high. ADB has also helped Viet Nam modernize and expand its economic infrastructure as well as provided support in the field of industrial and technical standards, and small- and medium-sized enterprise development. Cumulative ADB lending to Viet Nam, as of end of 2004, was about $3.2 billion in agriculture and natural resources, transport and communications, energy, finance, water supply, sanitation, waste management, education, law, economic management, public policy, health, nutrition, social protection, industry, and nonfuel minerals (ADB 2005).

GOOD PRACTICE CASE STUDIES

Three case studies of good practices in sustainable urban development are presented: institutional building in urban upgrading in Phu Thuong ward, Hanoi; environmental improvement of Nhieu Loc—Thi Nghe Basin, Ho Chi Minh City; and urban upgrading in Van Mieu Ward, Nam Dinh City, Nam Dinh Province. The first two cases are located in the country's two largest cultural and socioeconomic centers. These projects used innovative approaches in solving urban development problems and resulted in sustainable development. The third case study—similar to the first but carried out in a second-category city—demonstrates the value of engaging communities in the design and implementation of a program involving local area urban improvement. Figure 14.2 shows the location of the case studies.

The three case studies emphasize the importance of good governance, urban management, better infrastructure, and service provision, and programs designed to ensure social and environmental sustainability. They illustrate the importance of learning from trial and error in working toward the development of good practices in Viet Nam.

Figure 14.2: Map Showing Location of the Case Studies



Institutional Building in Urban Upgrading in Phu Thuong Ward, Hanoi

Background

GOOD PRACTICE	
Good Governance	✓
Urban Management	✓
Infrastructure/Service Provision	✓
Financing and Cost Recovery	
Sustainability	✓
Innovation and Change	
Leveraging ODA	✓

This case study on Phu Thuong Ward, Hanoi investigates the improvement of governance and institutional capacity building in urban upgrading in an area undergoing transition from rural to urban development. The area was the subject of a pilot study of a UNDP project on Strengthening the Capacity of Urban Planning and Development in Hanoi. The study commenced in 1997 and was completed in 2000; results of the study helped improve the situation of the ward markedly.

Phu Thuong is a traditional village famous for growing flowers and other ornamental plants, especially for the Lunar New Year, which is the biggest traditional festival in Viet Nam. Phu Thuong Ward is located in Tay Ho District, at the northern end of a series of "flower villages," 9 km northwest of Hanoi City center between National Highway No. 23 and the south bank of the Red River. Hanoi's famous West Lake is located on the northwestern edge of the ward.

Phu Thuong has experienced spontaneous residential urbanization on the fringes of the city. The ward became classified as an urban ward on 1 January 1996, although three quarters of the households were engaged in agriculture and related activities. The ward covers an area of 609.5 hectares (ha). The encroachment of urbanization has raised debate about the loss of valuable land devoted to rice farming, an industry with a traditional identity.

In September 1998, the population of Phu Thuong was about 10,200 living in 2,238 households. The ward was recently divided into nine residential clusters, each composed of 265–300 households. By 2003, the population of Phu Thuong had increased to 12,480 living in 2,740 households, an average growth rate of 1.8%/year (Phu Thuong 2004).

Before 1998, the residents living in the ward had no running water; 88% of the households used wells while the remainder relied on other sources of water. Water from well sources did not meet basic health standards. An estimated 67% of wastewater was discharged untreated directly into ponds, lakes, or gardens (VIE/95/050 1998). In addition, storm water and drainage were combined with sewerage and irrigation systems in the ward. Waste removal

vehicles collected 54% of waste, with 23% disposed of in local dumps in the ward and the remaining 23% disposed of in residents' yards. The lack of an adequate sewerage system led to human waste being used to fertilize flower gardens and rice fields. Such waste management practices were beginning to seriously exacerbate water pollution in local ponds, lakes, and gardens (VIE/95/050 1998) and affect the health of residents.

Air pollution increased from using poor-quality coal for cooking and heating, and from vehicle emissions. Lack of development control led to some roads and lanes being constructed at widths of 1.5–2 meters, leaving little room for emergency vehicles and air circulation. The need to reduce emissions from motorcycles and newly emerging industrial enterprises has been identified but not yet addressed.

Prior to 1998, Phu Thuong had few buildings and faculties for cultural, sport, or recreation activities. There was only one kindergarten, one primary school, one secondary school, and a technical college for more than 4,000 children. With the exception of the secondary school, most structures were temporary one-storey buildings on small land areas (VIE/95/050 1998). Health facilities were also lacking—only one clinic with a small staff (one doctor, three nurses, and another clinic staff) to service 10,000 residents. The ward had 2,830 houses, of which 86% were temporary single-storey dwellings, 12% were two-storey, 1.3% were three-storey, and only one four-storey and one five-storey house, respectively (0.70%).

