

4 HANOI'S ROLE IN THE REGION

4.1 Approach

1) Background and Objectives

Hanoi's development is greatly affected by degrees of integration at both the regional and international levels in terms of trade, economy, and infrastructures. While this holds true for other provinces in the region as well, development among the provinces must also be coordinated and integrated with each other to synergize their respective strengths and effectively overcome weaknesses. To ensure that Hanoi's urban development will be an integral part of the national urban policy and regional development framework, existing policies and plans related to Hanoi's urban development were reviewed and development directions at the regional level has been proposed.

The Socio-Economic Development Strategy (SEDP) for 2001-2010 is the Vietnamese government's major policy document on national development. Based on this strategy, the SEDS Five Year Plan 2001-2005 was formulated to ensure Vietnam a comprehensive and an integrated economic and physical development. The SEDP is prepared at different administrative levels, from the national to the commune.

The SEDP puts emphasis on economic development along with the improvement and the enhancement of socio-economic conditions and infrastructures. The SEDP also underscores poverty reduction as one of its main priorities and goals. To achieve the SEDP goals, a variety of sectoral programs and projects has been implemented, including the launching of the government's Comprehensive Poverty Reduction and Growth Strategy (CPRGS) with the people's participation and the international donors' support.

The SEDP aims to reduce poverty through a comprehensive economic development approach and goal setting. Regional planning has been done for six regions in the country, with the envisioned economic development to be achieved through the strengthening of infrastructure. Particularly, transportation linkage is considered as the most important factor in socio-economic development.

2) Study Areas

Currently, there are three regions which cover slightly different areas in the Northern Vietnam as follows:

- (a) **Red River Delta:** This is one of eight (8) national subregions and comprises nine (9) provinces located in the delta area with Hanoi as the northernmost province. The area covers 12,632km² and has a population of 15.4 million.
- (b) **Northern Focal Economic Zone (NFEZ):** Vietnam is also divided into six economic zones of which the NFEZ is a planning area for social and economic development for Hanoi Region. It comprises eight (8) provinces, covers an area 15.287km², and has a population of 13.2 million.
- (c) **Hanoi Metropolitan Area (HMA):** This includes Hanoi City and seven surrounding provinces. The area covers 13,379km² and has a population of 12 million.

Since Hanoi is included in all of the above three regional planning classifications, the HAIDEP study area includes all the provinces and also additional three neighboring provinces of Phu Tho, Thai Nguyen, and Bac Giang. It covers 16 provinces in total and an area of 32,730km², with a population of 22.1 million (see Table 4.1.1 and Figure 4.1.1).

Figure 4.1.1 Coverage of Regional Plans and HAIDEP

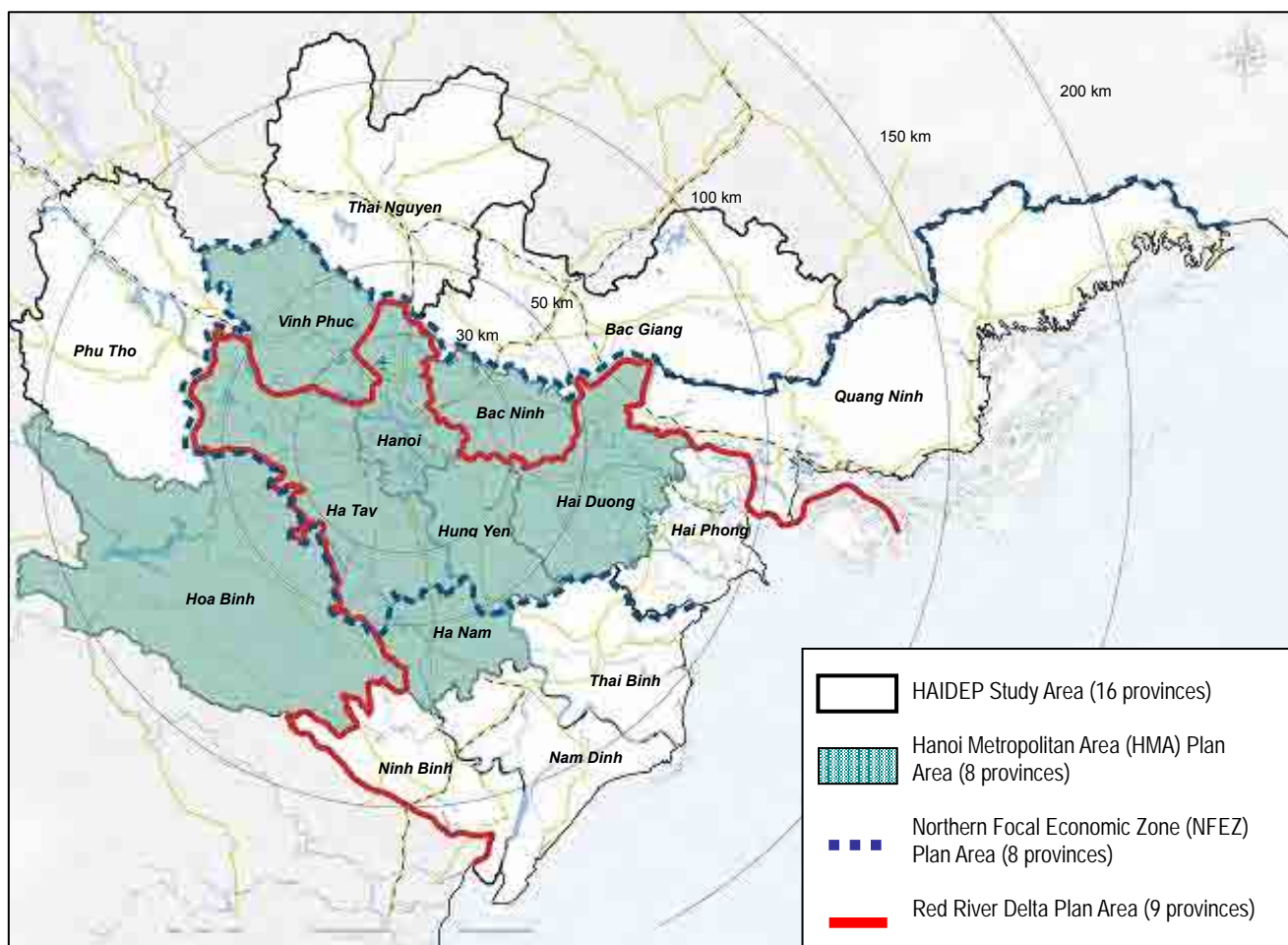


Table 4.1.1 Study Areas of Existing Plans and HAIDEP

Provinces (♦ Cities)	Existing Plans			HAIDEP Study Area
	HMA ¹⁾	NFEZ ²⁾	RRD ³⁾	
Hanoi ♦	○	○	○	○
Hai Phong ♦		○	○	○
Vinh Phuc	○	○		○
Ha Tay	○	○	○	○
Bac Ninh	○	○		○
Hai Duong	○	○	○	○
Hung Yen	○	○	○	○
Ha Nam	○		○	○
Nam Dinh			○	○
Thai Binh			○	○
Ninh Binh			○	○
Thai Nguyen				○
Phu Tho				○
Bac Giang				○
Quang Ninh		○		○
Hoa Binh	○			○
No. of Provinces	8	8	9	16

Source: Construction Law No 16/2003 / Decree 08/2005/ Circular 15/2005/TT-BXD.

Table 4.1.2 Profile of Study Area

Items		Unit	Hanoi City	HMA	NFEZ	RRD-mp	HAIDEP	Whole Country
No. of Cites and Provinces		-	1c	1c+7p	2c+6p	2c+7p	2c+14p	5c+59p
Covered Area		sq. km	921	13,376	15,287	12,629	36,252	329,297
Population Density 2003		pers/sq. km	3,265	898	865	1,230	646	246
Total Population 2003		000 persons	3,007	12,015	13,217	15,529	23,433	80,902
Urban Population 2003		000 persons	1,834	2,818	3,752	3,623	5,076	20,870
Urbanization Rate		%	61	23.5	28.4	23.3	21.7	25.8
Land Use Composition 2002	Forestry	%	7.2	20.6	21.3	7.2	27.0	36.6
	Agriculture		46.1	42.7	38.3	58.4	35.9	28.6
	Homestead		12.8	4.8	4.4	6.3	3.7	1.4
No. of Cities and Towns	Governmental City	Unit	1	1	2	2	2	5
	Provincial City		-	1	2	2	4	22
	Urban Town		-	8	10	8	17	61

Source: General Statistical Book, Vietnam.

Table 4.1.3 Profile of Province in the Study Area

	Provinces (◆ Cities)	Covered Area (sq. km)	Population Density (p/sq. km)	Urban Population		Increase		Land Use Composition (%)		
				(000 Persons)		Rate (%)		Homestead	Agriculture	Forestry
				1995	2003	1995-03	1995-03			
RRD	Hanoi ◆	921	3,265	1,275	1,834	559	4.65	12.8	46.1	7.2
	Hai Phong ◆	1,526	1,149	524	646	122	2.65	4.3	47.4	14.0
	Vinh Phuc	1,372	833	80	129	49	6.15	3.8	48.5	22.1
	Ha Tay	2,192	1,131	162	208	46	3.17	5.9	56.0	7.7
	Bac Ninh	805	1,213	41	103	62	12.20	6.7	64.2	0.7
	Hai Duong	1,648	1,025	133	237	104	7.49	6.8	63.7	5.5
	Hung Yen	923	1,205	24	113	89	21.37	7.9	68.7	0.0
	Ha Nam	852	956	56	77	21	4.06	5.2	61.2	11.2
	Nam Dinh	1,638	1,181	220	252	32	1.71	5.8	65.1	3.0
	Thai Binh	1,545	1,185	96	132	36	4.06	8.0	67.4	1.6
	Ninh Binh	1,384	655	77	125	48	6.24	3.7	4.1	14.5
	Thai Nguyen	3,541	307	201	249	48	2.71	2.4	26.8	43.2
	Phu Tho	3,520	370	117	193	76	6.46	2.2	27.6	41.0
	Bac Giang	3,822	405	82	128	46	5.72	3.2	32.8	30.6
	Quang Ninh	5,900	179	404	483	79	2.26	1.1	10.4	40.7
	Hoa Binh	4,663	170	103	119	16	1.82	1.3	14.4	43.5
Ref.	Ho Chi Minh City ◆	2,095	2,651	3,466	4,860	1,394	4.32	8.7	43.7	16.1
	IV: HAIDEP (16)	36,252	646	3,596	5,076	1,480	4.19	3.8	36.8	25.5
ER	North Region (25+1)	115,771	253	4,295	5,879	1,584	4.00	1.5	18.9	35.5
	Whole Country (61+3)	329,297	246	14,938	20,870	5,932	4.27	1.4	28.6	36.6

Source: General Statistical Book, Vietnam.

3) Coverage of HAIDEP

Since HAIDEP's objective is primarily to look into urban issues of Hanoi and its directly adjoining areas, regional aspects and issues were studied with particular regard to the following:

- Preliminary regional development strategies and
- Regional transportation network development orientation.

4.2 Profile of and Issues in Hanoi Region

1) Urbanization in the Region

(1) Demographic Development

Vietnam's population broke through the 70 million mark in 1983, and passed the 80 million mark in 2003. That year the population in NFEZ was 29 million, making up 36% of the country's total population. Sixty percent (60%) of the population in NFEZ was concentrated in the Red River Delta. In comparison, the population of HAIDEP's study area was 22 million, or 27% of the whole country and 76% of NFEZ. Hanoi's population was three million (13.6% of HAIDEP) in the same year. Growth rates of population are 0.8% per year for the study area, while 1.7% for Hanoi which is equivalent to that of HCMC (see Table 2.1.1). Based on the projection by the Ministry of Construction (MOC), the region will have a population of 26 million in 2010 and 30 million in 2020.

(a) Population Density

Of the subregions in Vietnam, the Red River Delta has the highest population density with 1,180 persons/km² compared to the national average of 231 persons/km². The average population density in Hanoi Region (study area) was 961 persons/km² (2003). The population density varies between the provinces with Hanoi having the highest of 3,265 persons/km² and Hoa Binh with the lowest of 170 persons/km².

(b) Migration

After the 1960s, the major migration trend was from the Red River Delta to the highlands. This aimed at encouraging the establishment of settlements and agriculture in the mountainous regions whose residents were mostly minorities. It also aimed at improving the sanitary conditions in the RRD. Other major migration trends occurred in 1975 and onwards, during which city residents, like those from Ho Chi Minh City, resettled in mountainous areas or in depopulated swamps.

Doi Moi Policy and subsequent ones encourage migration as part of a policy on job creation (in the periods of 1976 -1980, 1981-1985, and 1991-1995, 3.5 million, 3.0 million, and 1.0-2.0 million people migrated respectively).

Migration into the city from the provinces surrounding Hanoi (rural-urban migration) accounted for 275,000 persons in 1995-2003. As to rural-rural migration, migration of agricultural workers from RRD to the northern highlands totalled 142,000 persons, while that of agricultural workers from RRD to central and southern Vietnam numbered 633,000 persons.

Most immigrants to Hanoi came from urban areas in the region, while the other provinces have higher rate of migrants from rural areas. The main flow of migrants in the regional provinces (except for Hanoi) is in the outgoing direction. Poor migrants are usually the temporary or seasonal low-paid workers in local areas or urban centers, while those better-off have a greater chance of being hired overseas.

Migration data in Vietnam shows that people migrating to big cities, including Hanoi, mainly come from other urban centers. This could be because rural people prefer to move to smaller towns and people from smaller towns migrate to bigger towns and cities.

Figure 4.2.1
Population and Population Growth, 2003

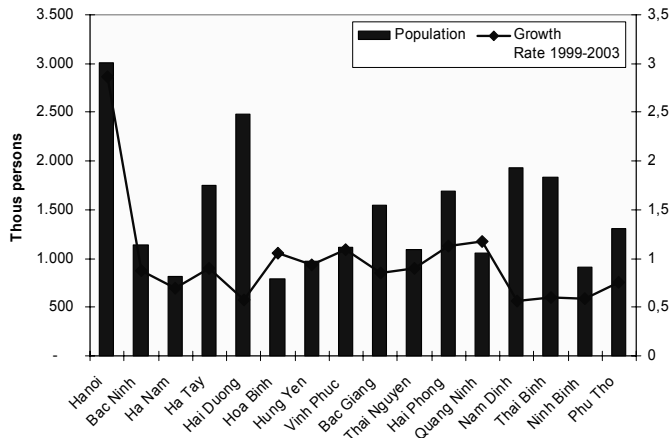


Figure 4.2.2
Population Trends in Hanoi Region

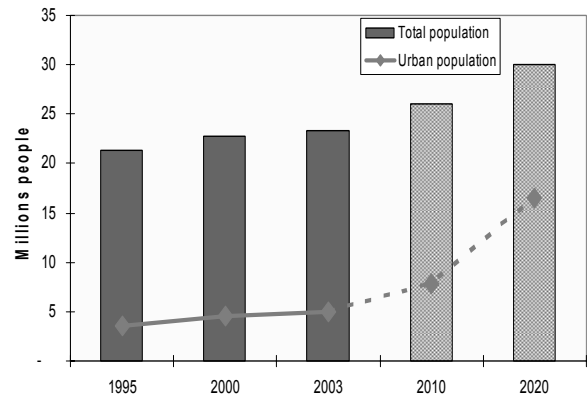


Table 4.2.1 Demographic Characteristics

		Total Population (000)				Migrant Population (000)			Population Density (no/km ²)
		1995	2003	Increase		1984-89	1994-99	1995-2003	2003
				1995-2003	%				
NER	NHL	10,464	11,610	1,146	1.50	-99	-77	-149	115
	RRD-sr	16,137	17,649	1,512	0.78	-204	-194	-484	1,192
	SubTotal	26,601	29,259	2,658	0.87	-303	-271	-633	253
HAIDEP Study Area	HMA	10,819	12,015	1,196	0.89	-89	-71	-142	898
	NFEZ	11,886	13,217	1,331	0.91	-71	-54	-139	865
	RRD-mp	14,173	15,529	1,356	1.31	-192	-149	-397	1,230
	Subtotal	20,233	22,130	1,897	0.80	-207	-51	-606	676
Hanoi City		2,431	3,007	576	1.72	6	112	275	3,265
Ho Chi Minh City		4,640	5,555	915	1.71	82	411	341	2,651
Whole Country		71,996	80,902	8,906	1.08	0	0	0	246

Source: population: General Statistics 2004, Migration: Report on Human Development 2001

Note: HMA : Planning area of the Hanoi Metropolitan Area Development Plan

NFEZ: Planning area of the Socio-economic Development of the Northern Key Economic Region until 2010, with a Vision to 2020

RRD-mp: Planning area of the Master Plan for Socio-economic Development in the Red River Delta

HAIDEP: Planning area of the Comprehensive Urban Development Programme in Hanoi Capital City

RRD-sr: Red River Delta economic sub-region

NHL: North East and North West economic sub-regions

Figure 4.2.3 Migration of North Economic Region

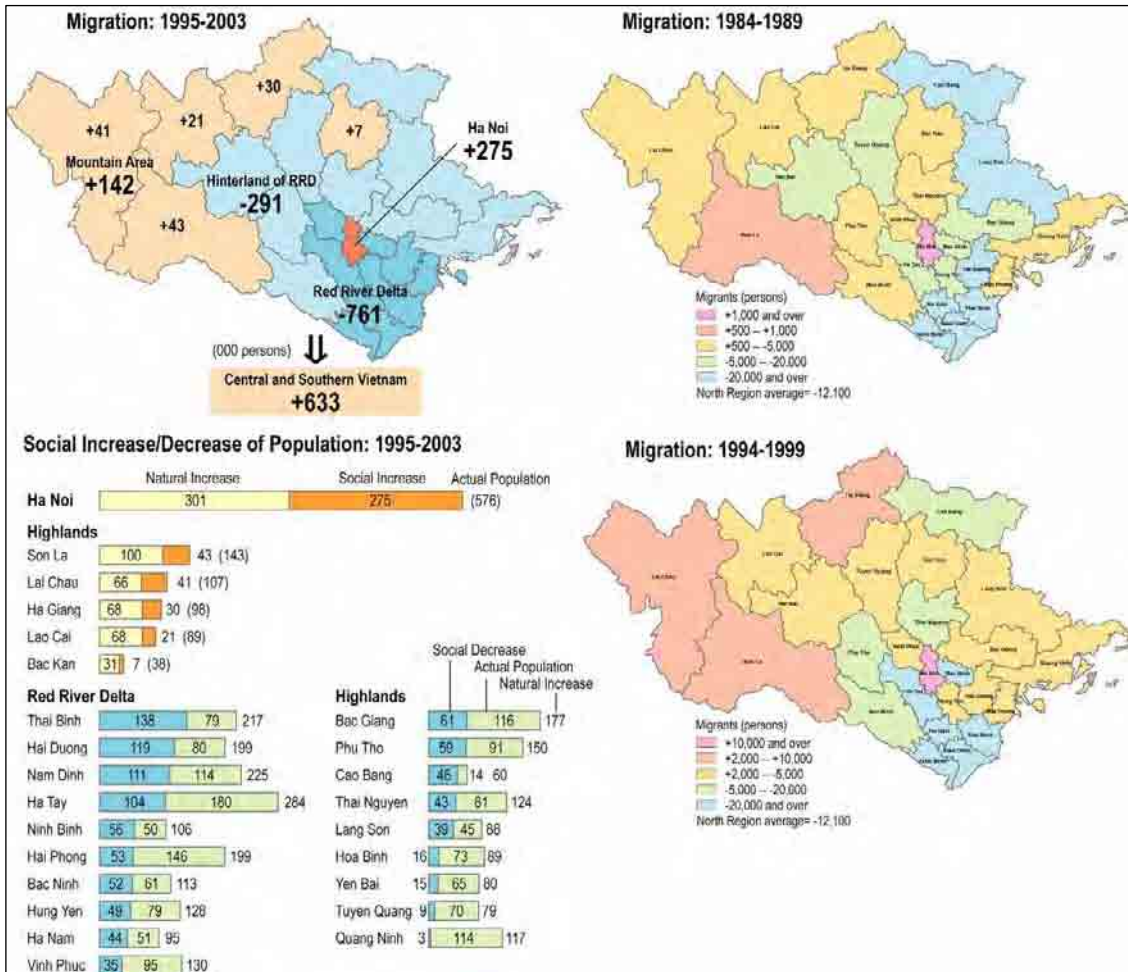
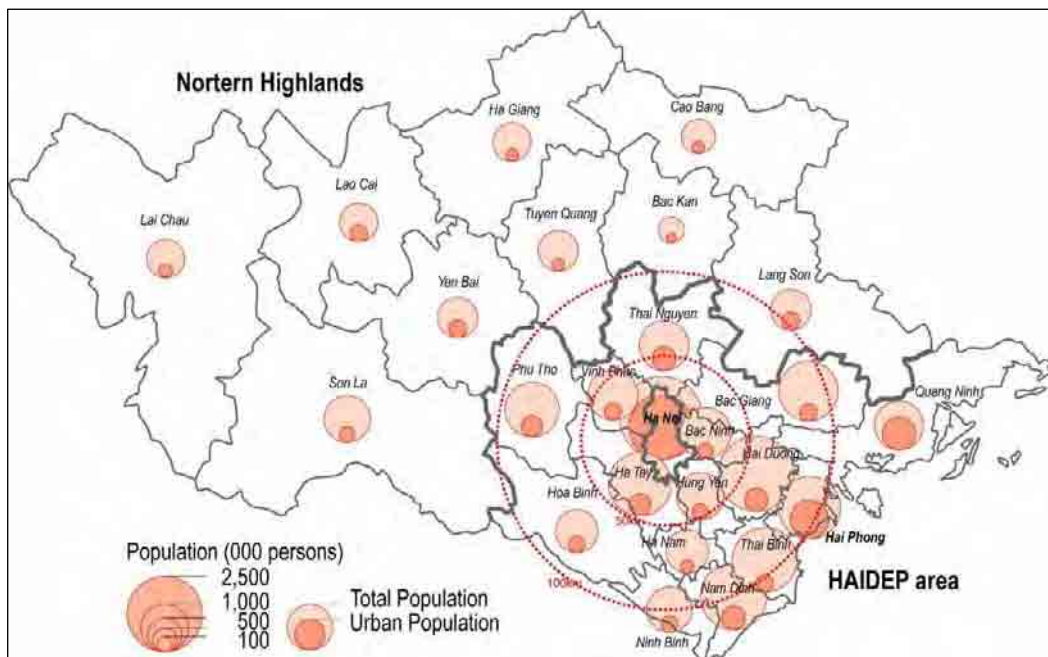


Figure 4.2.4 Population Distribution



(2) Urbanization Trend

(a) Urban Population

Vietnam's urban population went up from 14.9 million (about 20.7% of total population) in 1995 to 20.9 million (25.8%) in 2003. This is expected to increase to 46 million (43%) in 2025, according to the United Nations' World Urbanization Prospects (1994 Revision).

In 2003, the urban population was 5,879,000 for NER, 3,855,000 for RRD-er, and 2,024,000 for NHL. Provinces with large urban population included Hanoi (1,834,000), Hai Phong (646,000), and Quang Ninh (483,000).

(b) Urban Population Growth Rate

The annual average rate of increase of urban population for the whole country from 1995 to 2003 was 4.89%. The average increase rate per region was 4.59% for NER, 5.28% for RRD-er, and 3.36% for NHL. Provinces with high increase rates were Hung Yen (25.13%), Bac Ninh (13.88%), Hai Duong (8.55%), Phu Tho (7.37%), Vinh Phuc (7.11%), and Bac Giang (6.52%). Provinces with low increase rates were Tuyen Quang (-0.13%), Son La (0.52%), and Yen Bai (1.92%) which are all adjacent to Hanoi.

(c) Urbanization Rate

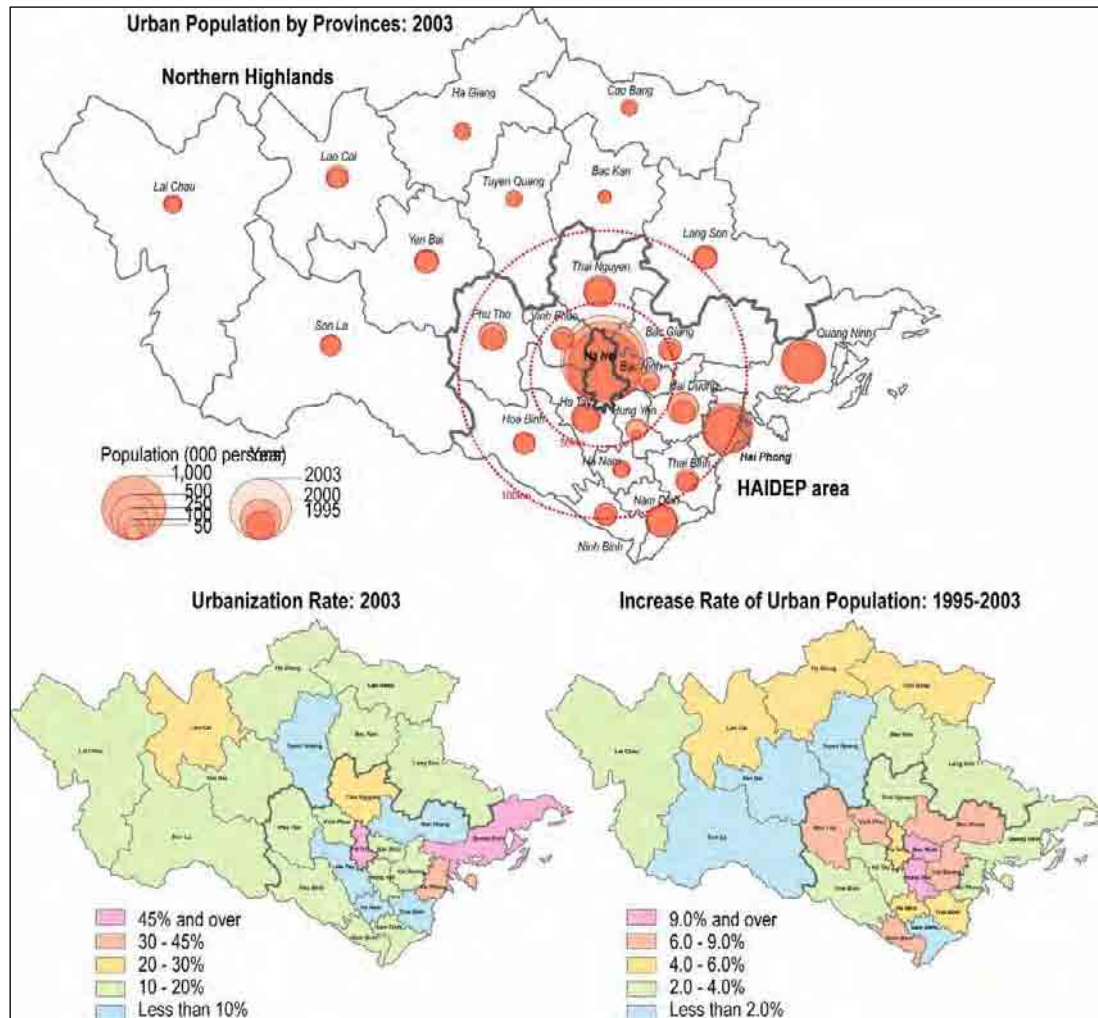
Although the national urbanization rate was stable, just over or below 20% following the implementation of Doi Moi, this went up 5% in the eight years from 1995 (20.7%) to 2003 (25.8%). This figure is expected to climb up to 43% by 2025.

Table 4.2.2 Trend of Urbanization by Provinces

	Provinces (♦ Cities)	Urban Population		Increase		Urbanization Rate (%)	
		(000 persons)		Rate (%)		1995	2003
		1995	2003	1995-03	1995-03		
HAIDEP Area	Hanoi ♦	1,275	1,834	559	4.65	52.4	61.0
	Hai Phong ♦	524	646	122	2.65	32.6	36.9
	Vinh Phuc	80	129	49	6.15	7.6	11.3
	Ha Tay	162	208	46	3.17	7.1	8.4
	Bac Ninh	41	103	62	12.20	4.5	10.5
	Hai Duong	133	237	104	7.49	8.3	14.0
	Hung Yen	24	113	89	21.37	2.3	10.1
	Ha Nam	56	77	21	4.06	7.3	9.4
	Nam Dinh	220	252	32	1.71	12.1	13.0
	Thai Binh	96	132	36	4.06	5.5	7.2
	Ninh Binh	77	125	48	6.24	9.0	13.8
	Thai Nguyen	201	249	48	2.71	20.0	23.0
	Phu Tho	117	193	76	6.46	9.7	14.8
	Bac Giang	82	128	46	5.72	5.7	8.2
Quang Ninh	404	483	79	2.26	42.9	45.7	
Hoa Binh	103	119	16	1.82	14.3	15.0	
Ref.	Ho Chi Minh City ♦	3,466	4,860	1,394	4.32	74.7	87.5
IV: HAIDEP (15)		3,479	4,833	1,354	4.19	17.2	21.8
North Region (25+1)		4,295	5,879	1,584	4.00	16.1	20.1
Whole Country (61+3)		14,938	20,870	5,932	4.27	20.7	25.8

Hanoi region's urbanization rate was 20% in 2003. This is lower than the national average of 25.8%. MOC has estimated a rapid increase in urbanization rate in the region – about 30% in 2010 and over 55% in 2020. The average annual urban increase rate was 4.19% between 1995 and 2003 which is slightly lower than the national average of 4.27% during the same period. The urbanization rate varies greatly between the provinces. Provinces with high urbanization rate are Hanoi (61%), Quang Ninh (45.7%) and Hai Phong (38.8%). Provinces with low urbanization rate (below 10%) are Thai Binh, Ha Tay and Ha Nam. The trend indicates that both the population and urbanization rate will continue increasing in the coming 10-20 years.

Figure 4.2.5 Urbanization Trend



(3) Cities and Towns

(a) Definition of Cities and Towns

Currently, there are three types of administrative units which are considered as cities. These are: (1) government city (Thanh Pho Thuoc Trung Uong), (2) provincial city (TP: Thanh Pho Thuoc Tinh), and (3) urban town (TX: Thi Xa). Vietnam now has five government cities, 22 provincial cities, and 61 urban towns. In NER, there are two government cities, eight provincial cities, and 26 urban towns. In 1992, Hanoi and Hai Phong were classified to be under the central government's direct control.

(b) Urban Distribution

The grouping of cities according to distance from Hanoi is as follows:

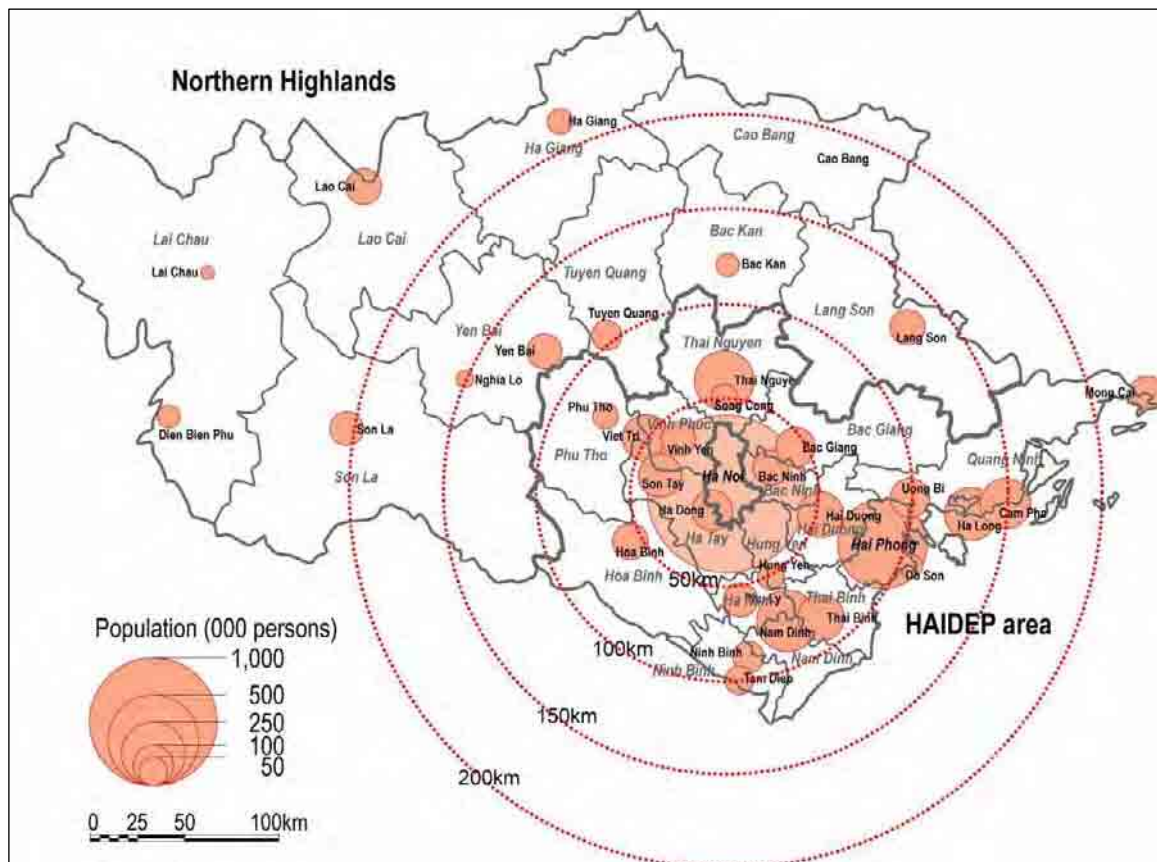
- (i) Less than 25km zone: Hanoi, Ha Dong, Phuc Yen.
- (ii) 25-50km zone: Bac Ninh, Bac Giang, Song Cong, Vinh Yen, Son Tay, Hung Yen.
- (iii) 50-75km zone: Thai Nguyen, Viet Tri, Phu Tho, Hoa Binh, Phu Ly, Hai Duong.
- (iv) 75-100km zone: Hai Phong, Uong Bi, Do Son, Thai Binh, Nam Dinh, Ninh Binh, Tam Diep.

(c) Urban Corridors

Cities located along main radial expressways starting from Hanoi are as follows:

- (i) Route 1A (South): Hanoi-Phu Ly-Ninh Binh-Tam Diep;
- (ii) Route 1A (North): Hanoi-Bac Ninh-Bac Giang-Lang Son;
- (iii) Route 2: Hanoi-Phuc Yen-Vinh Yen-Viet Tri-Phu Tho-Yen Bai-Lao Cai;
- (iv) Route 3: Hanoi-Song Cong-Thai Nguyen-Bac Kan;
- (v) Route 5: Hanoi-Hai Duong-Hai Phong;
- (vi) Route 6: Hanoi-Ha Dong - Hoa Binh;
- (vii) Route 10: Hai Phong-Thai Binh-Nam Dinh -Phu Ly; and
- (viii) Route 18/4B: Hai Phong-Ha Long-Cam Pha-Mong Cai.

Figure 4.2.6 Distribution of Cities and Towns

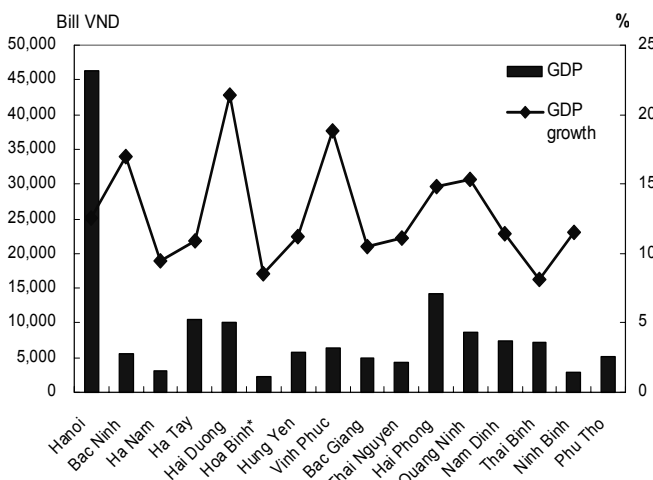


2) Economic Development

(1) Overview

Gross regional domestic product (GRDP) between 2000 and 2003 grew by over 46% and reached VND 144,484 billion in 2003. GDP growth in Hanoi Region is 7.2%, which is equivalent to the national annual average. GDP per capita of Vietnam was US\$ 482 in 2003. The average GDP per capita in the Hanoi Region was only US\$ 344. In same year, however, it varied greatly between the provinces with Hanoi being the highest at about US\$ 1,012 and Bac Giang, the lowest with US\$ 200. The region's growth trend is expected to increase from 7.4% to 9.5% in 2010 and, slightly reduce to less than 9% up to 2030, according to MOC.

Figure 4.2.7
GDP and GDP Growth, 2003, HAIDEP Study Area



Source: GSO, MOC, HAIDEP Study Team

Figure 4.2.8
GDP/Capita and Expected Growth, Hanoi Metropolitan Area

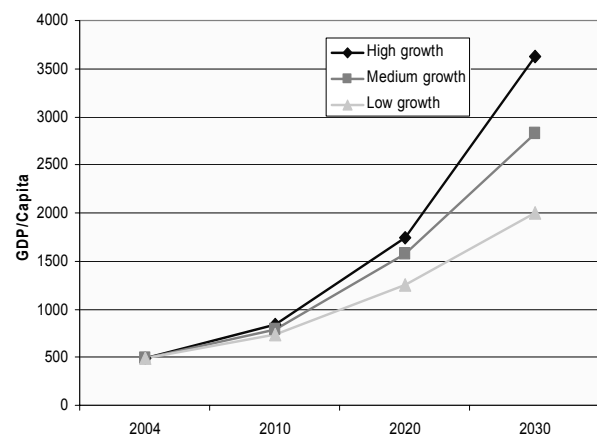
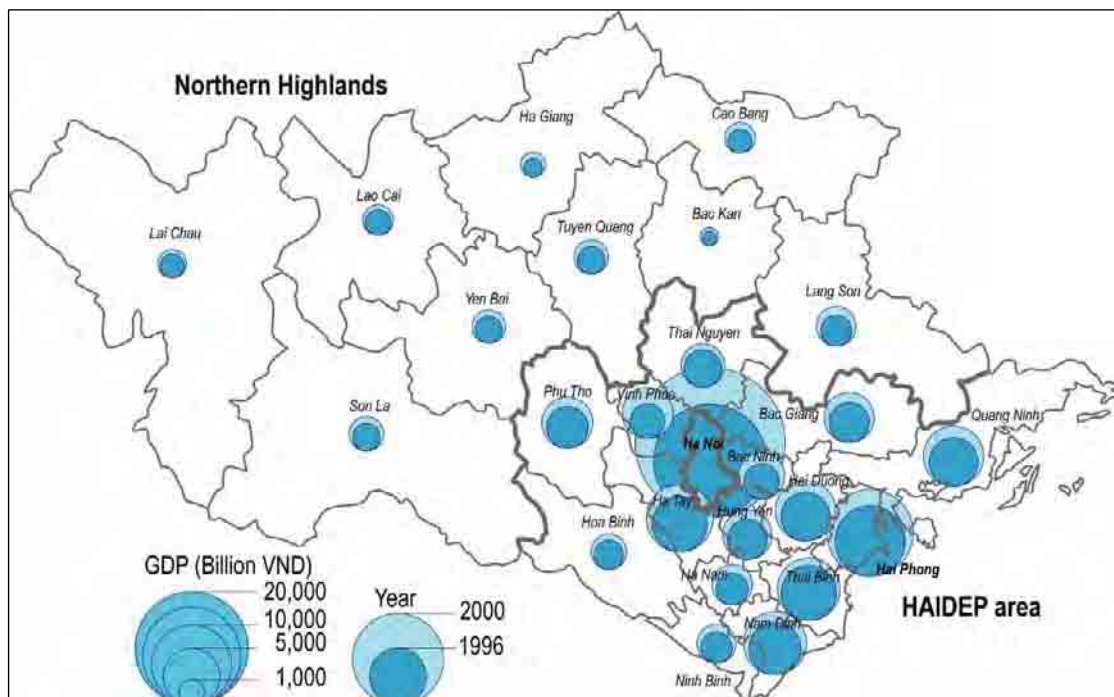


Figure 4.2.9 GDP by Province



In Hanoi Region, secondary sector is the dominant (41%), followed by tertiary (32%) and primary (27%).¹ The sector share varies widely in the region. In Hanoi, the tertiary sector constituted 55% of GDP, while primary sector was less than 3%. The primary sector is more important in most other provinces and constitutes around 30-40% of GDP. In terms of the region's work force, almost 70% is in the primary sector. However, the share of industrial and services sectors represented by textiles, food processing, agricultural products, seafood, construction materials, minerals, handicrafts, is rapidly growing.

From 1996 to 1999, the number of employed people in the whole of Vietnam reached 35,192 thousand from 35,772 thousand, decreasing by 1.6%. On the other hand, the total population increased by 1.05 times. The employment rate (employed people compared with total population) correspondingly decreased from 48.9% in 1996 to 45.9% in 1999.

The changes in the number of employed people in the period 1996-1999 by area are as follows: (1) there was a very slight decrease in NER, from 13,868 to 13,840 thousand; RRD-er was static at 8,281 thousand; (2) NHL also experienced a very slight decrease from 5,587 to 5,560; while Hanoi increased by 5.2%, from 1,106 to 1,163 thousand; and (3) Ho Chi Minh City increased by 7.8%, from 2,091 to 2,196 thousand.

Figure 4.2.10
GDP by Economic Sector in Region

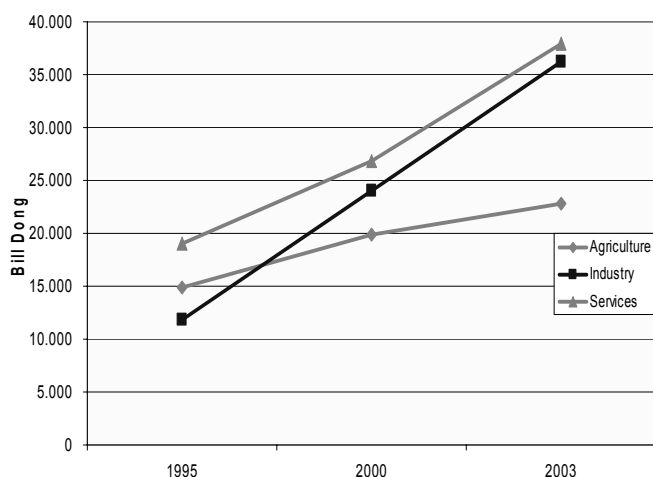
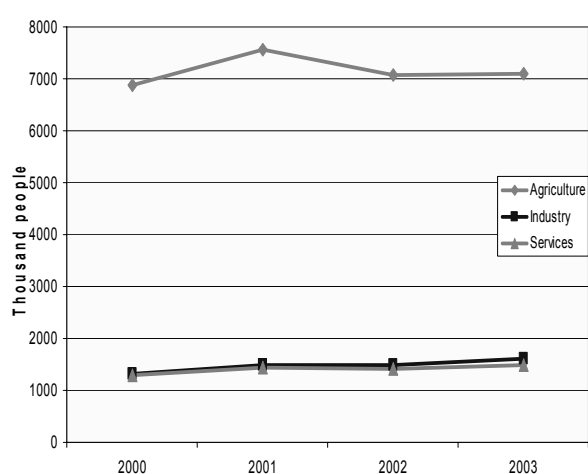


Figure 4.2.11
Labor by Economic Sector in Region



Source: Socioeconomic Statistical Data of 64 Provinces, 2005, GSO Vietnam

Table 4.2.3 **Change of GDP Structure by Sector (%)**

Area	Year	Primary	Secondary	Tertiary
Hanoi City	1995	5.3	30.8	63.8
	2000	4.0	37.4	58.5
	2003	2.7	41.9	55.4
HAIDEP Area	1995	32.5	25.8	41.7
	2000	28.2	33.9	37.9
	2003	23.5	37.4	39.1
Whole Country	1995	27.8	29.7	42.5
	2000	24.5	36.7	38.7
	2003	23.0	38.6	38.5

Source: GSO Socio-economic Statistical Data of Provinces and Cities 1998, 2005

¹ Socioeconomic Statistical Data of 64 Provinces, 2005, GSO Vietnam

Table 4.2.4 Economic Growth by Province

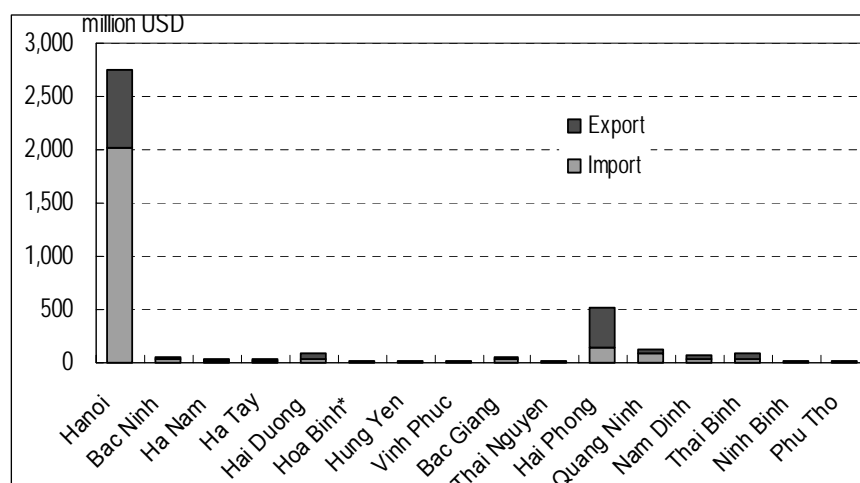
	Provinces (♦ Cities)	GDP (Billion VND)		GDP/Capita (000 VND)		Increase Rate (%)		GDP Share of NER	
		1996	2000	1996	2000	GDP	/Capita	1996	2000
						1996--00	1996--00		
HAIDEP Area	Ha Noi ♦	19,943	35,146	8,000	12,831	15.2	12.5	12.9	28.8
	Hai Phong ♦	7,655	11,625	4,711	6,861	11.0	9.9	9.9	9.5
	Vinh Phuc	1,880	4,041	1,770	3,654	21.1	19.9	2.4	3.3
	Ha Tay	5,165	7,840	2,219	3,248	11.0	10.0	6.7	6.4
	Bac Ninh	1,957	3,391	2,115	3,574	14.7	14.0	2.5	2.8
	Hai Duong	4,713	6,921	2,910	4,162	10.1	9.4	6.1	5.7
	Hung Yen	2,489	3,820	2,387	3,536	11.3	10.3	3.2	3.1
	Ha Nam	1,595	2,560	2,067	3,218	12.6	11.7	2.1	2.1
	Nam Dinh	4,229	6,200	2,301	3,256	10.0	9.1	5.5	5.1
	Thai Binh	4,735	6,080	2,689	3,371	6.5	5.8	6.1	5.0
	Ninh Binh	1,550	2,370	1,790	2,664	11.2	10.5	2.0	1.9
	Thai Nguyen	2,220	2,965	2,175	2,812	7.5	6.6	2.9	2.4
	Phu Tho	2,730	4,093	2,229	3,211	10.7	9.6	3.5	3.3
	Bac Giang	2,556	3,902	1,761	2,583	11.2	10.1	3.3	3.2
	Quang Ninh	3,709	5,708	3,871	5,618	11.4	9.8	4.8	4.7
Hoa Binh	1,332	1,948	1,825	2,537	10.0	8.6	1.7	1.6	
Ref.	Ho Chi Minh City ♦	58,433	100,708	12,307	19,270	14.6	11.9	-	-
Regional Plan	I: HMA (8)	39,074	65,667	3,561	5,703	13.9	12.5	50.7	53.7
	II: NFEZ (8)	47,510	78,492	3,942	6,199	13.4	12.0	61.6	64.2
	III: RRD-mp (9)	52,073	82,562	3,630	5,510	12.2	11.0	67.5	67.6
HAIDEP (15)		65,726	104,517	3,207	4,887	12.3	11.1	85.2	85.5
North Region (25+1)		77,141	122,222	2,860	4,325	12.2	10.9	100.0	100.0
Whole Country (61+3)		272,036	444,139	3,719	5,721	13.0	11.4	-	-

Source: Vietnam Economy the Year of Reform, 2002 (at current prices)

(2) Imports and Exports

Being the regional hub for trade, Hanoi's import and export volume are growing steadily, and is followed by Hai Phong. However, other provinces have low level of international trade. Total import and export turnover in Hanoi increased by 19% per annum between 1991 and 2000. The main export markets are China, Singapore, Japan, and France.

Figure 4.2.12 Import and Export by Province



agricultural land to total land at 74.5%.

The agricultural output of the study area in 2002 was around VND 27,355 billion or 22.4% of the total. Land productivity in the study area for the agricultural sector is higher than that of the whole country given the share of its agricultural land to the total which is 9.1%. By major agricultural product in the study area, its production of sweet potatoes shared more than 40% of the total, while the number of raised hogs was around 35.3% of the total.

(c) Forestry

The forest area in the study area is 7,844km² or 6.6% of the national total. The output value of forestry in the study area amounted to VND 690.2 billion or 11.2% of the national total in 2003.

(d) Fishery

There are five provinces nestled along the shoreline, namely Quang Ninh, Hai Phong, Thai Binh, Nam Dinh, and Ninh Binh. The output value of fisheries in the study area, therefore, is VND 2,462 billion or 8.2% of the national total. One of the major export products in the fishery sector in Vietnam is farmed (cultured) shrimp since some provinces in the study area culture these, but the amount of production is limited to 11,204 tons or 5.0% of the national total²

(e) Industry

In 2003, the value of industrial outputs in the study area amounted VND 76,380 billion or 25.2% of the national total. From 1995 to 2003, the average industrial growth rate in the study area was 14.8%, exceeding the national industrial growth rate, which was 12.5%.

Evidently, the main factor for the growth of the industrial output value was FDI inflow. The growth rate of FDIs from 1995 to 2003 reached 25.5% and the study area's share dramatically changed from 14.0% in 1995 to 35.0% in 2003. At the same time, the growth rate of industrial output value in SOEs remained rather slow at 9.5%. The share of the output value of the study area declined from 62.3% in 1995 to 40.8% in 2003.