The labor force in the agriculture sector of the ward numbered approximately 1,600 persons, with the remainder employed in the other sectors, such as business and a mix of business and agriculture (HAU 1998). The economic structure of Phu Thuong Ward has changed largely because cultivated land has been lost due to new housing construction. In the near future, all land formerly used for rice cultivation is anticipated to be used for flower growing. As the household economy in the ward changes significantly, there has been an increasing shift toward developing microenterprises. In recent years, small-scale services (including packaging enterprises, food processing for markets, tailors, hair salons, electrical repairers, and small stores) have developed rapidly (Phu Thuong 2004). In 2004, monthly income of households averaged Viet Nam dong (D)250,000–350,000 (about $25–35).

Many problems are associated with land and housing management, construction, and tenure, including the inflexible and complicated nature of administrative procedures related to development. The ward has not been able to monitor and control construction activities effectively due to weaknesses in the capabilities of local government administration and unwillingness of public officials to enforce laws related to development.

Capacity-building Project

The Strengthening the Capacity of Urban Planning and Development pilot project (VIE/95/050 1998) provided the basis for supporting the upgrade of Phu Thuong Ward and improving institutional capacity and management of service delivery. UNDP provided technical assistance as well as financial support to the ward and the city. The project organized seminars and training activities, conducted surveys, and provided proposals for the ward, which were supported by the city government and other bodies. A number of elements for the project needed to be put in place to ensure the longer-term continuity of the settlement improvement process. These included building physical assets, restoring natural assets, building on human capital, building social capital, building economic assets, and reforming governance institutions.

Physical assets include infrastructure and services for water and sanitation, garbage removal, storm water drainage, electricity, health and education projects, and community and recreation facilities.

Sustainable Impacts of the Project

Infrastructure and Environmental Improvements. After the upgrading (1998–2004), the infrastructure in the ward improved significantly. Most residents of Phu Thuong now have access to reticulated drinking water and electricity, while 85% of sewage is now discharged into the ward's sewerage system, which has been linked to the city urban sewerage system. Domestic waste and farm water no longer run over the roads and are not allowed to pool, thereby reducing the odorous and unhygienic conditions that once prevailed in the area. In 2003, the storm water drainage system was upgraded. However, old systems are still in use.

Since 2003, 81% of garbage generated by households, public buildings, and industrial enterprises is regularly collected and transferred to the city disposal sites. Following the upgrading of the solid waste management system and the widening of roads, waste collection trucks can reach each household. The transportation system has been significantly improved with support of the Government and contributions from citizens. Most roads have been surfaced with asphalt and connect reasonably well to the central and southern areas of the city. A bus route to Phu Thuong from the city center has also been established.

Housing construction is based on planning approval, and households are encouraged to fulfill necessary procedures before building. By 2002, the housing stock had been significantly improved. Single-storey houses had decreased to only 30%; two- and three-storey houses had increased to

65%, and higher than four-storey houses accounted for 5% of all dwellings. Playgrounds for children and cultural facilities were constructed. Religious buildings were upgraded. Since 2002, Phu Thuong has achieved improved education results, with nearly 99% of children in the ward currently attending schools. Besides the Government's investment, educational dissemination has mobilized capital resources from residents and social organizations; at present, all ward schools are regarded as high-quality schools (HAU 2004).

Environmental Management and Public Health. In 2002, both the Hanoi and ward people's committees (WPCs) developed and implemented an improved health care program for the prevention of diseases, as well as for providing information on food safety and advice on reducing the threat of HIV/AIDS. Programs to prevent malnutrition for 764 children under 5 years of age were initiated, resulting in a reduction of malnourishment (by 2%) since 2001. During upgrading, the WPCs encouraged residents to build toilets using appropriate techniques. At present, the proportion of households using waterborne toilets has increased to 72% while the number with latrines has decreased to 20%; only 8% use temporary latrines (Do 2005).

The 1993 Environmental Protection Law provides for the protection of the environment and charges local governments and residents with the responsibility for improving environmental management. WPCs play an important role in raising community awareness about environmental protection. Every Saturday, all residents participate in cleaning the ward. In addition, residents contribute funds to help improve the quality of lanes and the storm water drainage system. The ward authority has organized numerous environment protection training courses with the help of the city and district authorities and social organizations. By 2003, the majority of households used gas and electricity to meet their energy needs while the proportion using leaves and straw decreased to 20%. Pollution caused by industrial production is not seen as a problem as there are no major industrial enterprises in the ward (Phu Thuong 2004).

Human Capital Development. Building human and social capital has been an integral part of the upgrading of Phu Thuong Ward. Human capital development is closely linked to economic and social infrastructure provision. Upgrading has involved improvement in educational and health care facilities, and strengthening internal social organizations within the ward. Importantly, particular attention has been paid to the needs of the poorest households in the ward. The WPC has cooperated with many agencies and associations in its drive to control the population growth rate using advanced methods. It has taken an active interest in family planning and, consequently, the natural population growth rate has remained relatively stable at about 1.6–1.7%. The ward has also established a Board of Poverty Reduction and

Alleviation, collaborating with many other agencies to create opportunities to borrow capital. Moreover, to prepare laborers to work on the contiguous Ciputra residential development—a new housing and office development plan that will house 50,000 residents when it is completed in 2010—the ward has organized technical training courses for workers.

The ward has also collaborated with the Fatherland Front and other organizations to deal with residential complaints and provide households with information related to economic, social, cultural, and security matters. The residents receive all available information because it is announced publicly.

Governance. In Viet Nam, the ward is the smallest local authority governance system within the organizational structure of the Communist Party, people's committees, people's councils, and other groups, such as trade unions, youth unions, women's unions, and veterans unions. Since 2003, the Phu Thuong Ward People's Committee has been streamlined and is composed of 15 people. The chairperson is responsible for all activities of the WPC and is directly responsible for personnel, socioeconomic development strategy, finance planning, land use, and urban development. The vice-chair, as well as being the head of the finance board, is responsible for cultural and social issues.

After upgrading, the tasks of all members were clearly defined. Technical assistance from the donor and the guidelines of the city government and district authorities have enabled the ward to strengthen its capacity to mobilize participation, partnerships, and involvement in planning, monitoring, and evaluation of all residents, groups, and organizations in the community.

Economic Development. The pressure on land for urban development in Phu Thuong is bringing about a structural change in the ward's economy. By 2003, the area of cultivated land in the ward was 80 ha, of which 65 ha were used for flower growing and 15 ha for rice cultivation. Rice farming activities are slowly declining and will eventually disappear while flower growing has become more specialized. Phu Thuong no longer just produces flowers—it has also established a small-sized flower industry cluster with a range of value-adding industries that serve markets beyond Hanoi. Flower- and ornamental tree-growing techniques have been improved, leading to better quality and increased quantity. Income from flowers is high, amounting to $600,000 per year. Consequently, the number of poor households in the ward decreased significantly—from 180 poor households in 1996 to 20 in 2003 (Phu Thuong 2004).

Housing is an important asset as it can be used to generate rental income as well as providing opportunities for home-based enterprises (Moser 1998; Gilbert 2000 in Do 2005). Many Phu Thuong households rent out their housing space to students or laborers from other regions. Land management is

also very important in Phu Thuong because tenure security can enable private investments in housing.

Phu Thuong has become a high-density urban area of Hanoi and its economic structure has changed dramatically. Urban upgrading, institutional and human capacity building, and improved local governance have enabled the ward to improve its economic situation, become more specialized, and be responsive to change. However, to provide the basis for a sustainable economy in the future, the ward has to focus much harder on encouraging business to use local labor and to encourage households to develop private business services. In addition, the ward needs to provide better information on markets and new technology, and learn from the experience of other regions especially in terms of flower marketing and establishing small business enterprises and cooperatives.

Environmental Improvement of Nhieu Loc-Thi Nghe Basin, Ho Chi Minh City

Background

This case study presents Viet Nam's largest urban environmental improvement project, covering the Nhieu Loc-Thi Nghe Basin canal of Ho Chi Minh City (HCMC). The project, which commenced in 2000, is co-funded by the World Bank and Ho Chi Minh People's Committee. The program has involved upgrading the urban environment along the Nhieu Loc-Thi Nghe Basin canal, separating sewerage and storm-water drainage, reducing the impact of flooding, promoting economic development, and improving the efficiency of public institutions involved in the management of infrastructure systems in the basin.

Nhieu Loc-Thi Nghe Basin is one of five drainage catchments in the urban area of HCMC. The Nhieu Loc-Thi Nghe Basin covers an area of 33 km^2, and incorporates the center of HCMC and seven districts partially or totally, and parts of the districts of Phu Nhuan, Tan Binh, Binh Thanh, and Go Vap. The population in the Nhieu Loc-Thi Nghe Basin is approximately 1.2 million people, or about 14% of the city's population (World Bank 2001a). A significant proportion is poor.

The Nhieu Loc-Thi Nghe canal, which runs the length of the basin, is a combined sewerage/drainage system. It is the main drain and collector for untreated wastewater into which some 280 km of the city's sewers discharge. The canal poses a serious threat to public health (World Bank 2001a) with biochemical oxygen demand of 150–200 milligrams per liter, fecal coliforms measuring about 8,000 units per milliliter, and dissolved oxygen almost zero (CDM 2000a). Only 73% of people living in the basin have piped water con-

nections and only 64% have in-house toilets. Housing densities in the basin are 12,600–55,000 persons/km^2 (World Bank 2001a), creating conditions of excessive overcrowding.