In 2003, major industrial players in the study area were Hanoi and Hai Phong, accounting for 50% of the industrial output value of the region in 2003. The share of these two cities, however, has been slightly decreasing. It should be noted that the four provinces of Vinh Phuc, Hung Yen, Ha Nam, and Bac Ninh recorded dramatically high growth rates from 1995 to 2003. These provinces are located close to Hanoi. In 1997, Toyota Motors and Honda Motors located in Vinh Phuc, contributing to the output value and attracting associated industries along National Highway (NH) No. 5 and No. 18.

² In 2003, total production of farmed shrimp in Vietnam was around 224,000 tons with 76.5% of the products farmed in the Mekong Delta.

Table 4.2.5 Industrial Output Value by Province

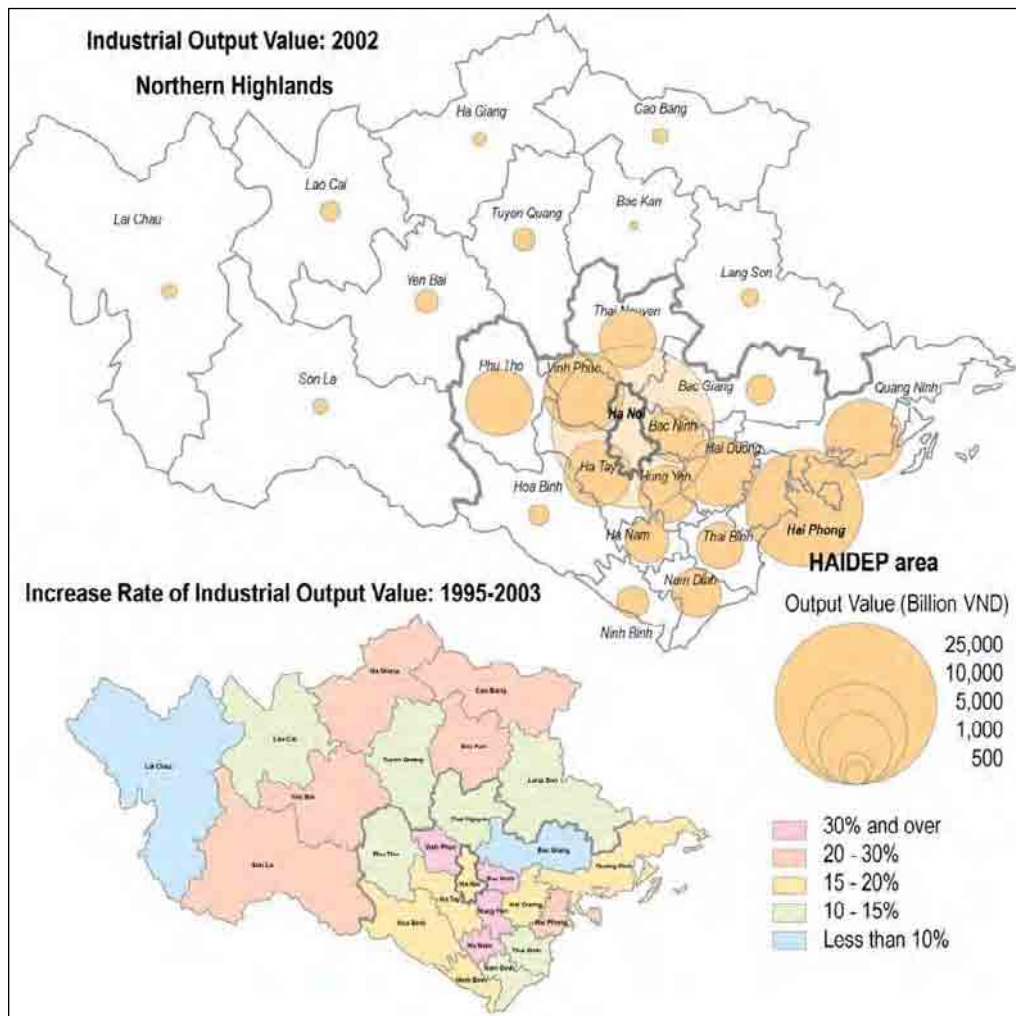
Unit: bil. VND

	1995	1996	1997	1998	1999	2000	2001	2002	2003 ¹⁾
Study Area	22,230	25,266	29,747	34,099	38,527	46,773	53,910	64,105	76,380
Ha Noi	8,479	9,495	10,811	12,206	13,206	15,168	17,048	20,543	25,101
Hai Phong	3,155	3,780	4,945	5,682	6,685	7,995	9,526	11,172	13,051
Vinh Phuc	250	291	585	1,471	1,792	3,503	4,019	4,973	6,091
Quang Ninh	2,012	2,296	2,666	2,910	3,140	3,789	4,359	5,038	5,845
Hai Duong	1,602	1,895	2,432	2,694	2,566	3,096	3,262	3,989	4,657
Ha Tay	1,570	1,777	1,944	2,098	2,341	2,630	3,041	3,514	4,176
Hung Yen	303	328	497	711	1,485	1,806	2,153	2,566	3,135
Thai Nguyen	1,311	1,601	1,648	1,683	1,679	1,897	2,491	2,865	3,079
Bac Ninh	454	480	571	635	1,103	1,669	2,023	2,479	2,915
Nam Dinh	963	990	1,080	1,228	1,327	1,463	1,673	1,952	2,304
Thai Binh	986	1,062	1,161	1,238	1,307	1,397	1,589	1,797	2,101
Ha Nam	251	282	315	422	815	1,120	1,330	1,581	1,790
Ninh Binh	283	313	358	426	440	513	564	632	956
Bac Giang	460	503	549	439	418	482	577	669	802
Hoa Binh	154	171	187	256	222	246	257	335	379

Source: General Statistical Office.

1) Preliminary figures.

Figure 4.2.14 Industrial Output Value in 2002



FDI becomes the main engine to spur the study area's economy. The main types of industries recently invested in the study area are electric and electronic appliances, which support motorcycle assembly.

The orientation for industrial growth covers the following:

- (i) Promoting further industrialization mainly by attracting FDIs.
- (ii) Promoting and expanding supporting industries for motorcycles and automobiles, electronics and electric appliances, etc.
- (iii) Promoting agro- and aqua-production using existing materials.
- (iv) Promoting handicraft industries located all over the study area.
- (v) Modernization of agriculture.

(f) Services

In 2002, retail sales of goods and services in the domestic economic sector in the study area amounted to VND 63,840 billion or 23.6% of the national total.³ During the period from 1995 to 2002, the average growth rate of retail sales of goods and services in the domestic economic sector in the study area (14.0%) exceeded that of the whole country (12.2%). Hanoi's share in the study area decreased from 47.7% in 1995 to 39.8% However, in 2003, it still occupied a big proportion of the total, followed by Hai Phong (9.4%) and Quang Ninh (9.1%).

(5) Industrial Zones/Parks

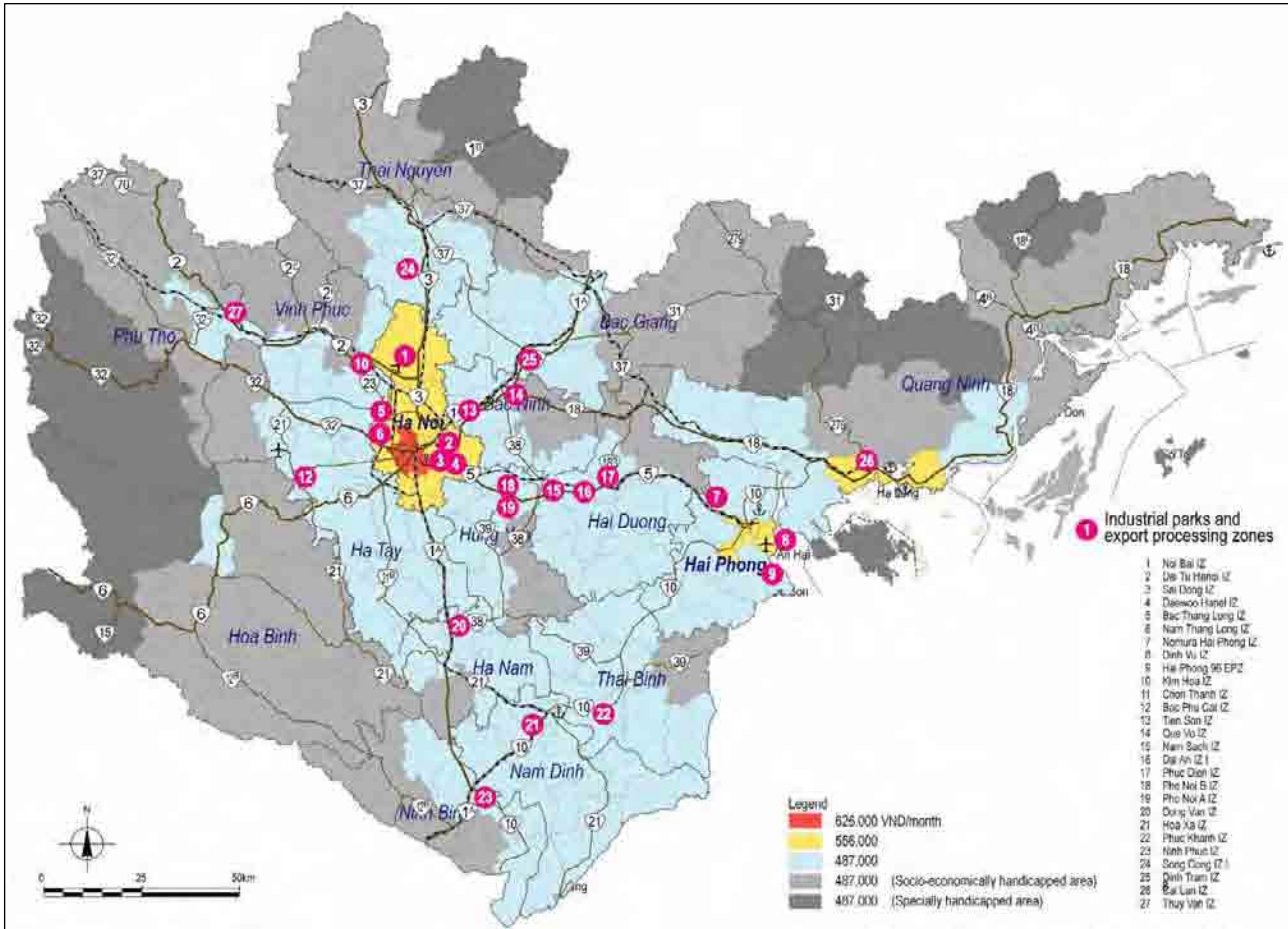
In Vietnam, there are 100 industrial zones (IZs) and parks approved by MPI. Most of them are located in southern Vietnam. In the study area the approved IZs total to 26 with a development area of 3,661ha or 19.2% of the total land.

The Northern Focal Economic Zone has developed 19 new IZs during the last decade. They are concentrated along the main economic corridor between Hanoi and the coast. Six zones in Hanoi have attracted investments, while the other zones have low investment attraction. However, the region is exerting effort in developing the technology and in setting up more industrial zones. There is a plan for the Red River Delta to have 27 industrial zones and parks by 2010.

For the FDI, the location into the IZ is much more advantageous than locating as a standalone. In the late 90's, since most of FDIs were advised by the Government to establish the JV mainly with SOEs, the Vietnamese partners supplied the land as investment capitals. In these situations, the foreign investors have some limitations to select the location. In recent years, the number of 100% capital-owned FDIs are increasing, so they had a more free hand to select their location.

³ In 2002, the share of the domestic sector covered 96.1% of the total retail sales. FDIs started flowing in from 1994 with retail sales amounting to only VND 10.9 billion or 3.9% of the total.

Figure 4.2.15 Industrial Parks and Export Processing Zones



Source: HAIDEP Study Team.

Table 4.2.6 Approved Industrial Zones in the Study Area

No	Province	Name	License	Investor	Area (ha)	of Which Rentable
1	Hanoi	Noi Bai Industrial Zone	1994	Malaysia/Vietnam	100	66
2	Hanoi	Dai Tu Hanoi Industrial Zone	1995	Taiwan	40	30
3	Hanoi	Sai Dong Industrial Zone	1996	Vietnam	97	73
4	Hanoi	Daewoo Hanel Industrial Zone	1996	Korea/Vietnam	197	150
5	Hanoi	Bac Thang Long Industrial Park	1997	Japan/Vietnam	198	145
6	Hanoi	Nam Thang Long Industrial Zone	2001	Vietnam	30	21
7	Hai Phong	Nomura Hai Phong Industrial Zone	1994	Japan/Vietnam	153	123
8	Hai Phong	Dinh Vu Industrial Zone	1997	USA/Belgium/Thailand	164	130
9	Hai Phong	Hai Phong 96 EPZ	1997	Hongkong/Vietnam	150	110
10	Vinh Phuc	Kim Hoa Industrial Zone	1998	Vietnam	50	38
11	Vinh Phuc	Chon Thanh Industrial Zone	2003	Vietnam	115	78
12	Ha Tay	Bac Phu Cat Industrial Zone	2002	Vietnam	327	191
13	Bac Ninh	Que Vo Industrial Zone	1998	Vietnam	135	94
14	Bac Ninh	Que Vo Industrial Zone	2002	Vietnam	312	217
15	Hai Duong	Nam Sach Industrial Zone	2003	Vietnam	64	44
16	Hai Duong	Dai An Industrial Zone I	2003	Vietnam	74	52
17	Hai Duong	Phuc Dien Industrial Zone	2003	Vietnam	87	60
18	Hung Yen	Pho Noi B Industrial Zone	2003	Vietnam	95	71
19	Hung Yen	Pho Noi A Industrial Zone	2004	Vietnam	390	274
20	Ha Nam	Dong Van Industrial Zone	2003	Vietnam	110	63
21	Nam Dinh	Hoa Xa Industrial Zone	2003	Vietnam	327	221
22	Thai Binh	Phuc Khanh Industrial Zone	2002	Taiwan	120	83
23	Ninh Binh	Ninh Phuc Industrial Zone	2003	Vietnam	125	80
24	Thai Nguyen	Song Cong Industrial Zone I	1999	Vietnam	69	48
25	Bac Giang	Dinh Tram Industrial Zone	2003	Vietnam	54	38
26	Quang Ninh	Cai Lan Industrial Zone	1997	Vietnam	78	56
Study Area					3,661	2,556
Whole Country					19,051	13,204

Source:

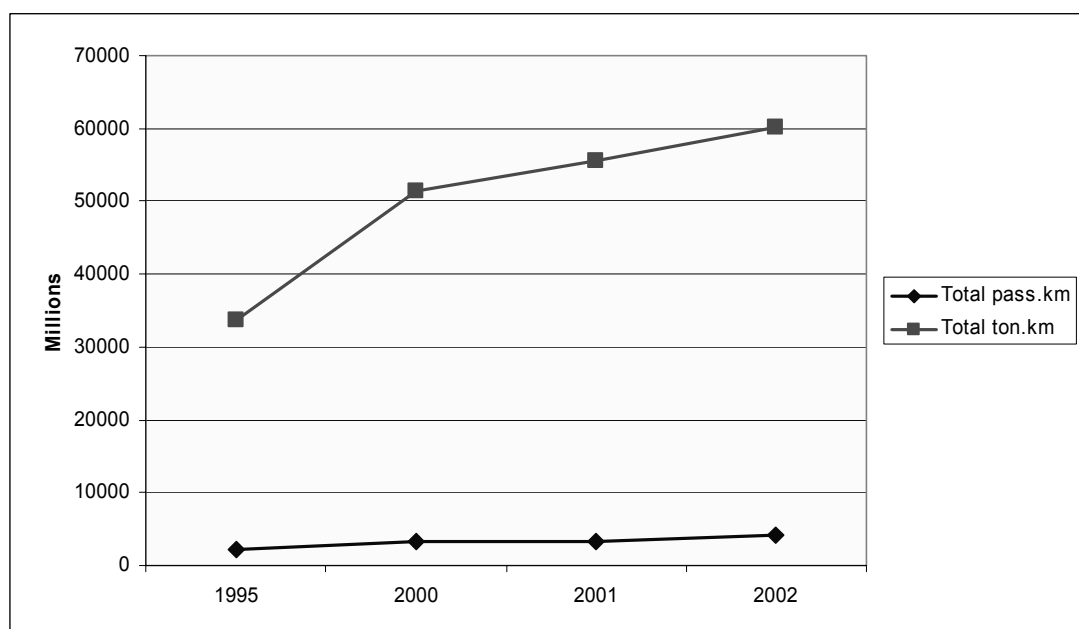
3) Infrastructure Development

(1) Transport Infrastructure

(a) Transport Demand

Passengers and goods in the region are mainly transported by road network. Passenger and freight transport increased dramatically over the last decade. For passenger traffic, along with cars and motorbikes have increased. The number of private car passengers increased by 22.3% per year while bus passengers increased by 7.2% per year over the last five years. In 2002, about a third of passenger demand in the region was generated in Hanoi City, followed by Nam Dinh (13%), Quang Ninh (10%), and Ha Tay (9%). Freight transport increased further at an annual growth rate of 31.4% for road transport and 22.8% for inland waterways. Around 20% of which was generated in Hanoi.

Figure 4.2.16 Volume of Passenger-km and Ton-km on Roads in Hanoi Region, 1995-2002



Source: Statistical Yearbook 2003, GSO, Vietnam.

Table 4.2.7 Total Interprovincial Demand in the Study Area

	Modes	1999	2005	Growth Rate (%) 99-05	Times 05/99
Passenger traffic (000 pax/day) ¹⁾	Car	21.4	71.7	22.3	3.35
	Bus	132.9	201.7	7.2	1.52
	Total	154.3	273.1	10.0	1.77
Freight traffic (000 tons/day) ²⁾	Road	37.1	190.9	31.4	5.15
	Inland waterway	36.1	123.8	22.8	3.43
	Total	73.2	314.7	27.5	4.30

Source: JICA VITRANSS 2000, HAIDEP Study Team.

1) Road-based traffic only.

2) Excluding by air, rail and coastal waterway.

(b) Roads

Although the road network in the region is generally well distributed, its capacity does not meet the demand of the region's fast development. Problems have arisen because none of the ring roads around Hanoi are complete, and bridges over the Red River are few and in poor condition. This leaves passenger and freight traffic traversing through Hanoi's inner city, causing traffic congestion and air pollution.

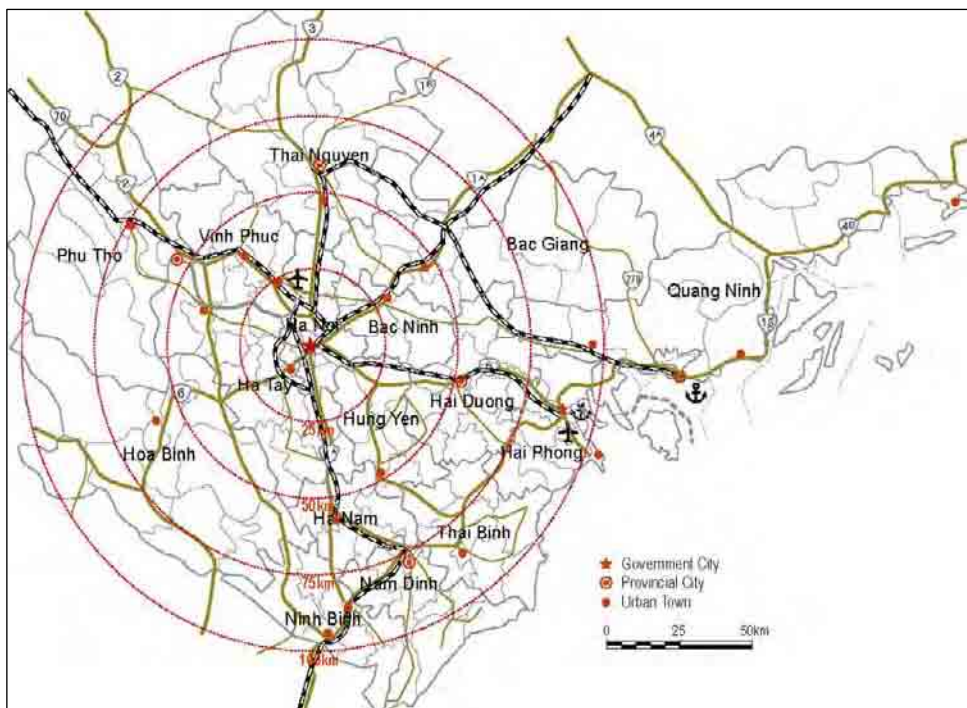
A number of urban road corridors run from Hanoi to the outer areas of the region. Cities located along main radial expressways starting from Hanoi are:

- (i) Route 1A (South): Hanoi-Phu Ly-Ninh Binh-Tam Diep;
- (ii) Route 1A (North): Hanoi-Bac Ninh-Bac Giang-Lang Son;
- (iii) Route 2: Hanoi - Phu Yen-Vinh Yen-Viet Tri-Phu Tho-Yen Bai-Lao Cai;
- (iv) Route 3: Hanoi-Song Cong-Thai Nguyen-Bac Kan;
- (v) Route 5: Hanoi-Hai Duong-Hai Phong ;
- (vi) Route 6: Hanoi-Ha Dong-Hoa Binh;
- (vii) Route 10: Hai Phong-Thai Binh-Nam Dinh-Phu Ly; and
- (viii) Route 18/4B: Hai Phong-Ha Long-Cam Pha-Mong Cai.

Most of the sections of such primary road networks have two-lane single carriageways with at-grade intersections, except for NH5 and NH1B which have dual carriageways and multiple lanes.

Most of national highways in the study area have been upgraded and expanded using international finances from entities such as JBIC, WB, and other donors. Upgrading of the primary road networks have improved accessibility between Hanoi and other provincial capital cities and between Hanoi and other major urban areas, thus promoted economic development in the northern region.

Figure 4.2.17 Cities and Transport Network in Study Area, 2002



(c) Rail Network

The region is covered by the railway but the efficiency is modest and the interconnectivity is low. Seven national railway routes with total length of 332km are in service in the NFEZ. Those railways have about 50% share of both passenger and freight transport of the whole Vietnam Rail system.

Main trunk lines run in north-south and east-west directions, with a branch line extending to Ha Long. The 102-km long Hai Phong railway line has a significant role in the major economic corridor and connects the 3.2 million people in Hanoi with the 1.8 million people in the second largest international gateway port of Hai Phong.

The whole system is meter-gauge single track, except for the Lu Xa- Kep- Ha Long section which is standard gauge (1435mm), as well as Gia Lam-Lang Son and Yen Vien-Luu Xa sections which have dual gauge.

Recently, the construction of the Ha Long line from Yen Vien-Pha La section commenced. This new line will significantly reduce travel time from Hanoi to the international tourist attraction of Ha Long Bay, a World Heritage site, and the Cai Lan international port.

Figure 4.2.18 Railway Network in the Study Area



Source: VITRANSS (JICA, 2000)

(d) Inland Waterway

Inland waterway transportation (IWT) has long been regarded as an important part of the regional transportation system, considering the dense river network in the Red River Delta with an average density of 0.2km/km². The NFEZ has further 1,230km of waterways as seen in Table 4.2.8 and Figure 4.2.19.

Figure 4.2.19 Inland Waterway Network



Table 4.2.8 Major IWT Lines in the Northern Region

Name	Length (km)	Freight mil.T/year	Size		Cargo type	General Fleet
			B1	H1		
1 Quangninh-Hanoi (via Duong River)	312.5	2.5	30	1.5	Coal, steel, fuel, construction material, import good	Push 135-150HP+4x 200T (or 6x100T)
2 Quang Ninh-Ninh Binh (via Luoc River)	322.5	4	30	1.8	Coal, steel, fuel, construction material, import good	Push 135-150Hp+4x 200t (or 6x100t) 100-200t locomobil
3 Tuyenquang-Hanoi	184	1.5	30	1.5	Sand & gravel, forest good, fertilizer, food, salt, paper material	Push 135-150Hp+4x 200t (or 6x100t). 100-200t locomobil
4 Day River Mouth-Ninh Binh	72	0.5	60	3.6	Phosphate, coal, cement	BPS 400t-1000t
5 Lach Giang - Hanoi	187	0.15	30	2	Castle food, others	BPS 400t
6 Vite Tr-Hoa Binh Port	71	0.15	30	1.2-1.5	Coal, cement, others	Pull (120tx4)+135Hp

Source: VIWA (2005).

According to the 2003 Red River IWT study (JICA, 2003), there are dozens of ports in the northern region, which include the following three categories.

- (i) **Port Managed by Central Government:** Those ports are managed by Vietnam Inland Waterway Administration (VIWA) and operated by SOE's such as Northern Waterway Transport Corporation (NOWATRANCO). Examples are Hanoi, Khuyen Long, Viet Tri, Hoa Binh, Ninh Binh, and Ninh Phuc, A Lu & Dap Cau, etc. Many factories are located along rivers to utilize those ports in transporting their goods.
- (ii) **Port Managed by Local Governments:** Majority of provinces have their own ports and berths. Examples are Son Tay, Hong Van, Cong Cau, etc.

(iii) **Specialized Ports:** These ports serve specific large-scale industries, such as thermal power plants, cement plants, paper mills, glass processing plants, etc. These ports are directly managed by various ministries and sectors. Examples are Pha Lai, But Son, Hooang Thach, Chinh Phong, Bai Bang, Uong Bi, Dien Cong, etc.

(e) Airport

The region has three airports: Noi Bai International Airport, Cat Bi, and Gia Lam Service Airport⁴. Noi Bai Airport is a key terminal for air network in the northern region, connecting the region to seven (7) domestic destinations and 13 international destinations directly. It can receive 4.2 million passengers plus 160,000 tons of cargo per year, and can accommodate aircrafts as big as B747s with its runway of 3,200 x 45m. Noi Bai has enough reserved land and the appropriate conditions to accommodate 5-6 million passengers per year, according to CAAV.

(f) Ports

There are two main port groups in the northern region: (i) ports at Quang Ninh and (ii) ports in Hai Phong. In addition there are other minor ports in the region. The port authorities of Quang Ninh and Hai Phong are supervising overall port activities in the Quang Ninh, and Hai Phong areas. Six ports are handled by the Quang Ning port authority, viz:

- (i) Muichua (GC);
- (ii) Cuaong (coal);
- (iii) Hongai (coal);
- (iv) Cailan (GC);
- (v) B12 (petroleum); and,
- (vi) Dien Cong (coal).

On the other hand, Haiphong Port Authority handles 12 ports, viz:

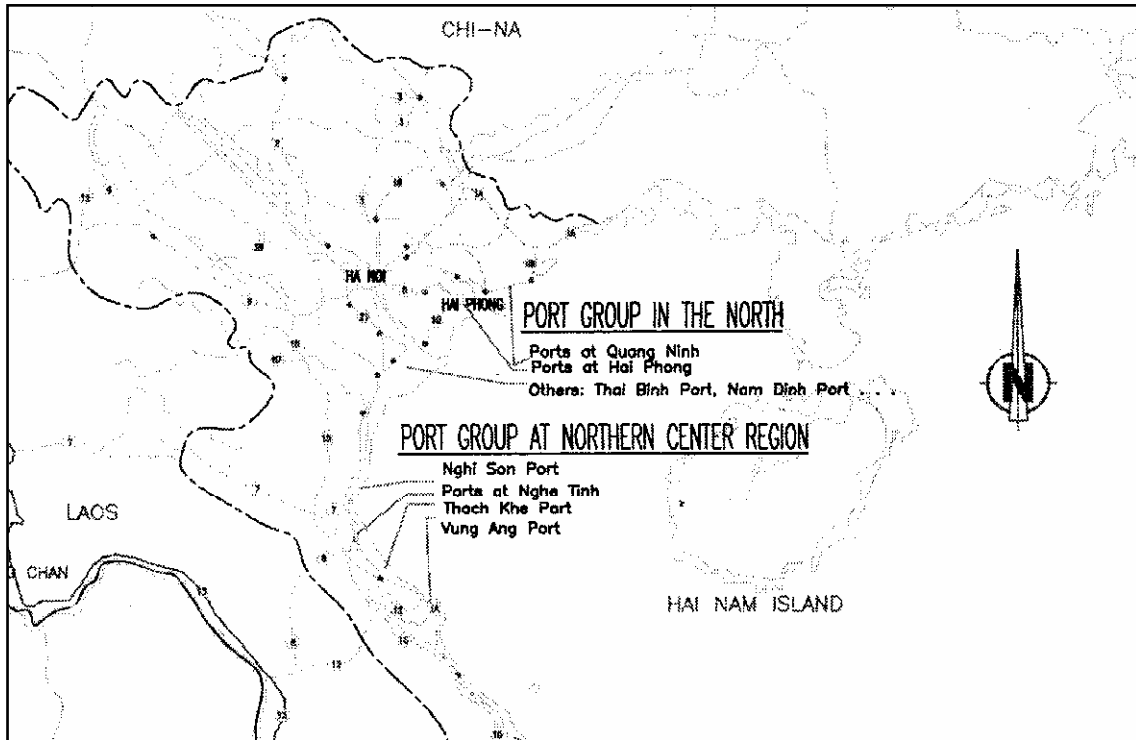
- (i) Haiphong (GC);
- (ii) Cua Cam (GC);
- (iii) Thuong Ly (Petroleum);
- (iv) Dai Hai (gas);
- (v) Total (gas); (vi) Petex (petroleum);
- (vi) Thanglong;
- (vii) Caltex (asphalt);
- (viii) Chinh Phong (cement);
- (ix) Transvina (GC);
- (x) Haidoan; and,
- (xi) 128 (GC).

According to Vietnam 's National Maritime Authority (VINAMARINE), containerization has been expanding rapidly, with the share of containerized cargo in 1994 only 23.15%, while in 2004 it has steadily increased to 46.36%. The growth of international container

⁴ In the northern region, there are three another airports, Vinh in Nghe An province, Dien Bien in Dien Bien province and Na San in Son La province.

traffic has been very robust, with an impressive average growth rate of 15% from 1994 to 2005, though from 2002 to 2005 annual growth has been more modest at 7%. In the case of general cargo, Hai Phong and Cai Lan port handle most of the traffic (around 90%), i.e. excluding petroleum products and coal.

Figure 4.2.20 Port Groups in the North Region



Source: VITRANSS (JICA, 2000).

(2) Water Supply

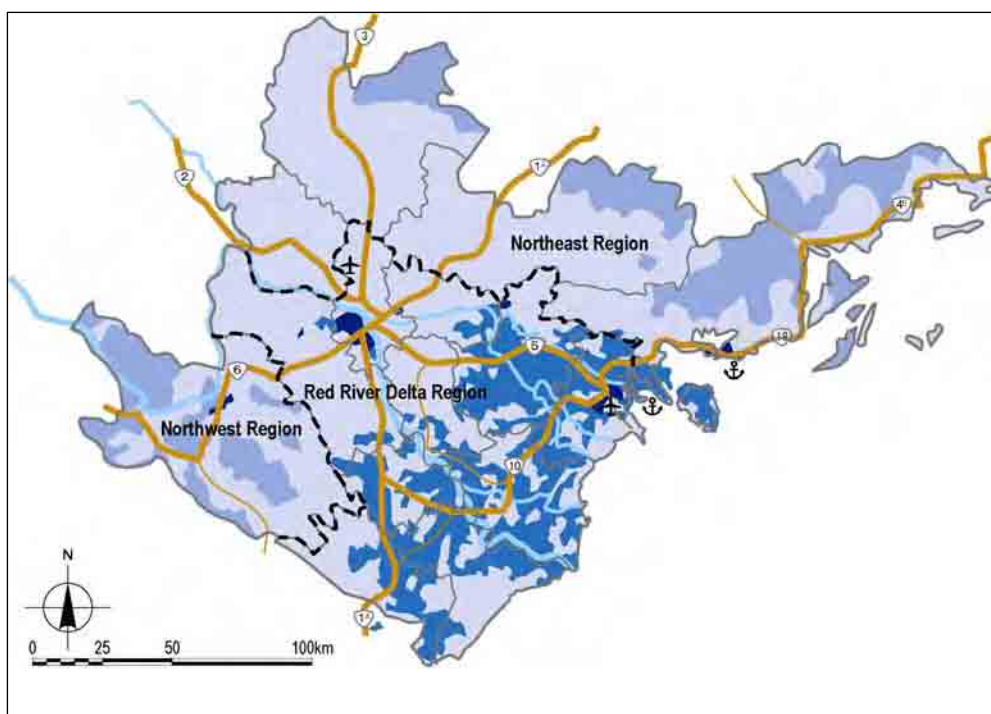
Tap water systems are developed in limited areas of the study area in 1999. The tap water system serves the urbanized areas in two cities, Hanoi and Hai Phong. The remaining areas of the study area are served by rain water, hygiene wells, and filtered water systems.

Although the service area of the tap water systems is limited, there are sufficient water resources that have not been utilized for domestic water use in the study area. In the Vietnam Environment 2003 Water, of the total water resources, unutilized water resource by region is estimated at 63% (35 billion m³) in the Northwest, 70% (35 billion m³) in the Northeast, and 59% (35 billion m³) in the Red River Delta.

In the Northwest, the Da River can be the main water resource while the ground water in this region is dispersed and is not easily extracted in spite of its large amount. In the Northeast, two rivers of Ky Cung Bang Giang and Red River can be the main water resources. In this region the distribution of water resource is uneven, for instance the coastal areas have experienced drought. The amount of ground water is limited in this region. In the Red River Delta, the intensive exploitation of the groundwater causes the land subsidence in and around the Hanoi City. Although there is large amount of ground water, such occurrence is influenced by the sanitary and industrial wastewater.

Except the areas in and around the industrial and urbanized areas, the water quality of the ground and surface water comply with the requirements of class A for domestic use or class B for the other uses specified in the national standard.

Figure 4.2.21 Main Source of Water in Communes in 1999



Source: Socioeconomic Atlas of Vietnam 1999.

Table 4.2.9 Estimated Water Resources in Three Regions

Region	Water Resource (Billion m ³ /y)	Utilized Water Resource		Environmental River Flow		Remaining Water Resource	
		(Bil.m ³ /y)	%	(Bil.m ³ /y)	%	(Bil.m ³ /y)	%
Northwest	56	5	9	16	28	35	63
Northeast	22	3	14	4	16	15	70
Red River Delta	141	17	12	41	29	83	59

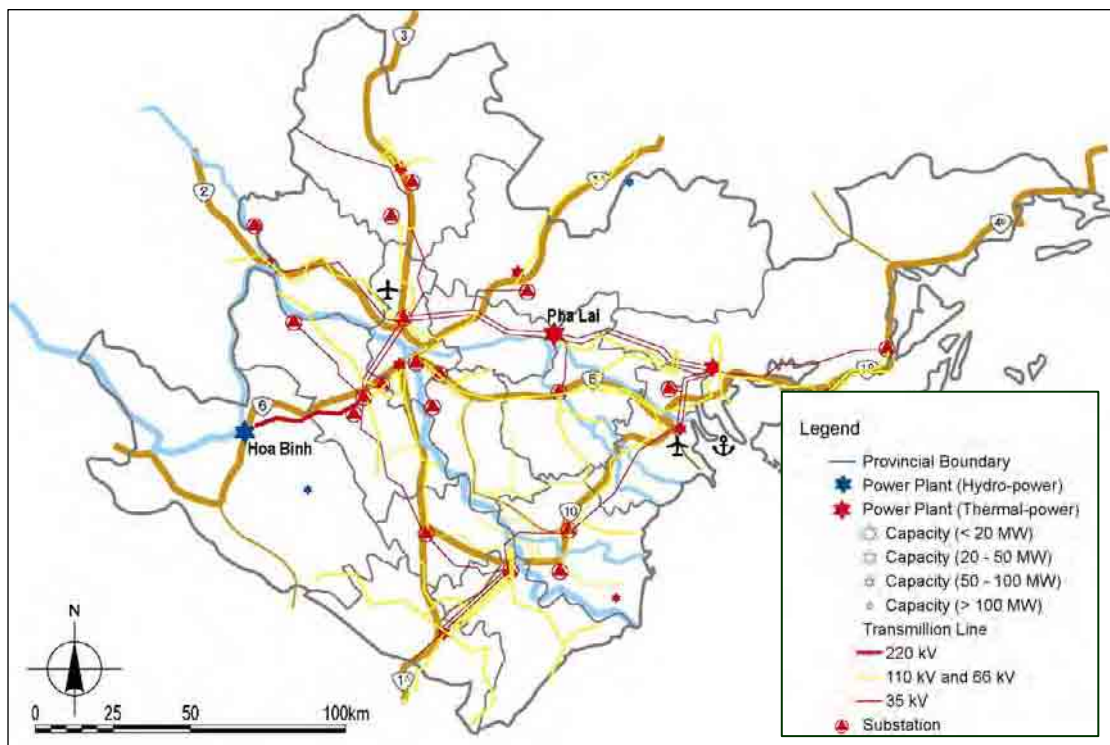
Source: Vietnam Environment Monitor 2003, World Bank Note: Utilized water resource includes the livestock, domestic, industry, aquaculture, and service.

(3) Power Supply

The state-owned corporation, Electricity of Vietnam (EVN), under the jurisdiction of the Ministry of Industry, takes charge of generation, transmission, distribution, and sales of electric power of the country. In 2003, EVN generated 40.8 billion kWh of electricity and sold 34.9 billion kWh. In the EVN's master plan, the power consumption by target year is estimated at 47 billion kWh in 2005, 70 billion kWh in 2010, 110 billion kWh in 2015, and 170 billion kWh in 2020. To meet those power consumptions, EVN has plans to expand the power generation capacity from 8,860 MW to 12,460 MW by the construction of a new Son La Hydro-Power Plant with the capacity of 3,600 MW until 2012. The generation capacity needs to be improved by the installment of gas turbine plants and power resources.

Power supply in the study area is operated by three companies under EVN. Those are Power Company No. 1, Hanoi's Power Company, and Hai Phong's Power Company. In 1996 the medium transmission lines of 35 kV was installed along the trunk roads, such as Route 1, 2, 3, 5, 6, 10, and 18. Those lines cover the area of the Red River Delta in the south of Route 5 while the areas in the north of Route 5 and in the west of Route 1 are not covered by the 35 kV lines.

Figure 4.2.22 Power Supply Network in 1996



Source: Vietnam National Atlas 1996.

4) Social Development Conditions

(1) Overview

In 2003, average poverty rate in the Hanoi region was 38% (living under poverty line). The rate varied between the provinces. Hanoi had the lowest rate of 16% and Hoa Binh the highest at 58%. As of 2001, the human development index (HDI) was more uniform among provinces. Hanoi had the highest HDI where 80% of its people reached a respectable level of human development.

The Hanoi region has many educational centers which include 41 universities (50% of the country's universities). In 1999, school enrolment rate was highest in Hanoi at almost 100%, while that of other provinces was only 60% to 90%. School enrolment of females was slightly higher than males. An important factor constraining parents from sending their children to school, especially among the poor, is the relative un-affordability of education.

The region has 104 hospitals and more than 18,000 hospital beds. However, these are mainly located in Hanoi and its surrounding areas. There are also 51 provincial hospitals and every commune and ward has medical stations. With some exceptions, population rate tends to relate to the provision of health clinics.



(2) Human Development Index (HDI)

In the 1995 international ranking of the human development index (HDI) among 162 nations, Vietnam ranked 120 (0.611 index). In 1999, it moved up to the 101st place (0.682

index). The HDI ranking of other countries in Indochina and their respective HDI indices are as follows: Thailand, 66 (0.757); Myanmar, 118 (0.551); Cambodia, 121 (0.541); and Laos, 131 (0.476).⁵

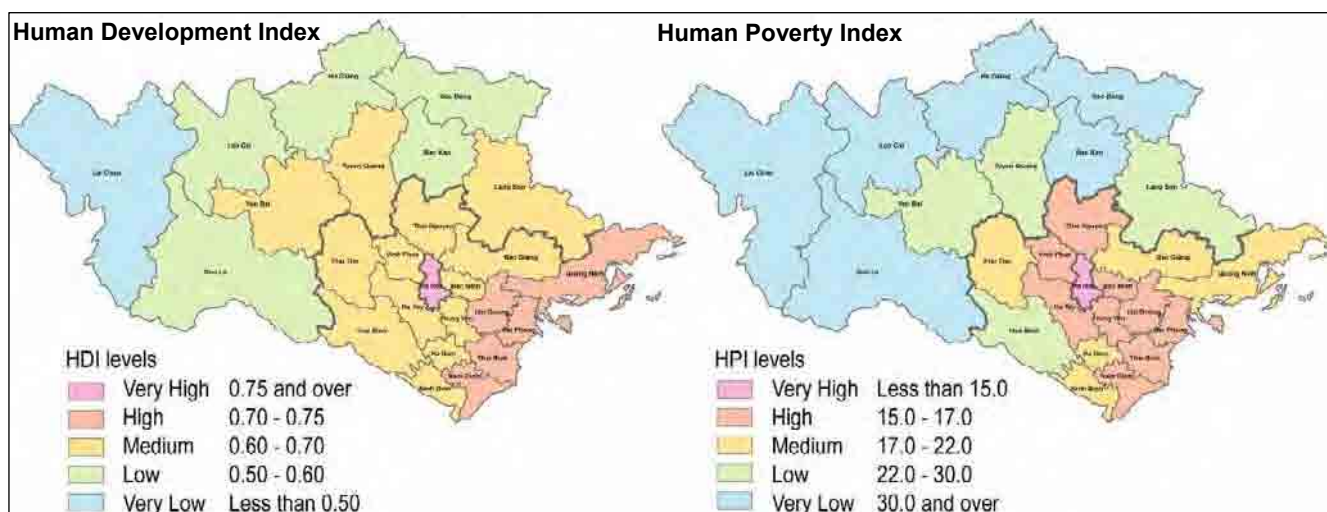
In 1995 Vietnam's national HDI average was 0.696. Red River Delta had 0.723, northeast 0.641, and northwest 0.564 (see Table 2.5.1). In NER, six provinces had high HDI indices, 13 were in the middle range, and six had low indices. Hanoi had the highest HDI (0.798), while Lai Chau at 61st place had the lowest (0.486). Ba Ria-Vung Tau⁶ scored the highest HDI in the country. Nine provinces which ranked lower than 50 belong to NHL.

(3) Human Poverty Index (HPI)

In 1999, Vietnam ranked 45 (29.1) in a field of 90 developing countries in terms of human poverty index (HPI). The HPI ranking of other countries in Indochina is as follows: Thailand, 21 (14.0); Myanmar, 43 (28.0); Laos, 66 (39.9); and Cambodia, 78 (45.0).

While the national HPI average was 20.10, Red River Delta got 15.50, northeast 20.90, and northwest 31.40. In Vietnam's NER, six provinces scored highly in the HPI ranking, 13 belonged in the middle range, and six got low scores. In NER, Hanoi had the highest score of 11.07, and Lai Chau the lowest at 42.79. In the whole country, Hanoi's HPI was the second-highest, following Ho Chi Minh City. Lai Chau was 61st, the lowest-ranked. Six provinces which ranked below 50 belong to NHL.

Figure 4.2.23 Social Indicators, 1999



(4) Poverty

Recent poverty trends indicate that poverty rates are still considerable, in particular in rural areas and among ethnic minorities. In terms of the number of the poor, the density of poverty is higher in urban areas. The reduction in poverty is "fragile" since many rural people now live just above the poverty line and are vulnerable to becoming poor again as a result of "crisis" events in the household or external factors (e.g. the recent fall in world coffee prices). The main source of rural poverty reduction has been economic growth with the liberalization of agriculture, improved farm productivity and crop diversification. The speed of poverty reduction seems to be slowing down and it may be difficult to sustain

⁵ UNDP, Vietnam Human Development Report, 2001.

⁶ Ba Ria-Vung Tau's HDI should be interpreted with care, since most of its GDP came from oil and gas revenues that accrue largely to the central government.

similar gains in the future. Greater emphasis must be placed on growth of off-farm employment and service in rural area, together with social development through better education and health care.

Areas where poverty rate is high are the northeast and the northwest (accounting for 28% of the national poor), Mekong River Delta (21%), and north central coast (8%). Fifty-seven percent (57%) of the nation's poor is concentrated in these areas.⁷ A government policy on Hunger Eradication and Poverty Reduction (HEPR) is being carried out.⁸

(5) Income Gaps

The income gap between the rich and the poor is widened. In 1994 the income of the rich was 6.5 times that of the poor. In 1999 it rose to 8.9 times. In urban areas, the change was from 6.9 times to 9.8 times, and in rural areas it was 5.4 times to 6.3 times.

(6) Ethnic Minorities

Based on the 1999 population census, the minority ratio in the whole country was 11.2%. The three major settlement areas of ethnic minorities are the Viet Bac region (northeast region), the Tay Bac Region (northwest region), and the central highlands.

The Viet Bac Region is the settlement area of the Tay people and 14% of the Nung. The Tays comprise the biggest group of ethnic minorities totaling 1,190,000 based on the 1999 population census. The Tay Bac region is home to the Thai.

Table 4.2.10 Major Social Indicators

		Human Development Index ¹⁾		Human Poverty Index ²⁾		IGI Income Gap Index	Population Below Income Poverty Line	
		Index	Level	Index	Level	Times	%	Level
NER	RRD-er	0.723	High	15.50	High	7.0	6.49	High
	NE	0.641	Medium	20.90	Medium	6.3	14.40	Medium
	NW	0.564	Low	31.40	Low	6.9	23.15	Low
Hanoi City		0.798	High	11.07	High	9.1	1.47	High
Ho Chi Minh City		0.796	High	10.59	High	11.0	10.92	High
Whole Country		0.696	-	20.10	-	7.3	13.21	-

Source: Vietnam Human Development Report, 2001, UNDP.

1) HDI: High (0.7 and over), middle (0.6-0.7), low (less than 0.6).

2) HPI: High (less than 17), middle (17-22), low (22 and over).

5) Main Planning and Development Issues in Hanoi Region

Hanoi's sustainable development is largely dependent on a balanced development of the provinces in the region and vice versa. The main issues facing the region are as follows:

(1) Impact of Urbanization and Globalization on Hanoi

The increased availability of imported manufactures and processed goods affects consumption patterns in both rural and urban settlements. If the products are cheaper than the locally manufactured goods, this could have a negative effect on local manufacturers and processors. This is especially the case for small-scale enterprises using traditional or limited technology. On the other hand, the increase in international tourist activities and

⁷ JBIC, Poverty profile, February 2001, Japan Bank for International Cooperation)

⁸ Jurisdiction: Ministry of Labor, War Invalids and Social Affairs (MOLISA).

export processing zones creates new areas of employment.

Globalization has an impact on social and cultural values. Increased access to information on different and often distant places has an important role in younger generations' desire to migrate and to move out of farming in favor of more modern types of employment in service and manufacturing. Changing employment opportunities can have a profound impact on traditional social structure.

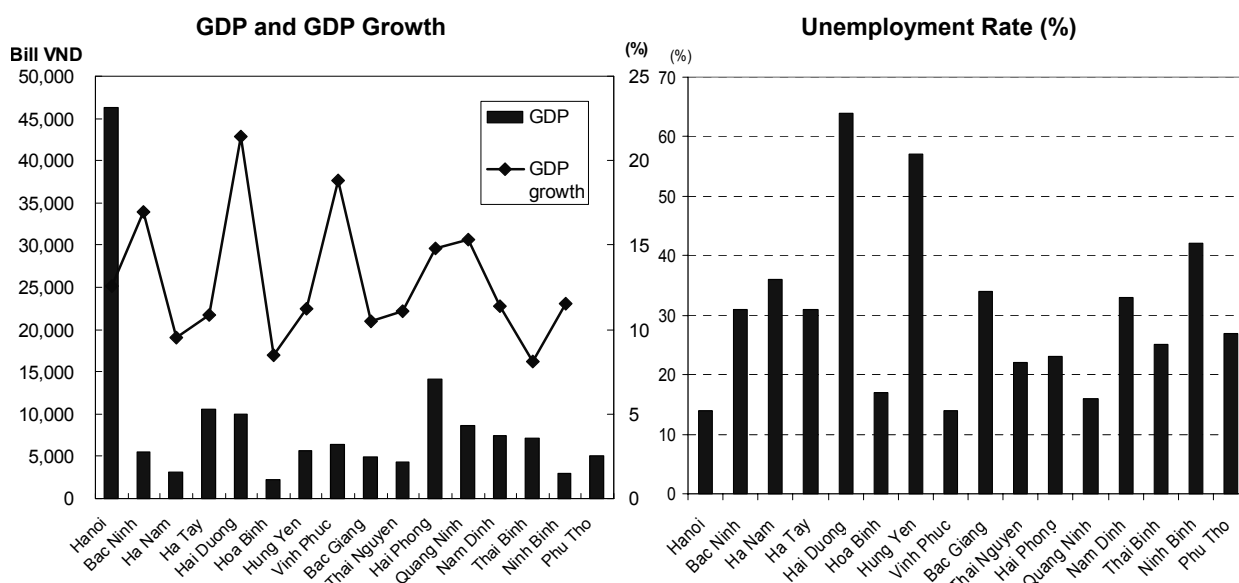
(2) Widening Inequalities

A major problem is the different development stages of the region's provinces. Most provinces, besides the provinces of Hanoi and Hai Phong in particular, are still at a low development level, and their focus is still on agriculture. The gap in socioeconomic development and in the GDP share between provinces and urban and rural areas are still high. The regional imbalance has resulted in the underutilization of the region's potential and competitive advantages. Poverty is still high in some provinces and needs to be resolved.

Unemployment registers at almost 7% in urban areas, but the figure is misleading as many unemployed people are not registered. In rural areas, it is difficult to estimate unemployment, but the figure is believed to be much higher than that in urban areas. In 1998, surveys found that 20 - 25% were unemployed (Figure.4.2.24).

Many services also concentrate in urban areas such as telecommunications, banking, and insurance. They are, to a large extent, lacking in rural areas.

Figure 4.2.24 Selected Economic Indicators in the Study Area



Source: GSO, 2004.

Source: GSO, 2004.

(3) Land Use

Land use is a problem in some provinces where agricultural land is marginalized in favor of industrial zones and other development areas. This is in particular a problem in the more urbanized areas of Hanoi and Hai Phong. Saving some land is now an important issue due to the rapid urbanization and narrowing land capital for agriculture. Land fund is further not used effectively to develop infrastructure, and compensation for land clearance is still low. The very high prices of land, especially in urban areas, impact the structure of houses and

the number of people living in them. They also restrict the development of new areas outside the urban core.