Extensive flooding occurs along the canal during the monsoon season, with raw sewage overflowing into the public areas, roads and sidewalks, and the ground floor of homes and other structures within the basin. The capacity of the Nhieu Loc-Thi Nghe Canal has diminished over the years because of deposits of sewage sludge, solid waste, debris, and sediments from soil erosion in the basin. The drainage system is old and has insufficient capacity to serve the currently developed urban area.

Project Activities

Concerns were expressed about the problems associated with the Nhieu Loc-Thi Nghe Canal in 1985, when the first attempts were made by the local government (HCMC People's Committee) to clear and improve a 100 m section in the central area of the city. Work stopped because of difficulties in persuading inhabitants to move. In 1991, the HCMC People's Committee began formulating a program to relocate residents, build housing, and improve the canal. At first, lack of funds prevented work from being done. In 1995, the HCMC People's Committee embarked on a program to sell public houses to raise $40 million to ensure sufficient starting capital to commence the project. The first phase started in 1996, with 500 m of canal improvement and 1,000 houses constructed for relocated residents.

After the success of the first phase, the World Bank agreed to support a second phase with a $166 million loan, supplemented by $34 million from the Government. The second phase was intended to extend and improve on the approaches used during the first stage of the project. Many lessons were learned during the first phase in relation to design, funding, project management, consultation, and compensation claims. Some of these will be discussed later.

The second phase of the project was essentially designed as a wastewater environmental engineering and housing resettlement project (World Bank 2001a). The design of the wastewater component entailed intensive efforts to minimize project impacts. Scheduled for completion in 2009, this phase aims to reduce flooding, improve the quality of the environment, improve public health and well-being, promote economic development, and strengthen the institutional capacity of the urban drainage company to manage the costs for wastewater services.

The three components of this phase are wastewater, drainage, and technical assistance. Works related to wastewater include the construction of

8.4 km wastewater interceptors, combined storm overflow and canal flushing chambers, outfall to the Saigon River, and wastewater pumping stations (World Bank 2001b). Works related to drainage include the replacement and extension of 72 km of combined primary and secondary sewers and storm-water drains; dredging sludge and related strengthening of 18 km of canal embankments; field investigation, design, and rehabilitation of 54 km of pre-1954 secondary combined sewers; and the extension of about 270 km of tertiary sewers (with less than 0.40 m diameter) to connect 30% of the basin's mainly low-income houses that are not currently linked to the system (World Bank 2001a). Technical assistance involved consultants contracted for detailed design, construction, management, and institutional strengthening.

Phase two has three stages: preconstruction, construction, and operation and maintenance. The preconstruction stage involved relocation and resettlement of an estimated 40,000 people (Wust et al. 2002). Preliminary calculations indicated the clearing of 11,400 houses, with new apartments for 8,000 households at a cost of $51 million.

Efforts to minimize noise and dust levels, which affected residents during the land clearing and construction stage, were also made. Moreover, the bid specifications restricted working hours and methods that could be employed. Up to 1.1 million m^3 of material arising from canal dredging and excavation activities required disposal; however, the use of the material in landfills is clearly beneficial to the environment.

At the operation and maintenance stage, trash racks will be incorporated in the combined sewer network to prevent waste from blocking the system and polluting the canal. When completed, most works will be located underground. Strengthening the maintenance arrangements, including the introduction of management contracting of facilities, is the most important measure.

Sustainable Impacts of the Project

The first phase and completed sections of the second phase of the project have resulted in significant improvements in the quality of the waterway system in HCMC. A research project conducted by the head of the Department of Science and Cooperation Management of the HCMC Institute for Economic Research, Du Phuoc Tan, showed that most households (87% of those surveyed) believed their living environment was far better than in their previous residences (Vietnamese Style 2005). While some residents expressed discontent over issues related to compensation and the quality of housing provided, this has been a small price to pay for achievements gained.

There had been extensive public involvement and consultation to engender improved public understanding of the project and its potential benefits. The consultations, together with a survey questionnaire designed for households affected by the project, provided important inputs into the project objectives, design, and implementation features of resettlement, compensation programs, and rehabilitation measures. The regular flooding that occurs in Nhieu Loc-Thi Nghe Canal and the noxious condition of the canal have given the project a high public profile and elicited regular calls by the media for government action to address these issues. Consequently, there is very strong public support for the project.

A Resettlement and Compensation Policy, which will apply to the entire project, and a detailed Resettlement Action Plan for the wastewater component have been prepared. The Resettlement Action Plan policy details resettlement principles and an eligibility/entitlements framework. The policy applies to both the wastewater and drainage components. According to the policy, all people likely to be affected are eligible for compensation, which varies according to the type of loss. Modes of compensation include cash, "land for land," or "apartment for land/house," or a combination of the above (CDM 2000b).