(4) Environment

The high urbanization rate and consequently the increasing number of unregistered populations are creating problems in urban management. For one, planning and implementation are not meeting the actual demand in terms of housing, employment, infrastructure etc. Traffic congestion, safety and pollution have also become serious problems that increase as urbanization progresses. Industrial and traffic pollution is severe in many areas, with the proportion of dust in the air being higher than international standards and water pollution in urban areas and industrial zones becoming serious. Most urban areas have insufficient and ineffective sewerage and drainage systems. Towns lacking sewerage systems discharge wastewater into the terrain, channels, rivers, and lakes, polluting riverwater and lakewater. Pollution in turn causes health problems and environmental degradation.

Flooding and water shortages are also the other effects of urbanization. There are more than 50 flooding points in Hanoi whenever there is heavy rain. Groundwater is polluted in many areas and in Quang Ninh and Hai Phong, it is partly salty.

(5) Economy

Despite structural changes in the economy, development has been slow in terms of the region's international competitiveness. The economic structure is influenced by the concentration on mainly heavy industries, especially state-owned companies and cooperatives. But many factories and industrial zones are old and production technology is low. Machines and equipment are often outdated and of low technology. Despite the fact that labor quality is higher than in many other areas, it is still cannot meet the demand of industrialization and modernization because workers are not always well trained, resulting in low capabilities and competitiveness for the region's industries.

Quality of products is also a major problem and efforts need to be taken to improve it to meet international standards. In the agriculture, forestry and fishery sector, the use of biological technologies is limited and export products are low.

The region has low investment attraction compared to HCMC due to poor technology and low labor skills, unfavorable investment environment, long procedures for investing, and high production costs. With regional integration, industry and farming can cooperate by exchanging experiences, skills, ideas, training, and equipment. As most products for Hanoi's industries are sourced from within the region, Hanoi can together with the regional industries develop and exploit products and provide a more competitive environment.

(6) Transportation and Infrastructure

Traffic accidents in the region are becoming increasingly serious. Most accidents involve motorcycles and often result in traumatic head injuries, if not deaths. At least 30 people die each day from transportation-related injuries, making them one of the leading causes of deaths in Vietnam. The lack of rules and regulations, lax enforcement, poor driving skills, and inappropriate behavior are the main problems that need to be overcome.

Road density is low with 0.1 km/km² in the Red River Delta⁹. The development of the road network is not coherent with rapid urbanization growth. Distribution of roads is uneven and poor in some areas. Many routes, particularly urban roads, are narrow. Hanoi lacks ring roads and highways are not linked into an efficient road network in the region. Areas on both sides of the Red River are not satisfactorily connected by bridges. Hence Hanoi experiences traffic congestion. Car parks are also almost nonexistent.

Railway services, on the other hand, only operate on long-distance routes. Rail efficiency is low. With limited infrastructure and facilities, connectivity is poor.

River transportation is also limited despite the high density of rivers and water channels. River ports often have poor infrastructure and low technology for loading and unloading cargo. The region further lacks proper intermodal transportation terminals for linking different types of transportation modes.

Infrastructure development has not followed the increasing demand caused by the fast development and urbanization rate. The region has difficulties in providing sufficient supply of housing, schools, hospitals, transportation, water supply and drainage, electricity, waste disposal sites, parks and green spaces, among other crucial facilities. At the same time, the provision of such infrastructure between areas in the region has big gaps. Many areas have underdeveloped infrastructure, hindering an efficient connection to the rest of the region.

The provision of electricity is growing but at a medium service level, with many areas still not properly connected to the grid. The same is true in the provision of clean water and sanitation. Some areas for regional integration are building and upgrading irrigation systems, drainage, road infrastructure, and electricity.

(7) Planning and Funding

Hanoi region is behind in planning and constructing high-standard areas that correspond to its size and economic importance. With a high population growth, the region faces increasing problems with population density, employment, traffic congestion, pollution, and land-use prices and rights. A weakness in meeting these problems is the lack of planning for regional integration and development.

The government has not developed legal and policy documents for the region's socio-economic development. There is a further lack of policies to make the best use of the region's strengths. The planning vision is still on short term and the central economy does not correlate with the local economy.

Major planning issues include:

- (i) Quality of data is not always reliable and there is a lack of proper databases.
- (ii) Planning is still guided by a central economy and not by a market economy.
- (iii) No close linkages between regional plans.
- (iv) Provincial plans on, for example, effective use of land does not correspond to the comprehensive plan and vice versa.
- (v) Poor coordination between the three planning units for socioeconomic plans, urban construction plans, and land-use plans e.g. the construction plan is not based on the socio-economic plan as required.

⁹ NIURP

(vi) Poor quality of planning, managing, and monitoring.

Local funding is a major constraint in the development. Decentralization of funds and responsibilities is slow and needs to be improved through local capacity building. Regional planning would make it possible to reach the best mobilization of limited resources. Other sources of funding also need to be mobilized. This could be attained through the attraction of investments from private companies, development projects, and state funding.

4.3 Existing Regional Plans and Policies

1) National Urban Policy

(1) Comprehensive Poverty Reduction and Growth Strategy

The 2002 Comprehensive Poverty Reduction and Growth Strategy (CPRGS) is an action plan to achieve economic growth through poverty reduction schemes. The action plan translates the government's 10-year socio-economic development strategy, its five-year socio-economic development plan, and other sectoral development plans into a concrete implementation agenda. The national annual socio-economic development plan brings policies and measures contained in the CPRGS into practice.

The overall objective of the *Socio-economic Development Plan up to 2010* is to bring Vietnam out of the state of underdevelopment. This includes the following goals:

- (i) Substantially improve the people's material, cultural, and spiritual life.
- (ii) Lay the foundation for transforming the country into a modern and industrialized country by 2020.
- (iii) Improve human resources, scientific and technological capacities, infrastructure, the economy, as well as defense and security.
- (iv) Establish the institutions for a socialist-oriented market economy.
- (v) Heighten the importance of Vietnam in the international arena.

(2) Socio-economic Development Plan

The socio-economic development plans (SEDPs) are five-year plans that specify the directions and tasks of the 10-year Socio-Economic Strategy (2001-2010). The current plan covers the period 2006 - 2010 and targets the acceleration of the country's economic growth, lifting it out of underdevelopment and making drastic changes to ensure sustainable growth.

The focus is to significantly improve people's living conditions, lay a firm foundation for promoting the process of national industrialization and modernization, and gradually develop a knowledge-based economy. In addition, it underscores the imperative of maintaining political stability, social safety and order; defend sovereignty, territorial integrity, and national security; and heighten Vietnam's international importance.

SEDP outlines the goals for the Red River Delta (RRD) and the Northern Focal Economic Zone (NFEZ). The region shall continue to be the driving force of the country's economic growth while assisting other regions in a similar effort. The average annual GDP growth for the regions should be 9% (1.2 times higher than the national average), with industry growing by 11.2%, agriculture by 3%, and services by 8.8%. Average annual per-capita GDP should reach US\$ 1,000 - 1,100 by 2010 (slightly higher than national average). The division of the GDP sectoral structure in 2010 is expected to be: agriculture-forestry-fishery sector 13.5%, industry and construction sector 42.2%, and services sector 44.3%. Export should increase by 15% per year and the region's exports' turnover should reach 20 - 25% of the country's total export value. The rate of poor households should decrease from 20% in 2005 to 10 - 11% in 2010.

2) Review of Existing Regional Plans

Regional and urban plans are based on the overall development strategies of Vietnam's SEDP. The SEDP will shape regional plans, regional sector plans, and urban plans. Currently, the Hanoi region has three regional plans slightly covering different geographical areas, namely the Red River Delta Plan and the Northern Economic Zone Plan of the MPI; and the *Hanoi Metropolitan Area Development Plan* of the MOC.

- (a) **Red River Delta Plan:** The Red River delta (RRD) region is one of eight national subregions and comprises nine provinces located in the delta area with Hanoi as the northernmost province. The area covers 12,632km² and has a population of 15.4 million. The *Master Plan for Socio-economic Development in the Red River Delta* was approved in 1997 and plans up to 2010.
- (b) **Northern Focal Economic Zone Plan:** Vietnam is divided into six economic zones of which the NFEZ is a planning area for social and economic development for the Hanoi region. It comprises eight provinces, covers an area of 15,287km², and has a population of 13.2 million. The *Socio-economic Development Plan of the Northern Key Economic Region 2010, with a Vision toward 2020* was approved in 2004.
- (c) **Hanoi Metropolitan Area Plan:** The Hanoi metropolitan area (HMA) includes Hanoi City and eight surrounding provinces. The area covers 13,379km² and has a population of 12 million. The *Hanoi Metropolitan Area Development Plan* is to be finalized in 2005 and has a vision toward 2020 and onward.

The basic orientations of these plans are stated in Table 4.3.1 and are summarized as follows:

- (i) Promote high economic growth through the development of the industrial and services sectors by providing efficient infrastructures and a conducive investment environment for foreign and domestic investors.
- (ii) Promote poverty reduction and narrow gaps in the living standards between the urban and the rural areas and among provinces.
- (iii) Promote environmentally sustainable development.

The study areas are expected to increase to a combined population of 27.7 million, of which 37% are urban by 2020. GDP will increase at 9.7% a year and per capita GDP will be VND 25.2 million or US\$ 1,600. Industrial structure will change significantly due to big reductions in the primary sector and large increases in the secondary sector. The poverty rate is expected to be minimal (see Table 4.3.2).

Table 4.3.1 Objectives of Existing Regional Plans

	RRD	NFEZ	HMA	Hanoi City SEDP
Goals/ Objectives	<ul style="list-style-type: none"> Develop the RRD as the center for industrial and agricultural development in Vietnam. Modernize the production force and achieve basic electrification. Restructure the economy toward the industrial and service sectors and reduce the agricultural sector. Reduce the gap in living standards between rural and urban areas and improve education, health, and cultural life in the region. 	<ul style="list-style-type: none"> Promote industrial development through foreign investments. Ensure the zone has a leading role and position in the north and the country, therefore boosting and assisting other regions, especially those facing huge difficulties. Be in the forefront of national industrialization and modernization with specific respect to international cooperation and investment attraction. Gain faster and more sustainable development than other regions. 	<ul style="list-style-type: none"> Develop HMA as the major economic area in Vietnam and promote it to a prominent economic and cultural position in Southeast Asia and Pacific. Ensure that HMA is an important national and regional cultural and historical area and tourism center as well as an area for science and labor training. Develop HMA as a favorable investment area with high living conditions in both urban and rural areas and ensure a sustainable environment. 	<ul style="list-style-type: none"> Develop as the strategic center of national politics, administrative leadership, culture, education, finance, and international trade of the country and the region. Strengthen integration with socio-economic development of the RRD, NFEZ, and HMA. Maximize the potential and resources of the city to promote industrialization, modernization, urbanization, and international economic integration.
Economic Development	<ul style="list-style-type: none"> Raise the average annual GDP growth rate of the region to 14% in 2001-2010. Raise the GDP share to about 7% for primary, 43% for secondary and 50% for tertiary sector by 2010. 	<ul style="list-style-type: none"> GDP growth: 1.3 times the average national GDP growth up to 2010 and 1.25 times up to 2020. Increase region's share to national GDP to 24% in 2010 and 29% in 2020. Raise the annual average per capita export value from US\$ 447 (2005) to US\$ 1,200 (2010) and US\$ 9,200 (2020). Raise trained labor to 55% by 2010. Raise advanced technology rate to around 45% by 2010 Reduce poor households to 1.5% by 2010 and 0.5% by 2020. 	<ul style="list-style-type: none"> GDP annual growth: 9.5% up to 2010 and 8.8% up to 2020. GDP shares by 2010: Agriculture 16.7%, industry 46%, and services 42%. GDP shares by 2020: Agriculture 7.3%, industry 49.8%, and services 43%. Annual industrial growth rate: 12% in 2004-2010 and 9.8% in 2011-2020. Annual services growth rate: 9.4% in 2004-2010 and 9.1% in 2011-2020. Shares of total labor force by 2010: agriculture 44.6%, industry 25%, and services 30%. 	<ul style="list-style-type: none"> Share of GDP to Vietnam total: 10% by 2010 and 12% by 2020. Average GDP growth rate: 11-12% in 2006-2010 and 11% for 2011-2020. Per capita GDP: US\$ 2,450-2,500 by 2010 and US\$ 6,000 by 2020. Export turnover growth rate: 15-17% in 2006-2010 and 15-16% in 2011-2020. GDP shares by 2010: Agriculture 1%, industry 41%, and services 11%. GDP shares by 2020: Agriculture 1%, industry 42%, and services 57%.
Social Development	<ul style="list-style-type: none"> Raise the quality and efficiency of educational and training system. Expand the network of primary healthcare, medical examination, and treatment for the people. Incorporate national programs for socio-economic development. Meet the demand for clean water for production, business, and daily life. Complete the electrification of the area. 	<ul style="list-style-type: none"> Reduce the natural population growth rate to 1% by 2010 and under 0.8% by 2020. Urbanize NFEZ to 51% by 2010 and 65% by 2020. Develop and raise the capacity of material and technical foundations in service of education. Develop medical establishments, equipment and services. Build cultural centers. Upgrade the central television tower. Build a safe and healthy economic-social-natural environment for children. Accomplish and modernize electricity grid for the region. 	<ul style="list-style-type: none"> Increase regional population to 13.5 million in 2010, 15 million in 2020, and 16.5 million in 2030. Urbanize HMA (currently 23%) to around 30% in 2010 and 55-62% in 2020. Create the education triangle of Hanoi-Hai Phong-Nam Dinh to provide services to the region. Increase number of colleges and vocational schools from 56 to 70 by 2020 and establish at least 1-2 universities in each province Establish high-quality healthcare service centers in major urban areas to reduce pressure on Hanoi hospitals. Supply clean water to 90% of urban and town centers and 85% of small towns by 2010 and 100% and 95% by 2020. 	<ul style="list-style-type: none"> Population: 3.6-3.7 million by 2010 and 5.1 million by 2020. Urbanization rate: 79-80% by 2010 and 85-87% by 2020. Share of trained labor: 60-65% by 2010 and 75-80 % by 2020. Urban unemployment rate: 5.5% by 2010 and 5% by 2020 Number of doctors and hospital beds/ 10,000 people: 12 and 14 by 2010 and 14 and 17 by 2020. Rate of secondary school graduates: 80-90% by 2010 and 90-92% in 2020.

Source: HAIDEP Study Team.

Table 4.3.2 Main Target Indicators for Study Area¹⁾

Indicator		1995	2003	2020	Growth Rate (%/yr)
Population (000)		21,446	23,432	27,712	1.0
Urban Population	(000)	3,595	5,028	10,105	4.2
	(%)	16.8	21.5	36.5	—
GDP (billion VND)		79,953	144,484	699,255	9.7
Per Capita GDP (000 VND)		3,728	6,166	25,233	8.6
Industrial Structure (%)	Primary	32.2	21.3	7.7	-5.8
	Secondary	28.2	37.5	48.7	1.5
	Tertiary	39.7	41.2	43.5	0.3
Poverty Rate (%)		62.7	22.4	negligible	—

1) Consisting of the cities of Hanoi and Hai Phong, as well as the provinces of Bac Giang, Bac Ninh, Ha Nam, Ha Tay, Hai Duong, Hoa Binh, Hung Yen, Nam Dinh, Ninh Binh, Phu Tho, Quang Ninh, Thai Binh, Thai Nguyen, and Vinh Phuc.

4.4 Proposed Regional Development Strategies

The study area is so extensive and its problems various and complex that investment requirements to meet development goals and the orientations stated in existing policies and regional plans will also be gargantuan. A regional planning study was conducted in HAIDEP¹⁰ in close coordination with ongoing planning activities of MOC's NIURP. In order to promote sustainable development and achieve balanced growth and poverty reduction in the region, the following strategies are considered important:

1) Regional Coordination and Integration

In the study area, development and growth started and accelerated during the last decade. However, the capacity of each province is still limited due to underdeveloped infrastructure and an environment that is not yet fully conducive to investments. While each province has its own strengths and weaknesses, the principal orientation must be placed on the coordination among provinces to integrate their resources, enhance their competitiveness, and avoid overlaps in investments and unnecessary internal competitions. The target is to promote the region's growth in the global market. At the same time, coordinated policy attention and integrated approaches are equally critical in order to attend to social and environmental concerns.

2) Establishment and Development of Growth Corridors

Competitive economic development as well as international and interprovincial integration is key to the growth of the region. For effective use of limited resources, corridors must be selected and prioritized. These corridors are provided with efficient transportation infrastructures, urban centers, and industrial estates to house and serve investments. These corridors will also provide connectivity to rural areas through provincial and rural roads. The following are the selected key corridors (see Figure 4.4.1 and Table 4.4.1):

- (i) East-West Corridor (Lao Cai - Viet Tri - Ha Noi - Hai Phong /Cai Lan: NH5, NH18, NH70, NH2, rail, IWT).
- (ii) South Corridor (Hanoi - Ninh Binh - Central/South: NH1, rail, maritime)
- (iii) Northeast Corridor (Hanoi - Bac Ninh - Lau Son: NH1, rail).
- (iv) North Corridor (Hanoi - Thai Nguyen: NH3, rail).
- (v) Southwest Corridor (Hanoi - Hoa Binh: NH6).
- (vi) Regional Ring Corridor (Vinh Phuc - Son Tay - Hoa Lac - Dong Van - Thanh Mien - Ha Dong - Sao Do - Bac Giang - Son Cong: NH21, NH38, NH18, new roads).

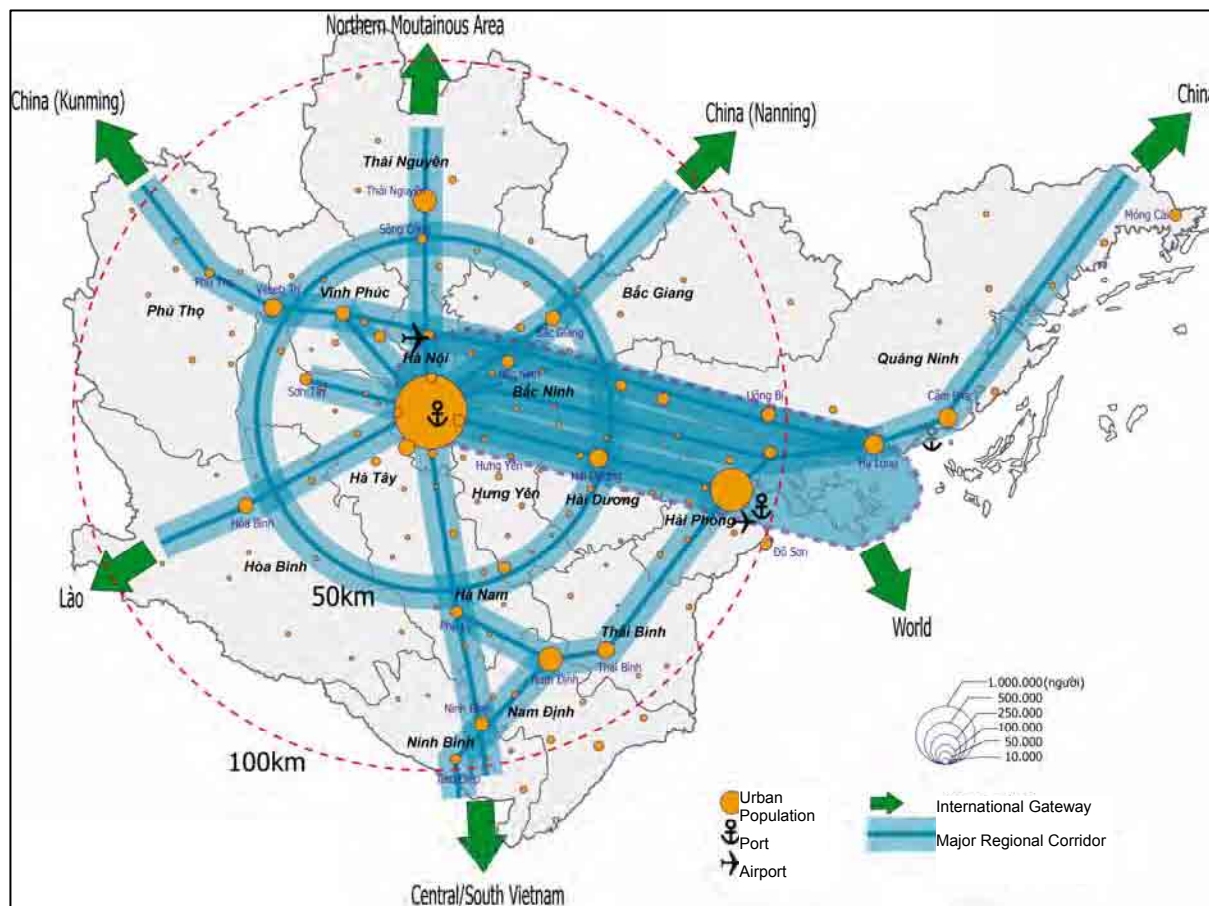
Since these corridors form the main transportation network in the region, their facilities and services must be upgraded to make them more competitive and attractive to users.

3) Strategic Economic Development and Market Integration

This aims to attract high value-added industries and investments and to encourage local industries to be competitive in the global market. To achieve these, a conducive investment environment, quality infrastructure, and institutional support must be provided.

¹⁰ A separate report on regional planning and development has been prepared for the study area.

Figure 4.4.1 Development Growth Corridors



Source: HAIDEP Study Team.

Table 4.4.1 Characteristics of Major Development Growth Corridors¹⁾

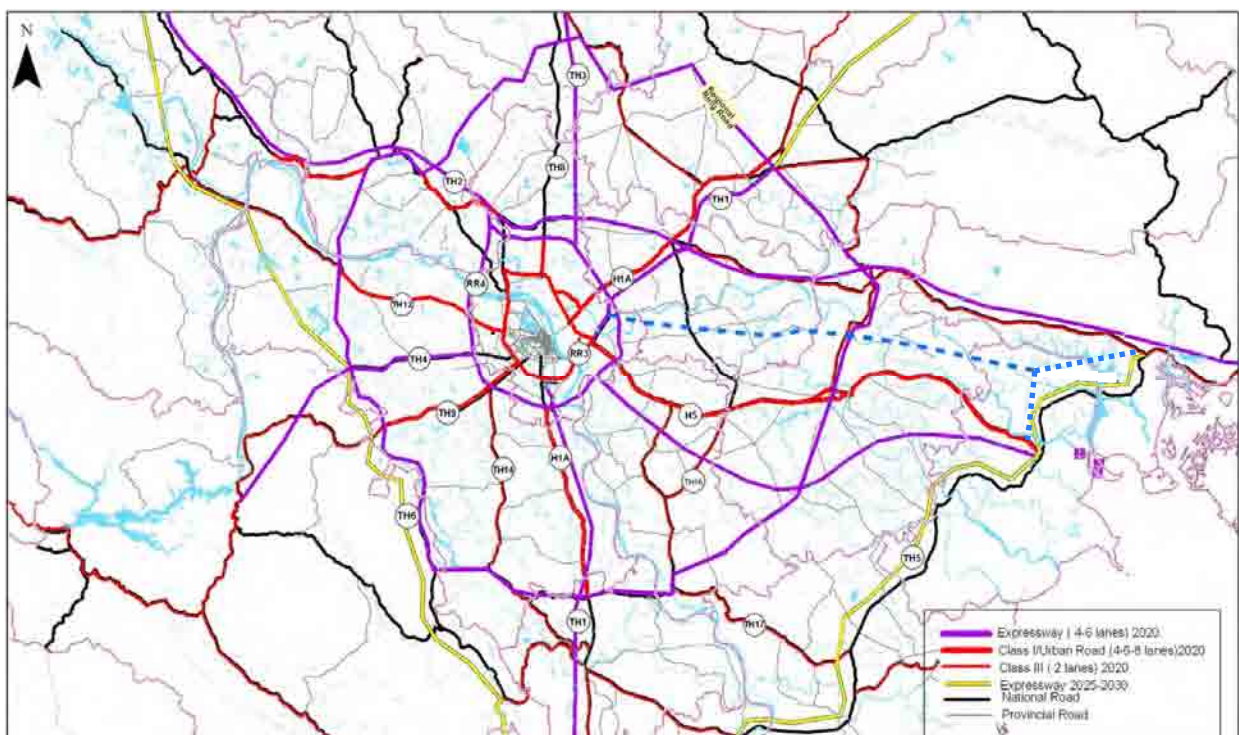
Corridor	Major Transportation Node	Major Characteristic	Development Orientation
1. East-West Corridor	NH5, NH18, NH2, NH 70, Railway, Inland Waterway	<ul style="list-style-type: none"> Major corridor connecting the two most important cities of Hanoi and Hai Phong, supporting Bac Ninh and Hai Duong cities. Major transportation axis connecting international gateways of Hai Phong and Cai Lan ports and Noi Bai airport. Important gateway going to Kunming, China via NH2 and railway. High poverty rate in Phu Tho and Vinh Phuc province. 	<ul style="list-style-type: none"> To promote industries to lead the economic development in the northern region. To develop competitive industrial parks along the corridor, connecting to the international gateways of Hai Phong and Cai Lan ports. To enhance regional development in northern provinces to reduce poverty.
2. South Corridor	NH1, Railway NH10, Maritime (north-south coastal line)	<ul style="list-style-type: none"> Important transportation axis connecting northern provinces with central and southern provinces and Ho Chi Minh City. Connection with RRD coastal corridor (NH10) in the delta area. 	<ul style="list-style-type: none"> To formulate Industrial cluster along NH 1. To improve agricultural productivity in the delta to support Hanoi and other cities.
3. Northeast Corridor	NH1A, Rail	<ul style="list-style-type: none"> The closest gateway going to, Nanning, China via NH1A and railway. 	<ul style="list-style-type: none"> To promote agro-forestry.
4. North Corridor	NH3, Rail	<ul style="list-style-type: none"> Important gateway for trade and exchange between northern regions and the Red River delta. 	<ul style="list-style-type: none"> To enhance connectivity between the northern region and Hanoi City. To promote agro-forestry. To enhance regional development to reduce poverty.
5. Southwest Corridor	NH6, Lang Hoa Lac Road	<ul style="list-style-type: none"> Strong linkage with Hanoi City, through NH6, NH32, and Lang Hoa Lac road, connecting with western mountainous area. Abundant tourism resources, including pagodas, natural resources, and craft villages. 	<ul style="list-style-type: none"> To develop the satellite city of Hoa Lac as an intellectual resource center with high-tech industries and higher education facilities. To enhance economic and social linkage with Hanoi City To develop tourism.