Specific task forces established by the city have received operative support in the field by the WPC, which coordinated information/consultation meetings and provided assistance during the implementation of the Resettlement Action Plan. The project management unit is responsible for internal monitoring. The project is also monitored by an external monitoring agency, the HCMC Institute of Social Sciences. The WPC first deals with any complaints or grievances regarding compensation, relocation, or unaccounted losses. If no amicable solution can be reached, project-affected families may appeal to the District Resettlement Committee, the project steering committee, or the City Court.

International development agencies and the World Bank are financing 90% of the wastewater and drainage components of the second phase, with the exception of tertiary sewers, which will be jointly financed by the city government (80%) and the district authorities and beneficiaries (20%). In the case of poor families, the entire 20% will be borne by the district authority. As part of the feasibility studies, 1,000 beneficiary households throughout the project area were surveyed to determine their socioeconomic characteristics, priorities among a range of infrastructure improvements, and willingness to pay for different improvements (World Bank 2001a).

The project will contribute to poverty reduction. Public health and environmental conditions along the canal have improved significantly.

Relocated residents from the canal banks have been compensated and provided with new apartment accommodation or accommodation elsewhere. Not all residents are satisfied; some have reportedly sold the accommodation provided in order to move to more traditional housing. There have been attempts to develop microenterprises, which are contributing to the growth of employment and raising income levels. The canals have also provided welcome open space to poorer communities and are being used for recreational activities.

The HCMC People's Committee has benefited from the project by strengthening the capacity of the organization's staff to design, construct, and maintain water and wastewater management systems. Prior to project implementation, the magnitude of the problems simply overwhelmed the ability of government to deal with them. The project will also assist in developing more efficient institutions to sustainably manage drainage and wastewater services. There is still room to further enhance capacity building and institutional learning so that the Urban Drainage Company is fully able to address the many urban wastewater management problems facing the city. However, in the interim, the establishment of the Urban Drainage Company has strengthened the capacity and capability in HCMC to pursue future programs and to provide assistance to other local governments in Viet Nam facing similar environmental wastewater problems.

The second phase of the Nhieu Loc-Thi Nghe Canal project is already bringing major improvements to the urban areas in HCMC. By reducing flooding and improving water quality in the canal, the project will bring general benefits to the city's economy as a whole, and private benefits to individual households. In particular, it will improve the health of women and children, who have the greatest exposure to unsanitary conditions. The community has benefited through reduced odors and waste management costs, greater access to public open space, better services, and increased property values.

The Nhieu Loc-Thi Nghe Canal project has been an important learning experience for the Government and community of HCMC in the art of creating and implementing a project to improve the quality of the urban environment with a sustainable development outcome. While many benefits have been derived from the project, these have had social, financial, and administrative costs. Not everyone—especially the very poor—had benefited from the project. Weaknesses in governance, urban and project management, land administration, and handling of compensation have delayed and added to the costs and complaints about the implementation of the project. These must be accepted as part of the learning process for what is Viet Nam's largest urban environmental improvement project. Learning to plan, construct, and man-

age projects of this size has been a real challenge to the institutional capacity of the Government.

Urban Upgrading, Environmental Impact Assessment in Van Mieu Ward, Nam Dinh City, Nam Dinh Province

Background

GOOD PRACTICE	
Good Governance	✓
Urban Management	✓
Infrastructure/Service Provision	✓
Financing and Cost Recovery	
Sustainability	✓
Innovation and Change	
Leveraging ODA	

This case study examines an urban upgrading project in Van Mieu Ward, Nam Dinh City, Nam Dinh Province, about 100 km south of Hanoi. The Van Mieu Ward urban upgrading project was selected as one of four projects funded under the World Bank Urban Upgrading Project. The other three projects are located in HCMC, Can Tho, and Hai Phong. The projects selected all include urban areas with poor environmental conditions and high levels of poverty. The project was implemented in the third quarter of 2004 and is scheduled to be completed by the end of 2006. The objectives of the urban upgrading project are to:

- improve basic tertiary infrastructure and other services in low-income areas through partnerships between communities and local governments, and through capacity building for participatory planning and management;
- provide and/or rehabilitate primary and secondary infrastructure networks to connect to the tertiary infrastructure in low-income areas;
- provide affordable housing and/or serviced plots to low-income families that have to be resettled as a result of upgrading; and
- provide technical assistance to improve land administration processes in the project cities (World Bank Project Document 2004).

Van Mieu Ward is located at the west-southern part of Nam Dinh City. It has an area of 37.7 ha, with a population of 12,186 in 2,797 households. The population density is more than 320 persons/ha, Each household has an average floor area of 29.8 m^2 (7.5 m^2/person). In recent years, the population of the ward has declined by about 1.2 %/year due to out-migration to Hanoi.

The economic development of Nam Dinh City has been very slow compared to that in other parts of Viet Nam. The city's economy lacks competitiveness and has been unable to attract investment in new economic enterprises.