4) Strategic Transportation System Development

Good transportation services and better infrastructure links will make the region a more attractive place for investments, and in particular as a better place to live and work. It will enhance the region's competitiveness by helping to attract and retain people with skills. In rural areas, improved accessibility is required to sustain business vitality, encourage investment, and improve access to socio-economic centers and markets. Key aspects are as follows:

- (i) Road infrastructures in main transportation corridors from Hanoi must be upgraded, including: (i) eastward, with two main routes of NH5 and NH18 linking Hai Phong and Cai Lan ports; (ii) northward, with a route parallel to NH2 and NH3 toward China; (iii) southwestward, in parallel with NH6; and (iv) northward/southward along NH1 (see Figure 4.4.2).
- (ii) International gateways, such as Hai Phong and Cai Lan for shipping and Noi Bai airport for air transportation, must be strengthened to compete with other cities in Asia and provide efficient links with the international market and facilitate north-south trade and movement within the country.
- (iii) Modal shares of road, rail, and inland waterway must be duly considered especially along the corridors, such as Hanoi - Hai Phong, Hanoi - Lao Cai, Hanoi - Ninh Binh, etc., to provide economical and effective services.
- (iv) The development of a regional ring road is proposed to connect key corridors to strengthen interprovincial linkages and reduce concentration in Hanoi.
- (v) While many growth centers in the region are located far from key international gateways (especially Hai Phong and Cai Lan for international trade), logistics centers, such as inland depots and terminals, must be provided at strategic locations especially where industries are concentrated such as Hanoi and Vinh Phuc.

Figure 4.4.2 Regional Spatial Structure



Source: Based on the HMA Plan.

5) Urban Development and Management

Managing the process of urbanization is an important emerging policy agenda in the region. Growth through industrialization and improvement of quality of life are closely related to the urbanization of the society. Urbanization rate is expected to increase from 21.5% to 37% between 2003 and 2020. Urban development is not only a concern of big cities but also of all types and levels of urban area as well as rural area.

6) Strengthening of Urban-Rural Linkages and Development of Rural Areas

Even in 2020, more than 60% of the population will reside in rural areas. While growth is primarily driven by industrialization and urban development, the development of rural areas must be strategically attended to through all possible measures such as promoting rural industrialization, craft production, eco-tourism, urban agriculture, etc., for which adequate infrastructure must be provided to strengthen urban-rural linkages.

7) Effective Land Use and Environmental Management

Of the entire land area of the Hanoi region, 86% is undeveloped or currently used as open spaces, forests and for agricultural purposes, while only 14% is developed. Future urbanization will bring about extensive impacts on land use and the environment across the region. The process must be carefully managed through effective institutional mechanisms and guidance by relevant authorities.

8) Social and Cultural Integration and Development

Providing quality human resources helps sustain growth and manage development processes. At the same time, while the rich cultures and resources of communities contribute to the overall image or identity of a region, the same must be enhanced and tapped to promote the region's sustainable development.

9) Strengthening Regional Development Administration and Coordination

The region is expected to experience further enormous impacts during the coming decades due to accelerating urbanization, motorization, industrialization, and globalization. On the other hand, the capacity of the provinces, as well as their coordination to integrate their resources and avoid overlaps in investments and unnecessary internal competition, are still limited. In order to ensure the region's growth in the global marketplace while attending to social and environmental issues, the administrative capacities of the provinces and the local authorities must be strengthened including the infusion of more effective coordinative capacities among ministries and between central government and local authorities.

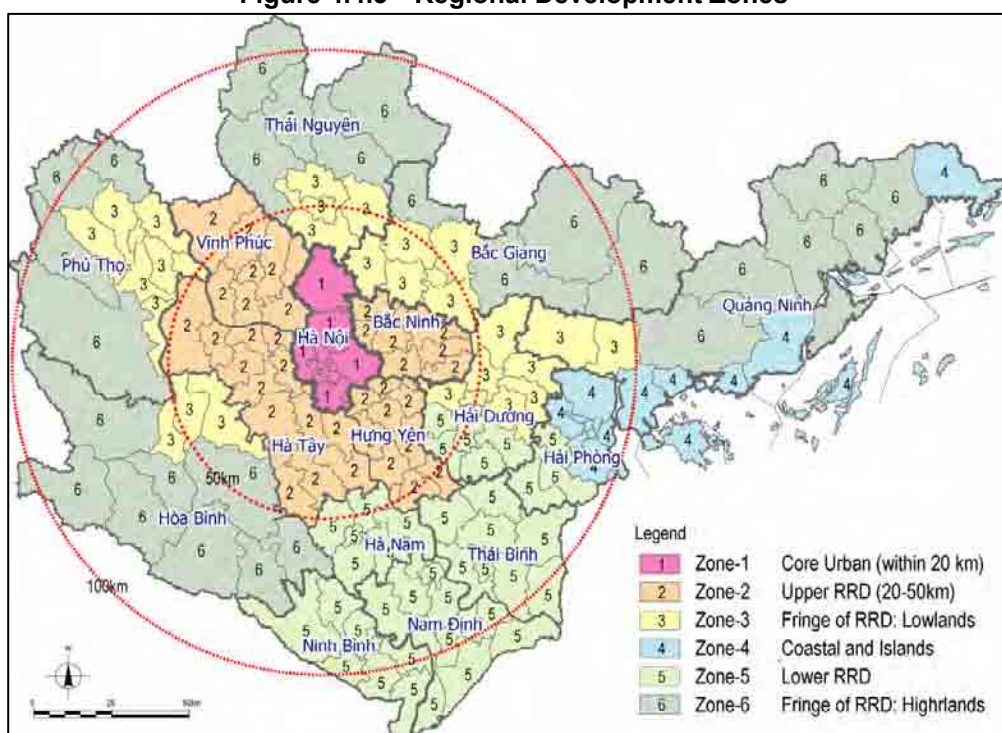
10) Development Orientations by Subregion

While the HAIDEP study area covers a total of 16 provinces in northern Vietnam, these provinces have significantly varied characteristics. In order to comprehensively attend to regional development issues and formulate development orientations that are appropriate for such characteristics, the study area was classified into subregions (see Table 4.4.2 and Figure 4.4.3).

Table 4.4.2 Development Orientations by Subregion

	Province	Characteristic of Zone	Development Orientation
Zone 1 Core City	Hanoi	<ul style="list-style-type: none"> Urbanized area with highest population density in the country. 	<ul style="list-style-type: none"> To develop as an international, political, cultural, scientific, educational, economic, and service center in the country. To develop into a strong center for HMA. To promote the renewal of inner-city areas and the development of suburban areas.
Zone 2 Upper Delta	Ha Tay / Vinh Phuc / Hung Yen / Bac Ninh	<ul style="list-style-type: none"> Good access to Hanoi City (20-50 km from Hanoi center). World's most highly cultivated land. High migration to other regions due to few employment opportunities. Low per capita GDP and low agricultural productivity. 	<ul style="list-style-type: none"> To construct an integrated metropolitan structure for 6-7 million people in the HMA. To promote and sustain major urban areas and develop satellite cities with specific functions as counterbalance to Hanoi.
Zone 3 Fringe of RRD (Lowlands)	Thai Nguyen / Bac Giang / Hai Duong / Hoa Binh / Phu Tho	<ul style="list-style-type: none"> Plains connecting to the upper delta. Good access to Hanoi City by national roads. 	<ul style="list-style-type: none"> To promote and sustain provincial cities and to strengthen their function of service provision. To develop cities to support habitation of and activities in hinterlands.
Zone 4 Northern Coast	Hai Phong / Quang Ninh	<ul style="list-style-type: none"> Highly urbanized area next to Hanoi City. High GDP productivity based on industry. 	<ul style="list-style-type: none"> To develop a strong industrial axis comprising Hanoi metropolitan area and the eastern industrial cluster. To develop competitive urban centers to sustain regional growth.
Zone 5 Lower Delta	Ha Nam / Hai Duong / Hai Phong / Nam Dinh / Thai Binh / Ninh Binh	<ul style="list-style-type: none"> Red River delta is the world's most highly cultivated land. High migration to other regions due to few employment opportunities. Low per capita GDP and low agricultural productivity. 	<ul style="list-style-type: none"> To strengthen axis connecting HMA with the coastal urban areas. To develop infrastructure to support the southern industrial cluster including Nam Dinh, Thai Binh, Ninh Binh cities. To develop rural towns and their centers in coordination with agricultural/industrial zones for balanced regional development.
Zone 6 Fringe of RRD: (Highlands)	Thai Nguyen / Bac Giang / Quang Ninh / Hoa Binh / Phu Tho	<ul style="list-style-type: none"> Hilly and mountainous area. Low population density and urbanization rate. Small GDP, mostly based on primary sector. Higher level of poverty and inequality. Higher rate of ethnic minorities. 	<ul style="list-style-type: none"> To create and upgrade town centers to provide necessary services. To promote regional development with focus on poverty reduction in rural areas.

Figure 4.4.3 Regional Development Zones



11) Spatial Structure and Urban Development Orientation in Areas Within 30 - 50km Radius of Hanoi

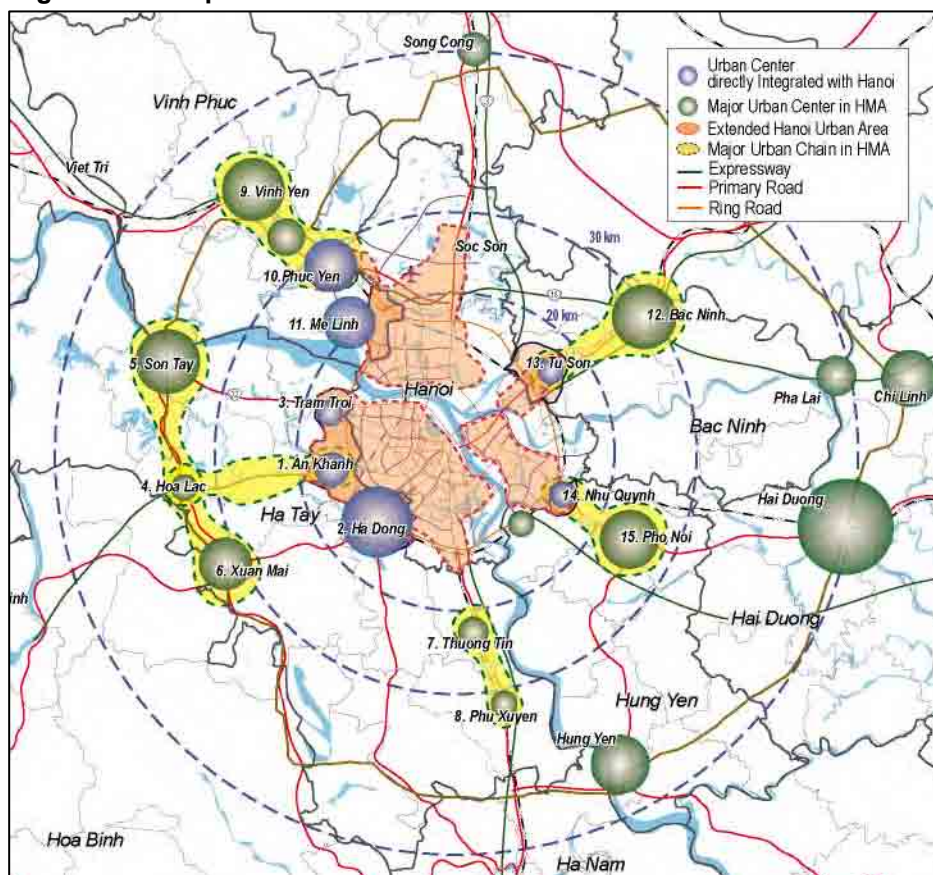
(1) Locational Characteristics

In the future, under the development and socio-economic activities of Hanoi will become increasingly interactive with urban areas located within a 30 to 50km radius of it as transportation infrastructure, especially roads are improved and developed. Urban areas located in this area include An Khanh, HA Dong, Tram Toi, Hoa Lac, Son Tay, Xuan Mai, Thuong Tien, and Phy Xuyen in Ha Tay Province; Vinh Phuc, Phuc Yen and Me Linh in Vinh Phuc Province; Bac Ninh and Tu Son in Bac Ninh Province; and Nhu Quynh and Pho Noi in Hung Yen Province (see Table 4.4.3). These urban areas form the following urban chains along national roads (see Figure 4.4.4):

- (i) Vinh Yen - Phuc Yen - Me Linh along NH2.
- (ii) Tui Son - Bac Ninh along NH1.
- (iii) Nhu Quynh - Pho Noi along NH5.
- (iv) An Khanh - Hoa Lac along Lang - Hoa Lac Road.
- (v) Ha Dong along NH6.
- (vi) Tram Troi along NH32.
- (vii) Son Tay - Hoa Lac - Xuan Mai along NH21.

Further growth of Hanoi and other urban areas in adjoining provinces as well as the development of transportation infrastructure and diversification of socio-economic growth will strengthen the interaction among cities. Sharing roles and functions among them will therefore become crucial.

Figure 4.4.4 Spatial Structure of Areas within 30 - 50Km Radius of Hanoi



Source: HAIDEP Study Team.

Table 4.4.3 Profile of Major Urban Areas in the Urban Chain

Province	Urban Area	Location ¹⁾	Urban Population		Major Function
			2003 ¹⁾	2020	
Ha Tay	1. An Khanh	15km from Hanoi along Lang Hoa- Lac Highway adjacent to Hanoi City.	0 ³⁾	50,000	<ul style="list-style-type: none"> Newly developed urban areas of business and service center. Development projects are ongoing.
	2. Ha Dong	15 km from Hanoi along NH6, integrated with Hanoi City.	79,785	200,000	<ul style="list-style-type: none"> Provincial capital Administrative, socio-economic and cultural center of Ha Tay Province. Urban area is integrated with Hanoi city.
	3. Tram Troi	15km from Hanoi along NH32, adjacent to Hanoi City.	4,164	30,000	<ul style="list-style-type: none"> Administrative, socio- economic, cultural center of Hoai Duc District.
	4. Hoa Lac	30km from Hanoi at the intersection of Lang Hoa - Lac Highway and NH21.	0 ³⁾	30,000	<ul style="list-style-type: none"> Largest planned urban area in the urban chain. Functions as training and education center with science research institutes and high-tech industries.
	5. Son Tay	40km from Hanoi at the intersection of NH32 and NH21A.	40,948	150,000	<ul style="list-style-type: none"> Services and industrial center. With special role in national defense and security.
	6. Xuan Mai	30km from Hanoi; at the intersection of NH6 and NH21A.	22,857	120,000	<ul style="list-style-type: none"> Has several industries, ie construction materials, mechanical and processing.
	7. Thuong Tin	20 km from Hanoi along NH1A	6,126	50,000	<ul style="list-style-type: none"> Administrative center of Thuong Tin district. Neighborhood commercial center.
	8. Phu Xuyen	30 km from Hanoi along NH1A	9,903	50,000	<ul style="list-style-type: none"> Administrative center of Phu Xuyen district. Neighborhood commercial center.
Vinh Phuc	9. Vinh Yen	40km from Hanoi along NH2.	58,113	170,000	<ul style="list-style-type: none"> Provincial capital, as an administrative, socio-economic, science and technology center of Vinh Phuc Province.
	10. Phuc Yen	Along NH2 and the Hanoi-Lao Cai rail route near Xuan Hoa and Hanoi.	52,000	120,000	<ul style="list-style-type: none"> With developed infrastructure and strategically located along NH2 going to Cai Lan Port. Low, fertilized land with diverse ecosystem, favorable to tourism development. Has thriving industries ie motor and motorcycle assembly plants.
	11. Me Linh	20km from Hanoi along NH23.	0 ³⁾	150,000	<ul style="list-style-type: none"> Newly developed urban area serving as industrial, commercial, services, tourism center. Industrial zone of Quang Minh and Tien Phong are located.
Bac Ninh	12. Bac Ninh	30km from Hanoi; along NH18 from Hanoi to Cai Lan Port.	43,823	180,000	<ul style="list-style-type: none"> Provincial capital Administrative, socio-economic and cultural center of Bac Ninh Province.
	13. Tu Son	15km from Hanoi along NH1, adjacent to Hanoi City.	3,745	30,000	<ul style="list-style-type: none"> Administrative, socio-economic, and cultural center of Tu Son District. Tien Son Industrial park has been developed and will be expanded, with accessibility to Cai Lan Port of NH 1.
Hung Yen	14. Nhu Quynh	15km along NH5 from Hanoi to Hai Phong.	10,764	30,000	<ul style="list-style-type: none"> Large economic center in northern Hung Yen Province.
	15. Pho Noi	25km from Hanoi along NH5, going toward Hai Phong.	9,728	150,000	<ul style="list-style-type: none"> Industrial and commercial zone in the north of Hung Yen province.

Source: Revision of Hanoi Master Plan by 2020.

1) Distance from Hanoi's urban core.

2) As of 2003.

3) At present there is no urban area.

(2) Role Sharing among Urban Centers

Hanoi plays a leading role in the region being the magnet for regional trade and the gateway to national and international markets. The infrastructure in and around Hanoi plays an important role in linking the provinces in the region and in generating favorable conditions for trade and exchange with other parts of the country or with other countries. Hanoi is the most important transportation terminal in the northern region for all transportation modes. The city also plays an important role for the region's workforce as it accommodates the most immigrants coming from the region.

Hanoi has by far the highest GDP in the region and functions as the industrial center for both national and international investments, making it the region's economic development force. Materials for industries are mainly sourced from neighboring provinces which makes interprovincial dependency important.

Major social facilities, e.g. education and health facilities, are located in Hanoi, serving the regional population when the same are not adequate in the provinces.

Cities and urban centers located in the area of 30 - 50km range of Hanoi are increasingly becoming closely interdependent in many ways in socio-economic activities as urbanization makes progress, transportation and communication systems modernize, and income levels improve. Important to Hanoi is that unless these satellite cities are developed in an attractive manner, the concentration to Hanoi will be accelerated and congested, while on the other hand, the satellite cities remain underdeveloped. Roles and functions must be adequately shared among Hanoi and other satellite cities and related urban areas. Some main points are described below.

(3) Industrial Development

Industrial development has been and will be an important driving force of growth in the region. While foreign direct investments are being accelerated, the provision of adequate space equipped with quality infrastructure and services is lacking.

Since many of these large-scale investments are connected with international markets, they must also be provided with smooth and competitively priced transportation and logistics services, in addition to overall conducive investment environment. For this, adequate locations should be planned in areas along NH18, NH2, and NH5. Advantages of these areas include: (i) proximity to international gateways both for shipping and air transportation; (ii) elimination of heavy trucks and freight traffic entering Hanoi's city center; (iii) availability of multimodal transportation infrastructure such as roads, expressways, railway, and inland waterways; and (iv) promotion of regional development and poverty reduction in poor provinces.

While relatively heavy industries are located along the above-mentioned NH18-NH2-NH5 corridor, emerging new types of industry including software, high-tech, and information technology, can be better located close to urban areas with better infrastructure and easy access to quality human resources. While Hoa Lac is being developed, other areas along the Hoa Lac - Hanoi corridor are also potential locations specially considering their proximity to Hanoi where higher education facilities are concentrated.

Hanoi must likewise consider seriously the relocation of polluting industries from the city center or builtup areas to outer areas. It is also likely that even non-polluting factories will move to outer areas because increasing land prices and worsening traffic congestions. To

facilitate such move, adequate locations must be provided. Industrial estates can be developed along the main corridors.

(4) Integrated Urban Areas

Among the identified urban areas, those which are located in adjacent areas of Hanoi will be more and more intensively integrated with the capital city. In fact, according to HIS results, there are many commuters from Ha Dong and other communes going to Hanoi for work, schooling, and private businesses. The development of these urban areas must be integrated into the urban planning and development of Hanoi City.

4.5 Proposed Regional Development Orientation

1) Goals and Objectives

The Hanoi region is tasked further to lead the growth and development of Vietnam in a sustainable manner, while at the same time to promote a balanced development and to attend to widening regional inequalities and environmental degradation. Besides being a difficult task, this feat can only be attained through coordination and team work among stakeholders who are equipped with adequate capacities. The main objectives of regional development are as follows:

- (i) Hanoi shall be an important growth center to sustain the development of the northern part of the GMS region and shall play a key role in Southeast Asia on economic, cultural, and environmental aspects.
- (ii) Hanoi shall continuously grow and take the lead as an important center for policy formulation, economic growth, enhancement of traditional culture, science and technology, as well as in the development of high-quality human resources.
- (iii) Hanoi shall be effectively integrated with the rest of the region within the Hanoi Metropolitan Area as well as in northern Vietnam to facilitate the region's balanced growth and at the same time to lessen the excessive concentration of population and functions in Hanoi.

2) Proposed Strategies, Actions, and Strategic Projects

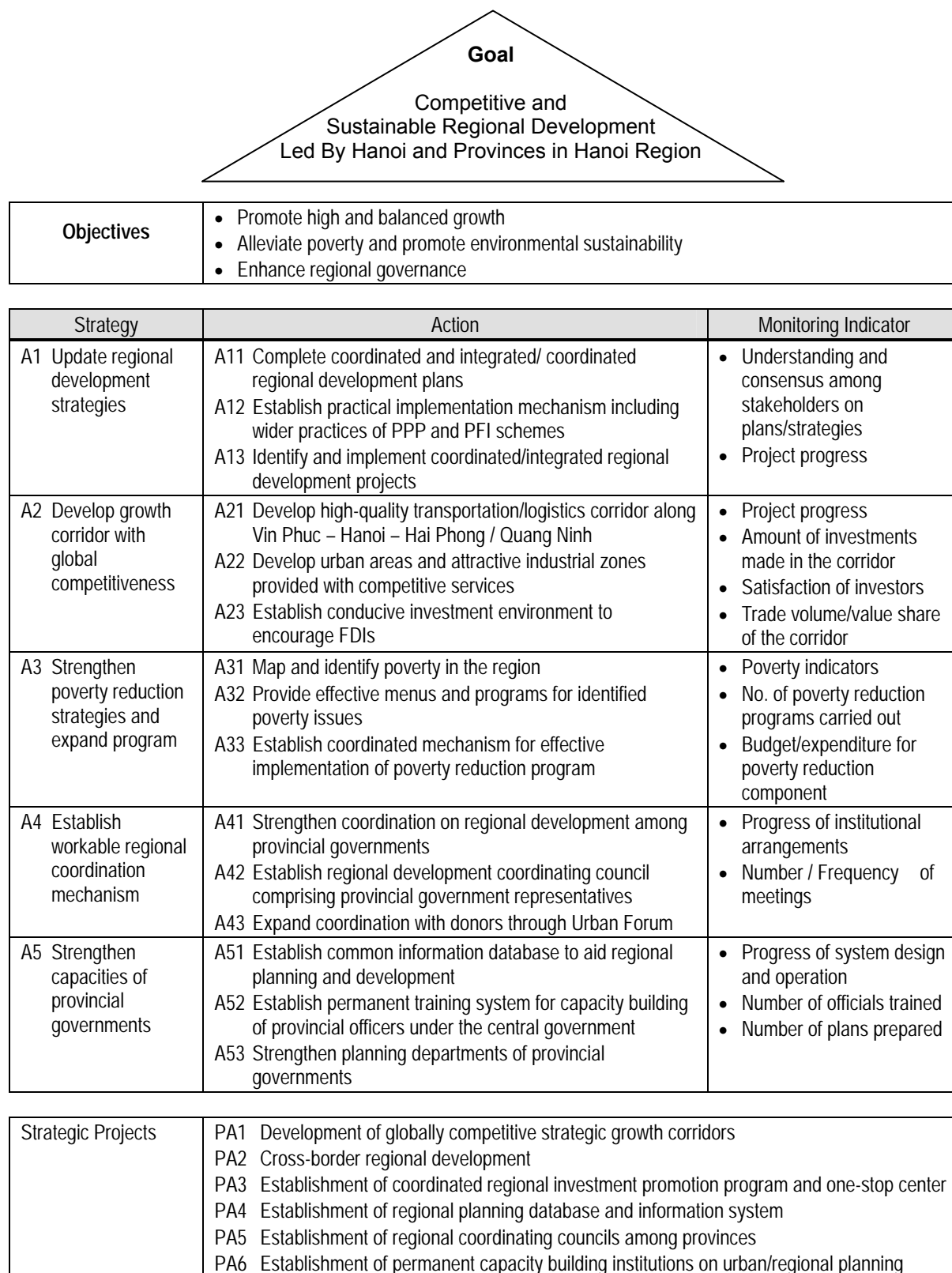
In order to promote the objectives of a sustainable regional development, five strategies are set for which more concrete actions and strategic projects are proposed (see Figure 4.5.1). The basic strategies are as follows:

- (i) Updating of regional development strategies
- (ii) Development of a globally competitive growth corridor
- (iii) Strengthening of poverty reduction strategies and expansion of program
- (iv) Establishment of workable regional coordination mechanism
- (v) Strengthening of capacities of provincial governments

Strategic projects for priority action are the following:

- (i) Development of globally competitive strategic growth corridors
- (ii) Cross-border regional development
- (iii) Establishment of coordinated regional investment promotion program and one-stop center
- (iv) Establishment of regional planning database and information system
- (v) Establishment of regional coordinating councils among provinces
- (vi) Establishment of permanent capacity building institutions on urban/regional planning

Figure 4.5.1 Proposed Strategies and Actions for Regional Development in the Study Area



Source: HAIDEP Study Team.