The textile and garment industry has played a crucial role in the economy of Nam Dinh City and the ward; however, this industry lacks the infrastructure and business capabilities to compete with more modern industries located in the industrial estates around Hanoi. Other industries important to the economy are meat processing, seafood, fruits and drinks, and wood, along with the manufacturing of woolen carpets, jute fiber products, boat building, and handicrafts. In 2003, the estimated income of 78.5% of the population was less than $25/month (SW 2003).

The economic decline of Nam Dinh City has been exacerbated by the paucity of basic infrastructure, lack of maintenance, and poor condition of housing and the urban environment, especially in Van Mieu Ward. An estimated 23.8% of houses in the ward front onto a road no wider than 5 m, making emergency vehicle access difficult. The proximity of buildings to one another poses major fire, health, and security hazards. Only 30% of the structures are made of robust materials.

While most houses have access to potable water and electricity, the quality of supply is not good. In addition, sanitation conditions are basic, with only three public toilets servicing about 600 families in the ward. Flooding and surface water drainage creates a safety and health hazard for the area. Most inhabitants in the project area have solid waste collected by the Urban Environmental Company. However, the dirty streets pose serious environmental and health risks to the community.

Van Mieu Ward is typical of many residential districts in smaller towns and cities of Viet Nam. Few of the economic benefits seen in the national economy and larger cities have trickled down to regional towns struggling to come to grips with market reforms, reduced national government support for projects, and the responsibilities imposed on local governments under decentralization. These conditions provided a good opportunity for the World Bank to test and evaluate approaches toward urban environmental improvements in smaller regional towns and cities. The Van Mieu Ward project is a learning and innovation experience to show how to develop approaches that provide a model for achieving more sustainable urban development outcomes in smaller cities.

Upgrading Project

The urban upgrading project has been implemented at a decentralized level by city authorities in four cities of Viet Nam. Under the People's Committee of Nam Dinh Province, a multidisciplinary project management unit reports to the province-level project steering committee, which is composed of representatives of relevant departments and utility companies. The steering

committee provides overall guidance, ensures consistency, and coordinates with other projects.

As with the three other projects, the Nam Dinh project has six components:

- tertiary infrastructure upgrading and service improvements,
- complementary primary and secondary infrastructure,
- resettlement housing,
- land and housing management,
- housing improvement loan program, and
- capacity building.

Together with the other projects, a seventh component will be financing the development of a national urban upgrading program, which the Ministry of Construction will manage.

The Nam Dinh project was implemented in two phases. Phase One covered the Van Mieu Ward. Objectives of the urban upgrading project in Van Mieu were to mobilize active participation of communities on financial contributions, project preparation, and implementation; minimize resettlement and land acquisition; coordinate synchronously the various sectors; and implement a project based on suitable technical standards.

Sustainable Impacts of the Project

Although only two thirds through the first phase, the project has had some positive impacts:

- *Roads*: Access to some houses has improved and traffic flows enhanced.
- *Street Lighting*: There is improved security and safety and a decrease in accidents due to better street lighting.
- *Water Supply*: Household connections and supply to the area are improving.
- *Sewerage and Drainage*: There has been reduced flooding and remarkably improved living conditions, hygiene, and overall health of the people.
- *Solid Waste Collection and Public Toilets*: Hygiene and environmental conditions are improving.
- *Social Works*: Overall improvement is being made to the social infrastructure in such institutions as schools.

Three alternative strategies were considered for Phase One. The first strategy was related to the master plan, the detailed area plan, and planning

and engineering standards. For low-income residential areas, some standards required adjustment following site surveys and public opinion polls. The second strategy considered was minimizing resettlement and compensation effects by applying more functional standards. The third was a compromise of the two. Communities, local authorities, city departments, and provincial authorities agreed on this last alternative. The project's principle of incremental upgrading is being followed and appropriate technical standards that are affordable to the city and community are being applied.

The city was already familiar with community participation programs by virtue of an earlier Swiss-financed project. The city already had a community consultancy department and volunteers available in all wards. Capacity of all people in Van Mieu Ward had been built. Community groups had been formed, trained, and motivated to plan and comanage. These groups are aware of and understand urban environmental problems and their solutions. The design of tertiary infrastructure was developed using participatory methods that were agreed on by the communities in the ward. The communities agreed to pay D280,000 ($17.50) per household over a period of 3 years (World Bank 2004). The community also contributed to the maintenance of access roads and alleys as well as the branch sewers.

Urban authorities are more confident and capable of planning and managing appropriate solutions to urban environmental problems. Environmental assessments were carried out in consultation with affected communities and others, with the final reports made available to the public. In phase one, two types of environmental assessments were prepared, depending on the type of infrastructure interventions: for primary and secondary infrastructure and housing construction for resettled populations, environmental impact assessment reports, and environmental management plans; and for tertiary infrastructure, which emphasized a participatory approach to identifying environmental solutions at the community level, plans of community environmental management (World Bank 2004).

Professional planners considered and solved local environmental problems and local needs to make urban planning more appropriate and to improve methods of urban environmental planning and management at the project outset. In this regard, provincial and city planners are seen as being capable of analyzing local environmental planning needs. Appropriate cost-recovery mechanisms were also developed to ensure sustainability of urban services.

The environmental and planning issues of the ward have been studied and implemented through cooperation between all sectors and government bodies at all levels of the province as well as between the provincial authorities, the central Government, and international agencies.

Lessons Learned from the Case Studies

Many urban development practices in Viet Nam are not sustainable. The nation is struggling to meet the demand for new and improved urban infrastructure, housing, and transportation and to improve urban management by local and provincial governments. Environmental problems are proving increasingly challenging and expensive to address. However, despite these difficulties, there is growing awareness at all levels of government that urban development and management practices must change. It is hoped that the lessons gained from the three case studies can be replicated throughout the country.

The upgrading of Phu Thuong Ward case study in Hanoi has been an important learning experience for local government working with local communities on integrated planning for areas undergoing urbanization. The process of engaging the community in the planning, delivery, and ongoing maintenance of physical infrastructure and social services led to substantial improvements in the quality of life for most ward residents.

The importance of institutional capacity building has been critical in ensuring the longer-term continuity of the improvements made to the ward. Phu Thuong has been very effective in building relevant knowledge and skills among residents, strengthening community social organization and the knowledge and skills base, building a local economic base, and reforming governance institutions to ensure a supportive legal and regulatory context for the ongoing improvement of this residential area.

The case study of Nhieu Loc–Thi Nghe Basin Canal, HCMC, focused on a major urban environmental improvement program that is ongoing. The decision to sell public housing to raise capital to start the project was controversial, reversing strong socialist ideology; however, this decision enabled the local government to raise capital to undertake important environmental improvements that have had significant health and economic benefits, thereby promising greater sustainability.

That case study provides important opportunities for learning lessons on the need for good implementation arrangements at all levels of government, from national to local. The role of NGOs and special interest groups has added value to the project, with NGOs acting as an intermediate agent encouraging direct participation in the tertiary sewer component to promote better health and quality of life from the project.

This case study also illustrates the premise that to achieve sustainable development outcomes for cities facing serious environmental problems, bold initiatives and often difficult and expensive interventions—spearheaded by the Government—need to be undertaken. It further shows that a massive relocation of people may be necessary if the health of people and quality of

urban environments are to be improved. However, in choosing to act, innovative ways must be found to minimize the negative impacts.

The Van Mieu Ward, Nam Dinh City case study shows that better mechanisms for coordination between various stakeholders are a prerequisite for effective project implementation. The project demonstrates the advantages of improved cooperation with other projects involved in implementing ventures in the same area, avoiding the overlap that occurs between agencies with so many projects and, hopefully, optimizing the effectiveness of physical infrastructure in the city.

This case study points to the advantages of engaging communities in constructing social infrastructure. The project design minimized the need for resettlement. The lowest-cost options for upgrading infrastructure should be sought to allow greater coverage with limited resources. Land use and the impact of existing activities in the surrounding areas have to be properly considered in the project design. Environmental matters have to be integrated in all steps of the project.

Construction standards, regulations, and instructions concerning dimensions have to be followed and adjusted to suit the local circumstances. Subsequent operation and maintenance arrangements for upgraded infrastructure by the responsible agencies also need attention. In this case, experienced civil works contractors and supervision consultants with local knowledge were engaged to ensure a high-quality construction.

Project ownership by the beneficiary community is an essential prerequisite that can only be achieved through effective community empowerment—politically, economically, and socially. Schemes based on community participation take time and the timing of community participation in decision making is critical for effectiveness. Community participation is a key factor in urban upgrading projects.

STRATEGIES TO ENHANCE SUSTAINABLE URBAN DEVELOPMENT

The basic principles outlined in the Urban Development Strategy (MoC 1999) provide a basis for Viet Nam to move toward a more sustainable urban system. There are many problems in implementation of the strategy. However, it has had an important impact by raising the consciousness of politicians and government officials of the need to pay greater attention to managing urbanization in the future if Viet Nam is to avoid many of the problems facing the more urbanized nations of Asia.

Strategies to achieve more sustainable urban development in Viet Nam must be realistic and achievable within manageable time frames. Viet Nam is

a poor country, and the standards and targets applied in more advanced countries of Asia are not achievable, given the state of the nation's development. The following strategies to improve the sustainability of urban development are suggested.

Housing and Land Management

Land Tenure. To ensure more efficient management and operation of land and property markets, policies are needed for the reform of the land administration and management system, along the lines taking place in the Lao PDR and Cambodia. Improvements in terms of land registration and the length of tenure are needed. There is also the need to develop financial markets that enable land to be used as collateral for private individuals and business to raise capital for investments to support development and improved living environments.