5 POPULATION AND URBAN GROWTH MANAGEMENT

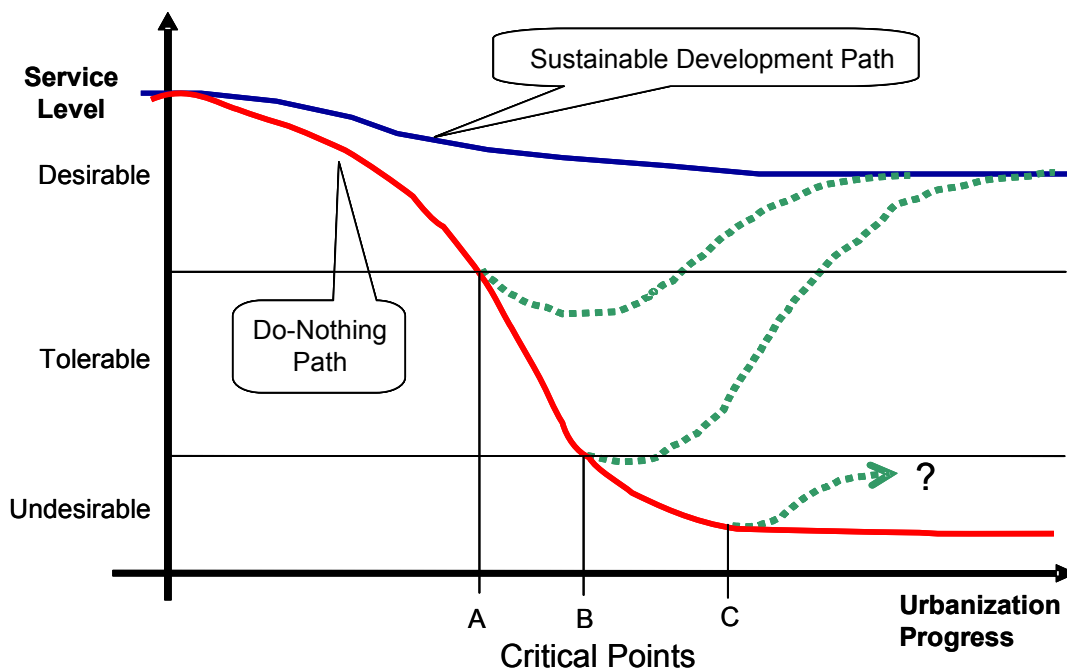
5.1 Importance of Effective Management of Urban Growth

The experiences of capital cities and large urban areas in the world clearly indicate that the process of controlling or managing urban growth is so important and critical to the formation of cities and urban areas, especially during the period of rapid urban population increases. Among selected Asian cities, different results can be clearly seen.

As population concentrates and urban areas expand, the overall service level of the city tends to decrease as is typically seen in increasing traffic congestion. If measures are inadequately done, the service level decreases quickly and the problems worsen. Delays in interventions further aggravate the situation and require much larger resources to get a city back on the right growth path. When the critical timing is lost, recovery will almost be impossible (see Figure 5.1.1).

In Asia empirical studies show that cities that have maintained sustainability include many Japanese cities, Singapore, and, to a certain extent, Kuala Lumpur. Those that have started to improve and are heading toward a sustainable path include Bangkok. Those that will find it nearly impossible to get back to a sustainable path include Metro Manila and Jakarta. For Hanoi whose urbanization has just started, the question of which path it will follow requires an immediate answer.

Figure 5.1.1 Urban Growth Management Process Models



- Notes:
- A: Relatively easy to improve the situation and pursue sustainability.
 - B: Difficult but still possible to improve the situation through vigorous investment in infrastructure (e.g. Bangkok).
 - C: Very difficult to get back to a path of sustainability (e.g. Metro Manila, Jakarta).

5.2 Future Population of Hanoi

The estimates and locations of the future population of Hanoi are important as they provide the basic planning framework. There is an existing population framework formulated in the 1998 Master Plan, while MOC's *Hanoi Metropolitan Area Development Plan* undertook a new analysis in 2005. After carefully studying these two population frameworks and considering new factors, HAIDEP has prepared a new proposal.

1) Review of Population Framework in the 1998 Master Plan

In the 1998 Master Plan, known as Decision No. 108, the urban population for both Hanoi City and its satellite cities/urban areas in adjoining provinces was estimated. Main points are as follows:

- (i) The urban population in Hanoi City will be 1.75 million in 2005 and 2.5 million in 2020, while the base year population (1997) was 1.3 million. The 2020 population on the left bank of the Red River will comprise 1.0 million and on the right bank of the Red River it will be 1.5 million, further broken down into 0.8 million in the development restricted area¹ and 0.7 million in the development expansion area.
- (ii) The 0.3 million urban population in Soc Son was not included in the above urban population of 2.5 million, because Soc Son was classified as a satellite city of Hanoi. However, if Soc Son was included, the total urban population of Hanoi City would be 2.8 million in 2020.
- (iii) The total population of Hanoi City is expected to be 3.9 million in 2020, which includes a rural population of 1.1 million.
- (iv) The Hanoi metropolitan area will be home to 4.5 to 5.0 million urban population, including 2.5 million in Hanoi City, 1.0 million in Xuan Mai - Hoa Lac - Son Tay urban chain, 0.5 million in Soc Son - Xuan Hoa - Dai Lai - Phuc Yen urban area, and 0.5 to 1 million in other urban areas (see Figure 5.2.1 and Table 5.2.1).

The 1998 Master Plan forecast on the 2005 population has been compared with the actual population by district. There are significant differences observed between the two figures, as follows:

- (i) The actual 2005 population exceeds the projection of the 1998 Master Plan by 250,000. Moreover, population increases in Thanh Xuan, Hoang Mai, and Tu Liem districts have been well over the projections of the 1998 Master Plan.
- (ii) On the other hand, population has not grown as expected in some suburban areas and in rural areas. The difference between actual and projected populations in rural areas is over 40,000.
- (iii) Population has increased much more rapidly than projected and not in the expected direction. Urbanization in satellite cities has also not progressed as expected.

¹ Including four urban core districts and existing urban areas in Tay Ho.

Table 5.2.1 Urban Population Distribution in Hanoi Metropolitan Area

Urban Area			1998 Master Plan		
			Base Year (000)	Forecast (000)	
				2005	2020
I. Hanoi Urban Area ¹⁾	Right bank of the Red River	Development control area ²⁾	940	863	800
		Development expansion area ³⁾	358 (103) ⁴⁾	562	700
	Left bank of the Red River (new Hanoi area)		(247) ⁴⁾	325	1,000
	Subtotal		1298 (350) ⁴⁾	1,750	2,500
II. Major Urban Chain	Xuan Mai - Hoa Lac - Son Tay - Mieu Mon (NH21)		54	280	1000
	Soc Son - Xuan Hoa - Dai Lai - Phuc Yen (NH18)		31	110-146	500
	Subtotal		85	390	1,500
III. Other Satellite Urban Areas			294	350	500-1,000
Hanoi Metropolitan Area			1,677	2,490	4,500-5,000

Source: 1998 Master Plan.

1) Excluding Soc Son area.

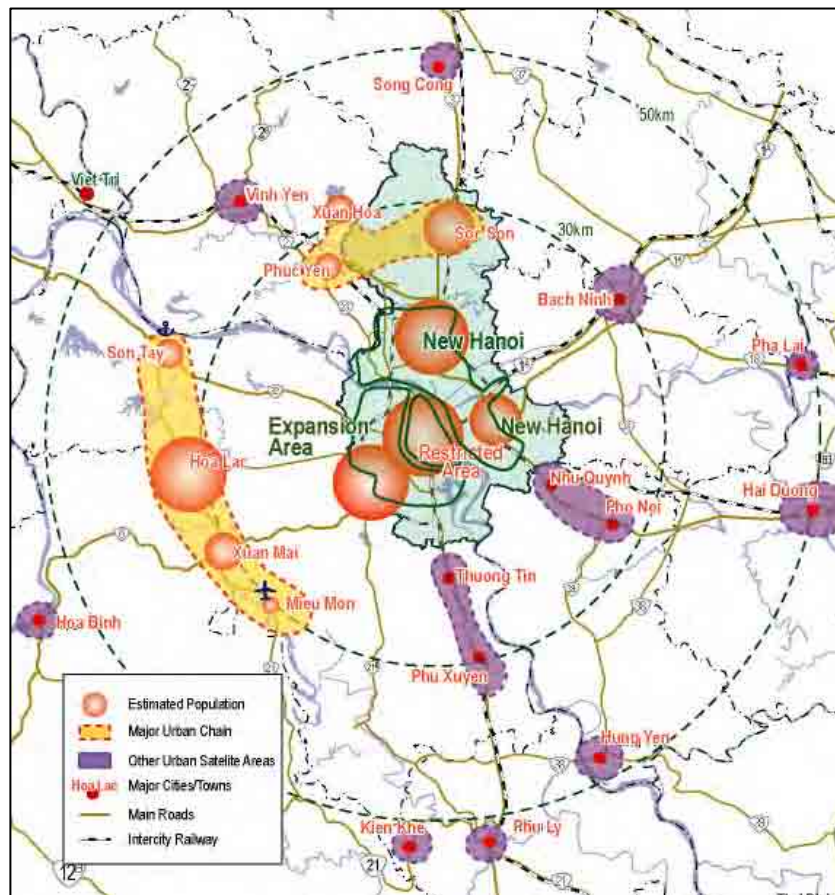
2) Includes the whole area of Hoan Kiem, Ba Dinh, and Dong Da districts, and the northern area of Minh Khai road in Hai Ba Trung District, and existing urban areas in Tay Ho.

3) Includes Cau Giay, Thanh Xuan, Hoang Mai, and new development areas in Tay Ho.

4) (*) refers population in rural areas and in towns that are currently not in urban areas.

5) Base year for 1998 Master Plan

Figure 5.2.1 Urban Structure of Hanoi Metropolitan Area



Source: HAIDEP Study Team.

2) Review of Population Framework in the HMA Plan

In the HMA plan by MOC's NIURP, a detailed analysis has been undertaken on the future urban population in the HMA based on the latest data and scientific analysis. The basic planning principle is similar to that used in the 1998 Master Plan, i.e. to develop HMA with a multi-center structure, where Hanoi and its satellite cities in adjoining provinces are better interconnected. The major objectives are summarized below.

- (i) To reverse the current concentration in the core city and put more emphasis on medium-size cities.
- (ii) To quickly expand major provincial cities and towns with a transportation network that will connect them with neighboring industrial and service zones and the core city of Hanoi.
- (iii) To develop small and medium-size cities and towns or district towns to support agriculture.

The plan estimates that the population of Hanoi, including Soc Son, will be 4.3 million, while that of the integrated urban areas will be 800,000, or a total of 5.1 million by 2020. It was assumed that population increases would be less than the current trend, as expected in the 1998 Master Plan. Major provincial cities will instead be strengthened to absorb the population increases in the Hanoi metropolitan area. The orientation of the HMA plan clearly shows that the population increase in Hanoi can be lowered through the encouragement of population growths in integrated adjacent urban areas.

3) HAIDEP Supplementary Study

- (a) **Trend Case:** Hanoi has been growing rapidly as proven by its 3% population increase rate between 1999 and 2003. This trend is expected to continue in the future considering the prominent level of infrastructure services and economic activities in Hanoi City, which definitely attract people from the rural areas. If this trend continues², the population of Hanoi by 2020 will be as large as 4.8 million, while the population in Hanoi's integrated urban areas will increase to 300,000, or a total of 5.1 million.
- (b) **Hanoi's Share in the National Urban Population:** Macro-level analysis was also done on the national urbanization trend. While Vietnam is currently at a relatively low urbanization level, it is expected that urbanization will pick up in the coming decades and will develop in much the same way as did China, Malaysia, Korea, and Japan. This implies that urbanization in Vietnam would not cease until it reaches 70 - 80% levels. The United Nations estimates that the current (2005) urban population of almost 23 million will increase to nearly 47 million in 2030 and furthermore thereafter. It was also forecasted that the population in Hanoi's urban agglomeration will reach 5.28 million by 2015, or an increase of 1.53 million from 3.75 million in 2000. While the urban area defined in the UN forecast is different from that of Hanoi City, the forecast clearly shows that the urban area of Hanoi City will go beyond the city's administrative boundary and will accommodate a population of more than 5 million in the next 15 years.
- (c) **Hanoi's Integrated Urban Areas:** As Hanoi City expands, it has become interconnected with the adjacent cities in adjoining provinces. Results of the HIS

² Assuming that the current growth rate of 3% continues till 2010, 2.8% in the 2010 - 2015 period, and 2.5% in the 2015 - 2020 period, the total population of Hanoi, including both urban and rural, will be 3.7 million in 2010 and 4.8 million in 2020.

survey show that many people commute from neighboring urban areas to Hanoi and vice versa. Some 98,000 workers and nearly 33,500 students commute to Hanoi everyday, while almost 60,800 workers and more than 14,800 students commute from Hanoi City to adjoining urban areas. These integrated urban areas are expected to expand in the future alongside the rapid urbanization in both Hanoi and its neighboring cities and towns. An integrated development of infrastructure and an integrated provision of urban services must therefore be more efficiently done. Besides, a strategically developed infrastructure that interconnects these urban areas can more efficiently manage urbanization to avoid urban sprawl.

4) HAIDEP Population Framework

The comparison of the three scenarios indicates a very similar total population framework. It is therefore proposed that the total population of Hanoi, including its adjacent integrated urban areas, be set at 5.1 million in 2020. A sharp population increase in the adjacent integrated urban areas, as assumed in the HMA plan, may be a little difficult to manage, unless good infrastructures, especially transportation facilities, that will link them with Hanoi are timely provided. Therefore, it was assumed that the urban population in the adjacent integrated urban areas by 2020 would be 600,000 and that of Hanoi would be 3.9 million (see Table 5.2.2).

The 1998 Master Plan and the HMA plan focus mainly on urban areas, even as more than 50% of Hanoi City will still be rural by 2020. Rural population outside of urban areas was estimated based on the current population residing in the future rural areas. With an addition of 600,000 rural population, the total population of Hanoi City will be 4.5 million in 2020.

Although the population of Hanoi was estimated to be 4.5 million by 2020, it is very much likely that the population will further increase beyond 2020, because the country's urbanization rate by 2020 would still be low and further industrialization and economic growth are expected. If it is assumed that the population would increase relatively slowly at 2% per year after 2020, Hanoi's population would reach 5.9 million in 2030.

Table 5.2.2 Future Population of Hanoi and Integrated Areas

Area		1998 MP	Trend	HMA Plan	Proposed
Hanoi	Urban	2,800 ²⁾	4,000 ²⁾	3,700 ⁴⁾	3,900 ²⁾
	Rural	1,100	800	600 ³⁾	600
	Total	3,900	4,800	4,300	4,500
Adjacent Area ¹⁾		n.a.	300	800	600
Total (Hanoi's Adjacent Areas)		n.a.	5,100	5,100	5,100

1) Including Ha Dong, Tram Troi, and An Khanh in Ha Tay Province; Phuc Yen and Me Linh in Vinh Phuc Province; Tu Son in Bac Ninh Province; and Nhu Quynh in Hung Yen Province.

2) Including Soc Son.

3) Rural population by 2020 was estimated based on the 2010 figure, which was calculated based on the total population of Hanoi City forecasted in the SEDP 2006-2010.

4) The HMA Development Plan of MOC (2005) estimated that the population growth of Hanoi between 2003 and 2020 would be 1.9 million comprising natural growth and migration on top of the existing 1.8 million as of 2003.

5.3 Future Growth Pattern

1) Overview

The future growth scenario was formulated based on the analysis of the growth pattern of population, employment, school enrolment, development trend, land development conditions, and orientations of existing urban and regional plans. While the proposed future framework is discussed in detail in the Urban Development Subsector Report, below are its main characteristics (see Figure 5.3.1).

- (i) Expansion of urban areas toward the north and east of the Red River as well as in adjacent provinces along major roads.
- (ii) Decrease in population and increase in employment in the city core, especially employment in the tertiary sector.
- (iii) Increase in population and employment in the fringe areas.

2) Main Transportation Network

The transportation network, including roads, rail, inland waterway, and air, is key to the effective integration of the region as well as urban areas within the city. Moreover, it determines the basic urban structure of an area. Hence it should be planned in a way that it contributes to the promotion of the planned urban growth in the most effective and efficient manner. Although each mode has its own role in the hierarchy, roads are the most crucial.

While a proposed network is discussed in Chapter 7 of this Report, the basic strategy is briefly as follows:

(1) Regional Level

- (i) Establish competitive multimodal transportation corridors linking Vinh Phuc - Hanoi - Hai Phong/ Quang Ninh including expressways, primary roads, railways, inland waterways, and air, as well as efficient logistics and transportation services.
- (ii) Strengthen main transportation corridors between Hanoi and the northwest (Lao Cai - China), north (Cao Ban), northeast (Lang Son- China), south (Vinh - Danang - HCMC), and west (Hoa Binh - Son La).
- (iii) Establish a regional ring road (RRR).

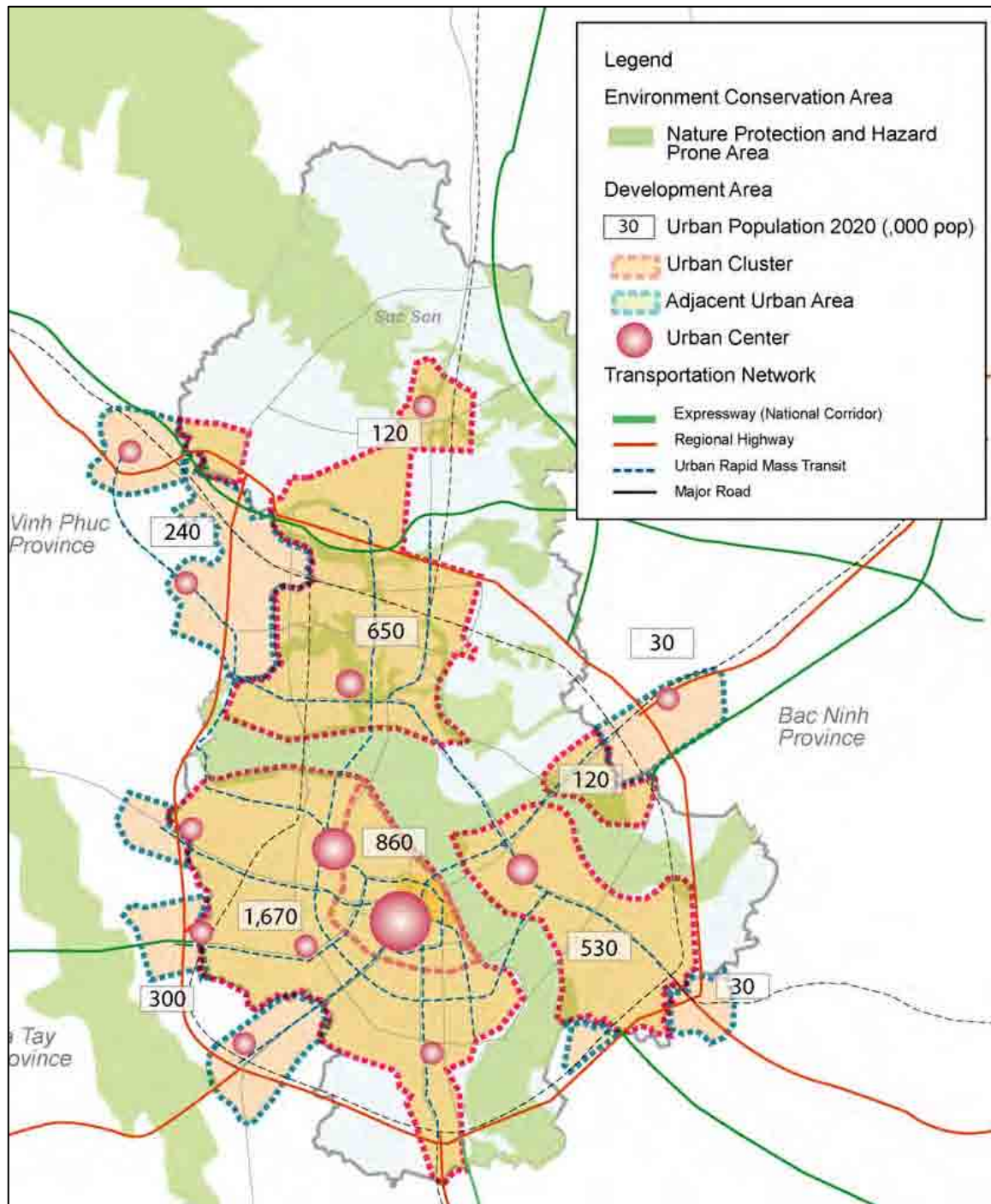
(2) Metropolitan Level

- (i) Improve and develop roads in Hanoi City between RRR and RR4.
- (ii) Prepare for the extension of UMRT lines to link Hanoi and adjoining provinces.

(3) City Level

- (i) Separate and ensure effective interface between inter-city and urban transportation by completing RR4 and the VR ring route.
- (ii) Establish clear radial and ring road systems.
- (iii) Develop efficient UMRT network to cover the city center and major radial corridors where urban growth is to be promoted.
- (iv) Develop inland waterway transportation providing urban and inter-city services.
- (v) Develop secondary and tertiary roads to support the planned urban development.

Figure 5.3.1 Distribution of Future Population, Employment, and Students



	Cluster	Population within Urban Development Promotion Areas			Worker Population at Workplaces (000)			Student Enrolment (000)	
		000	%	Density (no/ha)	Primary	Secondary	Tertiary	Secondary	Tertiary
Hanoi City	1 Central Area	860	22	225	1	88	632	80	230
	2 West of Red River	1670	42	119	22	153	339	148	211
	3 East of Red River	650	16	72	30	190	134	58	28
	4 North of Red River	770	20	62	86	262	107	127	48
	Total	3950	100	100	140	693	1213	413	518
Adjacent Urban Areas	5 Ha Tay Province	300	-	215	13	37	105	-	-
	6 Vinh Phuc Province	240	-	59	25	54	46	-	-
	7 Bac Ninh Province	30	-	30	0	9	8	-	-
	8 Hung Yen Province	30	-	23	1	27	3	-	-
	Total	600	-	166	39	127	162	-	-

5.4 Estimated Distribution of Population, Employment, and Students

1) Population Distribution

Based on the future growth scenario and development direction, the future population distribution was estimated. The urban population of 4.55 million is distributed in urban development promotion areas (UDAs) within the urban growth boundaries of Hanoi City and adjacent districts. Rural population is distributed outside the growth boundary based on the current distribution except for the area outside of the dyke³ located in the urban core (see Table 5.4.1 and Figure 5.4.1).