Housing. Policies that improve the recognition and protection of property rights and provide a more stable basis of tenure are needed. The establishment of a mortgage market for residential property in Viet Nam is also needed. Policies and standards for housing construction should aim to achieve a minimum of 18–20 m^2 per capita in 2020 to reduce overcrowding and improve livability in urban areas.

Urban Infrastructure and Utility Services

Transportation. More land needs to be set aside in new and redevelopment projects to increase the capacity of the road and river transportation networks and parking spaces. Total land use allocated for transport purposes in larger cities should be increased to 20–30%. For large cities, urban public transport using bus and rail systems should be developed and integrated at ground, underground, and elevated levels. Also, greater use of water transport should be made. Policies should be introduced at the national and local government levels to reduce private motorcycle and car usage in favor of public transport systems meeting 30–50% of travel demand.

Water Supply. National targets and support programs are needed to achieve 90% supply of running water to the urban populations by 2010 and 100% by 2020 (based on a target of 180 liters per capita in 2020). Measures to ensure sustainable use of water in dwellings, commercial premises, and factories should be introduced to ensure more efficient use and recycling of water. Developers should be responsible for providing all services and utilities to new urban areas.

Drainage, Sewerage, and Urban Hygiene. Upgrading and completion of the system of urban sewerage, including sewers, treatment, and

pumping stations, to ensure all urban areas have a basic minimum standard of service by 2025. Local sewerage and package treatment systems should be constructed in favor of building large systems that will take many years to construct. In new towns, the sewerage system needs to be separated from the drainage system.

Solid Waste Management. Local governments should introduce recycling of domestic and industrial wastes, especially in large industrial estates and public utilities, such as power stations and wastewater treatment facilities.

Electricity Supply. The target for the supply of electricity should be set at 1,000 kWh per capita per year in major cities by 2020, 700 kWh per capita per year in the regional cities, 350 kWh per capita per year in medium-sized towns, and 250 kWh per capita per year in small-sized towns. Currently, all municipalities have public lighting systems.

Telecommunications. Modernization of the telecommunication network is ongoing, increasing the numbers of persons using telephones to over 100 machines per 1,000 people since 2000.

Protecting Environment, Landscape, and Ecological System. Upgrading and new urban development must incorporate the need to preserve cultural values and national traditions. Natural areas of ecological significance should be protected, managed and, where necessary, rehabilitated. Urban open space provisions in newly developed areas should be increased to at least 20 m^2/person. Urban development must be coordinated closely with security, national defense, and social safety. There must be greater enforcement of laws on building construction and control of urban development to ensure public safety and compliance with plans.

Urban Management

Allocation and Organization of Key Zones in Municipalities. Existing and new industrial zones need to be better integrated with residential areas to avoid long and often dangerous commuting to industrial employment centers on the outskirts of cities.

Socioeconomic Development Strategies. Strategies on reducing unemployment, attracting investment, and reducing poverty need to be more focused. More investment in urban infrastructure is essential because it has a great multiplier effect on employment growth and investment.

Policies and Measures for Urban Development toward Poverty Reduction. Management effectiveness of urban policies and mechanisms designed to reduce poverty needs to be strengthened. Preferential policies for investments, which help reduce urban poverty and stimulate microbusiness,

need to be developed. Improvements in housing and land policies for social stability and urban human resource development are also needed.

Completion of Legal Documents for Urban Planning Management. Improvements in the legal framework on urban planning and construction management are needed. Reforms to construction planning and design that incorporate public participation in updating standards are necessary, as is the need to update standards and qualifications of urban construction workers.

Strengthening Urban Development Plan Implementation Management. Publicizing and disseminating urban development plans in various formats are required for easy access and implementation by civil society. Urban development and construction plans should be integrated in a way that attracts more investment in big cities and key economic zones.

CONCLUSION

Urbanization is creating many challenges for Viet Nam. Less than 30% of the population is in urban areas but the urban population is expected to double over the next 25 years. The current approach to dealing with urbanization is not sustainable. Public authorities have not yet come to grips with the extent of urbanization and how to manage the forces behind it. Sustainable urban development is not a widely understood concept. There is a need for public institutions to learn how to develop solutions and practices that result in improved urban development outcomes, recognizing that this will require a switch of policy and priorities for the development of sustainable cities (Nguyen 2005). This is going to take time.

Viet Nam is slowly adjusting to the realities and problems of urban development. The national Government has proposed many strategies, policies, and solutions to improve urban environments and to reduce poverty. Under decentralization, local governments are moving toward developing and implementing more sustainable urban development policies and practices. However, there are major weaknesses in policy frameworks, approaches, and institutional capacity. The three case studies in this chapter provide insights into ways local governments in Viet Nam are seeking to adopt more sustainable approaches toward urban management and development.