Table 5.4.1 Population Distribution in Hanoi City and Adjacent Urban Areas, 2020

Area	Population, 2003 ¹⁾			Population, 2020 ¹⁾				Increase (03 - 20)				Urban Pop. Density (pax/ha)	
	000	%	UDA	000 (A)	%	UDA ²⁾ (B)	B/A (%)	Ratio	%/yr	Ratio	%/yr	2003	UDA ^{3,4)}
Hanoi City	3,008	100	2,390	4,500	100	3,950	88	1.5	2.4	1.7	3.1	60	100
Urban Core	1,053	35.0	984	800	17.8	750	94	0.8	-1.6	0.8	-1.5	326	252
Ba Dinh	221	7.3	202	200	4.4	190	95	0.9	-0.6	0.9	-0.5	246	231
Hoan Kiem	175	5.8	138	120	2.7	90	75	0.7	-2.2	0.7	-2.3	388	262
Hai Ba Trung	301	10.0	286	230	5.1	220	96	0.8	-1.6	0.8	-1.6	339	259
Dong Da	358	11.9	358	260	5.8	260	100	0.7	-1.9	0.7	-1.9	359	258
Urban Fringe	827	27.5	790	1,370	30.4	1,320	96	1.7	3.0	1.7	3.2	76	132
Tay Ho	102	3.4	77	180	4.0	160	89	1.8	3.4	2.1	4.6	51	114
Thanh Xuan	185	6.2	185	180	4.0	180	100	1.0	-0.1	1.0	-0.1	203	200
Cau Giay	158	5.2	158	220	4.9	220	100	1.4	1.9	1.4	1.9	131	180
Hoang Mai	209	7.0	196	430	9.6	420	98	2.0	4.3	2.1	4.6	70	150
Long Bien	172	5.7	155	360	8.0	340	94	2.1	4.4	2.2	4.8	42	92
Suburban	392	13.0	300	880	19.6	800	91	2.2	4.9	2.6	5.9	35	94
Tu Liem	239	7.9	226	630	14.0	620	98	2.6	5.8	2.7	6.0	35	95
Thanh Tri	154	5.1	71	250	5.6	180	72	1.6	2.9	2.5	5.5	36	90
Rural	477	15.9	250	1,140	25.3	960	82	2.4	5.3	3.7	8.0	19	67
Dong Anh	276	9.2	151	750	16.7	650	86	2.7	6.1	4.2	8.9	17	75
Gia Lam	201	6.7	107	390	8.7	310	79	1.9	3.9	2.9	6.6	25	55
Excl. Soc Son	2,749	91.4	2,330	4,190	93.1	3,820	91	1.5	2.5	1.7	3.0	67	107
Soc Son	259	8.6	54	310	6.9	120	40	1.2	1.0	2.3	4.4	12	32
Adjacent Urban Area	150			600				4.0				37.0	42.9
Ha Tay Province													
Ha Dong	80	-	-	220	-	-	-	2.8	-	-	-	111.0	130.3
Tram Troi	4	-	-	30	-	-	-	7.2	-	-	-	32.9	42.9
An Khanh	0	-	-	50	-	-	-	-	-	-	-	-	42.1
Vinh Phuc Province													
Phuc Yen	52	-	-	120	-	-	-	2.3	-	-	-	21.7	28.1
Me Linh	0	-	-	120	-	-	-	-	-	-	-	-	31.0
Bac Ninh Province													
Tu Son	4	-	-	30	-	-	-	2.8	-	-	-	29.3	30.7
Hung Yen Province													
Nhu Quynh	11	-	-	30	-	-	-	8.0	-	-	-	15.6	23.3

1) For adjacent urban areas, population only includes urban population.

2) Residents outside of the dyke of the Red River in Ba Dinh, Hoan Kiem, Hai Ba Trung, Tay Ho, and Hoang Mai were not included in the UDA population.

3) The urban population density for adjoining urban areas by 2020 was based on the expected expanded size of urban areas by that year.

4) Population density except for the Noi Bai airport and Ho Tay area.

³ The area between the dyke and the Red River, which is particularly vulnerable to flooding, is outside of the UDA. It was assumed that 30% of this area's population will be relocated by 2020.

Figure 5.4.1 Population Density in Hanoi, 2003 and 2020

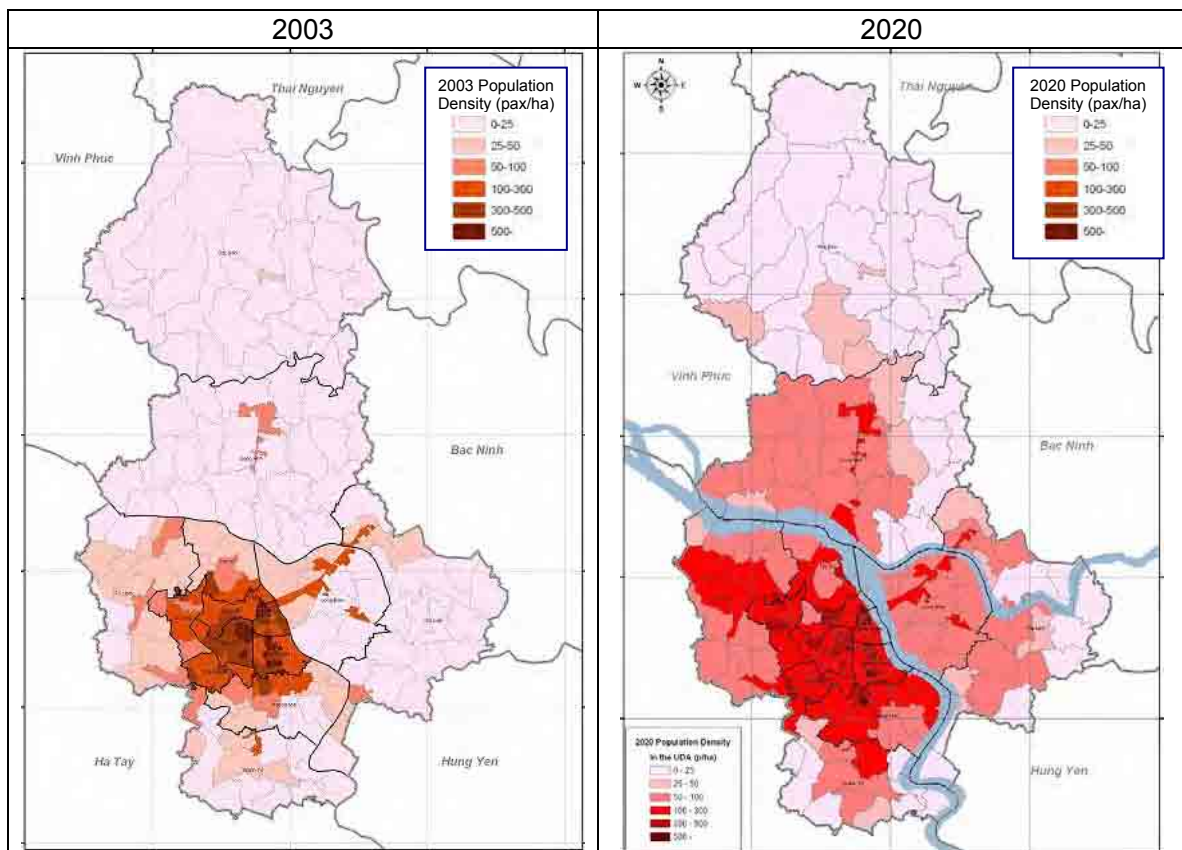
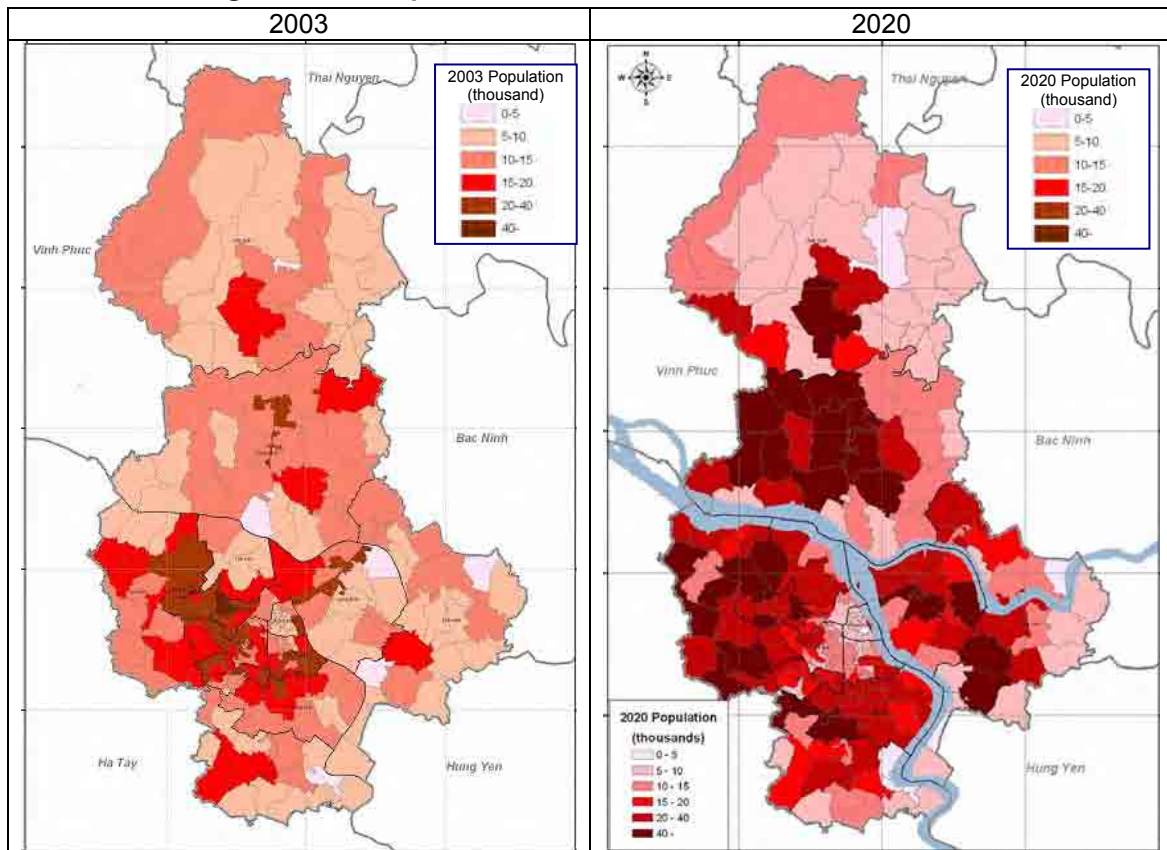


Figure 5.4.2 Population Distribution in Hanoi, 2003 and 2020



Source: HAIDEP Study Team.

Accordingly, urban population in the urban core will decrease to 0.75 million or by 0.8 times by 2020. With a smaller population density of 250 persons/ha, living conditions in the urban core is expected to improve. In the urban fringe, the population will continue to increase. In Thanh Xuan and Cau Giay districts, the population density is expected to reach 200 and 180 persons/ha, respectively, and then the population increase will slow down. On the other hand, the population of Long Bien and Hoang Mai districts, owing to their large development potentials, will increase at an annual growth rate of more than 4.5%.

In suburban areas, Tu Liem will absorb a significant volume of the population, about 0.63 million, while urbanization in Thanh Tri District outside the urban growth boundary will be restricted. In Dong Anh District, the population will increase at a growth rate of 6.6%, much higher than the 1.4% for the 1999 - 2003 period, as major infrastructures especially key railway sections and primary roads are planned for development here.

In adjacent urban areas, the population was estimated based on the HMA forecast and current trend. At present, there are five existing urban areas in Ha Tay, Vinh Phuc, Ba Ninh, and Hung Yen provinces that are directly connected with Hanoi City. By 2020, there will be two more urban areas that will be developed, namely An Khanh in Ha Tay Province and Me Linh in Vinh Phuc Province. As a result, by 2020 there will be seven urban areas adjacent to Hanoi.

2) Employment Distribution by Sector

(1) Daytime Employment Distribution at Workplaces

To estimate the magnitude of daytime economic activities, employment distribution at workplaces was estimated for the primary, secondary, and tertiary sectors, as follows (see Table 5.4.2 and figures 5.4.3 and 5.4.4):

(a) Primary Employment

While the number of workers engaged in primary employment in rural areas will decrease in proportion to the decline of agricultural land and the decline in population, the share of primary employment in the total employment structure in rural areas will still be large, at about 80% by 2020 (see Table 5.4.2).

(b) Secondary Employment

Secondary employment will be concentrated in future industrial clusters, including industrial parks, light industrial areas, and quasi-industrial areas, along the regional industrial corridors (NH18, NH5, and RR4), and in existing and planned industrial parks, such as North Thang Long and Noi Bai North⁴.

With an assumption of 150 workers/ha for industrial parks, secondary employment is distributed in accordance with the proposed land-use plan. It was assumed that factories would also locate along major regional corridors, such as NH3, NH2, NH5, as well as NH18 in the UCA.

On the other hand, existing factories within RR3 are expected to gradually relocate and vacated lands will be converted to urban land. Industrial areas mixed with residential areas will be relocated alongside urban redevelopment. Factories will be located also along

⁴ While industrial parks with 662 ha have been approved in 2004 in Hanoi City, it is proposed that some of planned area be converted to residential and commercial area instead of industrial area. It includes Sai Dong A (Dai Tu) of Long Bien district and Nam Thang Long in Tu Liem district. The former one has faced in difficulty to develop due to lack of investment fund as described before. The latter one is proposed to convert into urban area in order to utilize the location potential with good land conditions.

major corridors even outside of quasi-industrial areas, as they exist at present.

As a result, daytime secondary employment will decrease by 10% in the urban core and urban fringe and expand in Soc Son, Dong Anh, and Gia Lam by two to six times, where focal industrial clusters are planned to be developed.

(c) Tertiary Employment

Tertiary sector (service sector) employment is estimated to increase to 1.21 million jobs, comprising those working in the urban centers and those providing services within each commune. The former is distributed in accordance with the future area designated as mixed commercial/business and residential area. On the other hand, the latter is distributed in proportion to future population. The distribution of employment in each area is described as follows:

- (a) **Urban Center in Urban Core:** The existing urban center will remain as the administrative and business/commercial center. Service sector employment will increase to 0.6 million jobs, in accordance with a decline in residential population and with the development of business and commercial areas at 350 employees/ha.
- (b) **New Urban Center in Urban Fringe:** In the urban fringe on the right bank of the Red River, a new urban center will be established west of Ho Tay, My Dinh - Me Tri and Phap Van mainly at the intersection of RR3. Particularly, the west Ho Tay area will be developed as a new political center. These new urban centers will accommodate 150 jobs/ha on average. On the left bank of the Red River, large urban centers will be built in Van Tri and Long Bien but with a relatively lower density of 50 - 100 jobs/ha. These urban centers and existing ones will attract 45,000 commuters from adjoining provinces, which will account for about 4% of total tertiary employment.⁵
- (c) **Other Commercial Areas:** Other commercial areas, including service towns providing services to industrial clusters and neighborhood centers to provide commercial services within districts, will also generate service sector employment. Community-level service employment was estimated based on the current figures. It will be 80 per 1,000 population on average. As a result, the urban core will absorb 0.20 million workers in 2003 - 2020, which will comprise 45% of future tertiary employment. The urban fringe will also accommodate additional 0.13 million workers, especially Tay Ho, Hoang Mai, and Long Bien, where new urban centers will be developed.

(2) Nighttime Employment Distribution

The total number of nighttime employment will increase in proportion to population increases in each zone. The distribution in each sector was assumed to follow the present nighttime distribution.

⁵ In 2005, the number of workers and students commuting to Hanoi from neighboring provinces was 98,202 and 33,492, respectively, based on the 2005 HAIDEP HIS. On the other hand, 60,764 workers and 14,832 students commuted from Hanoi to neighboring provinces. In other words, net commuters from neighboring provinces were 37,438 workers and 18,660 students, which accounted for about 2% of total trips in Hanoi.

Table 5.4.2 Employment Distribution at Workplace

District	Employment in 2003						Employment in 2020					
	Primary		Secondary		Tertiary		Primary		Secondary		Tertiary	
	'000	%	'000	%	'000	%	'000	%	'000	%	'000	%
Hanoi City	327	100	316	100	808	100	140	100	693	100	1,213	100
Urban Core	12	4	100	32	429	53	1	0	83	12	599	49
Ba Dinh	3	1	17	5	89	11	0	0	14	2	123	10
Hoan Kiem	2	1	18	6	130	16	0	0	15	2	186	15
Hai Ba Trung	4	1	35	11	105	13	0	0	29	4	141	12
Dong Da	3	1	31	10	106	13	0	0	25	4	149	12
Urban Fringe	27	8	101	32	198	24	7	5	109	16	332	27
Tay Ho	3	1	7	2	28	3	2	1	7	1	46	4
Thanh Xuan	1	0	31	10	46	6	0	0	29	4	60	5
Cau Giay	1	0	10	3	47	6	0	0	9	1	80	7
Hoang Mai	9	3	19	6	38	5	2	2	18	3	63	5
Long Bien	12	4	34	11	40	5	3	2	47	7	83	7
Suburban	71	22	37	12	76	9	19	13	95	14	124	10
Tu Liem	39	12	19	6	50	6	3	2	39	6	82	7
Thanh Tri	32	10	17	6	26	3	16	12	57	8	42	3
Rural	217	67	79	25	105	13	113	81	406	59	159	13
Soc Son	102	31	17	5	33	4	64	46	90	13	37	3
Dong Anh	61	19	36	11	39	5	23	17	176	25	72	6
Gia Lam	54	17	25	8	33	4	26	18	140	20	50	4

Source: HAIDEP Study Team

Figure 5.4.3 Rate Increases in Daytime Employment by Sector, 2020/2003

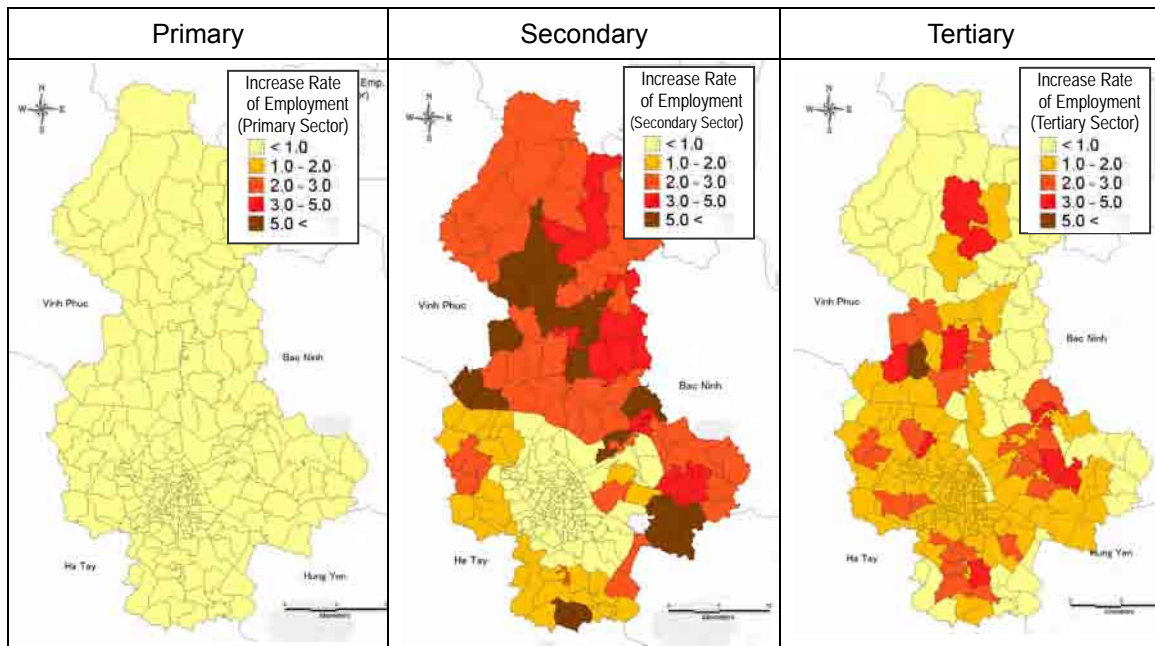
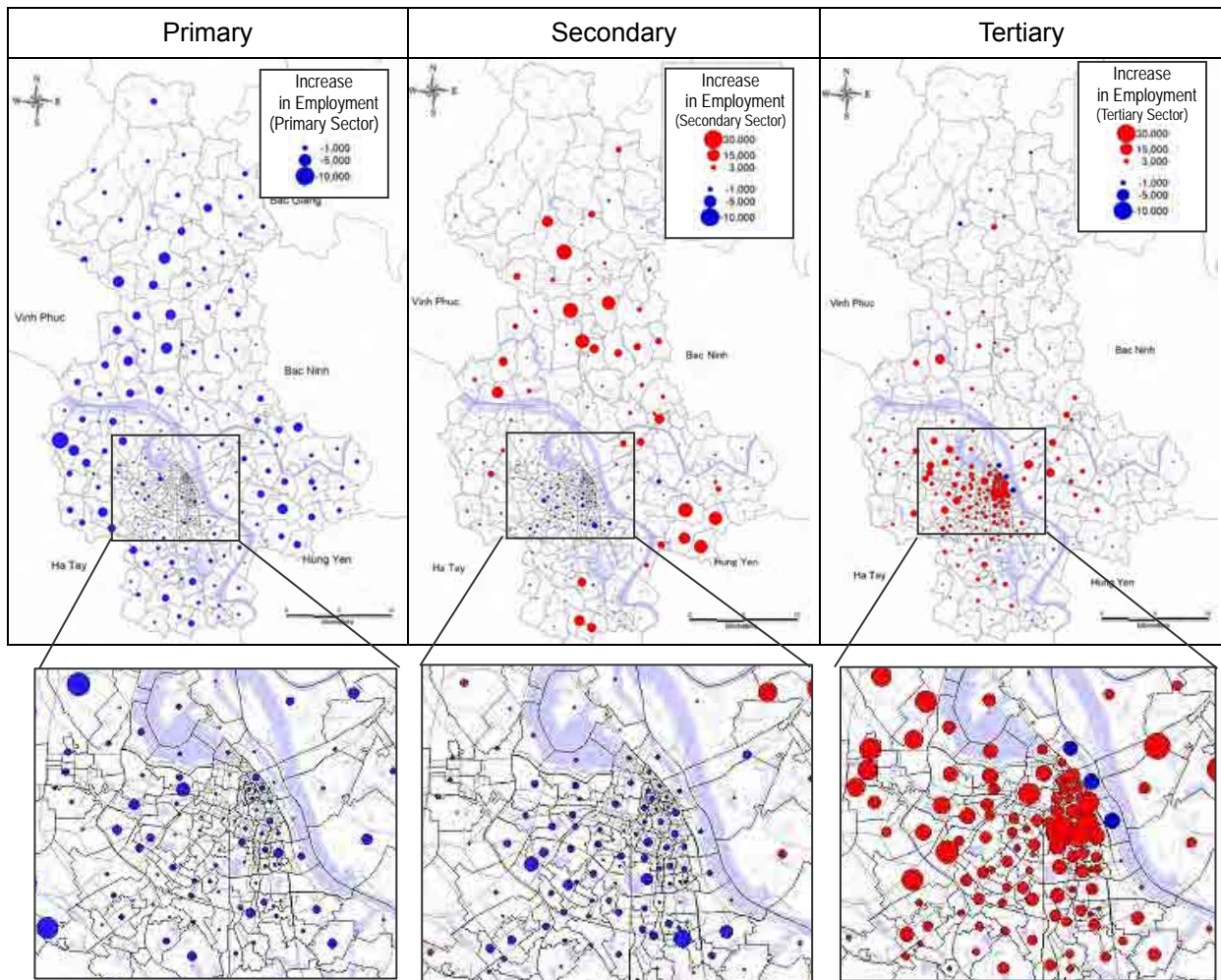


Figure 5.4.4 Increases in Daytime Employment by Sector, 2003 - 2020



Source: HAIDEP Study Team.

3) Distribution of Students

- (a) **Primary/Secondary Students:** The existing distribution of schools will remain, while new schools will be developed in accordance with population increases. Therefore, the number of primary and secondary student enrolment will increase in proportion to population growth.
- (b) **Tertiary Students:** Tertiary student enrolment is expected to increase. The number was estimated based on the future land use which indicates the establishment of universities as well as on future population distribution. New technical schools and vocational schools will also be set up in districts where existing ones are below the standard specified in the school network plan. A new university is planned to be located in Tu Liem District, as suggested by Hanoi City. A new research institute is proposed to be established in Dong Anh District to support high-technology industries in the Soc Son industrial cluster. As a result, Tu Liem will accommodate the highest increase of tertiary students, followed by Hai Ba Trun. The distribution of tertiary students by residence was estimated based on the current distribution and the future school enrolment.

Table 5.4.3 Student Enrolment by District and Education Level

Area	Primary			Secondary			Tertiary		
	2003	2020	Increase 03-20	2003	2020	Increase 03-20	2003	2020	Increase 03-20
Hanoi City	215	289	74	283	413	130	395	518	123
Urban Core	82	57	-24	91	68	-24	186	225	39
Ba Dinh	21	18	-4	24	21	-3	22	26	4
Hoan Kiem	15	9	-6	19	12	-7	11	14	3
Hai Ba Trung	20	14	-6	22	16	-6	86	104	18
Dong Da	25	16	-9	27	19	-8	67	81	14
Urban Fringe	50	73	23	66	105	39	127	161	35
Tay Ho	8	13	5	10	18	8	6	8	3
Thanh Xuan	11	10	-1	15	15	-1	42	50	8
Cau Giay	10	13	3	15	20	5	66	79	13
Hoang Mai	11	21	9	14	30	16	7	13	6
Long Bien	9	17	7	11	21	10	5	10	5
Suburban	28	59	31	37	77	40	35	66	30
Tu Liem	16	41	25	21	53	33	28	55	27
Thanh Tri	12	18	6	16	23	7	7	11	3
Rural	55	100	45	89	163	75	47	66	19
Soc Son	20	21	2	35	39	4	20	25	5
Dong Anh	23	59	36	34	89	55	15	23	9
Gia Lam	13	20	7	20	35	16	12	18	5

Source: HAIDEP Study Team.

Figure 5.4.5 Rate Increases in Student Population by Education Level, 2020/2003

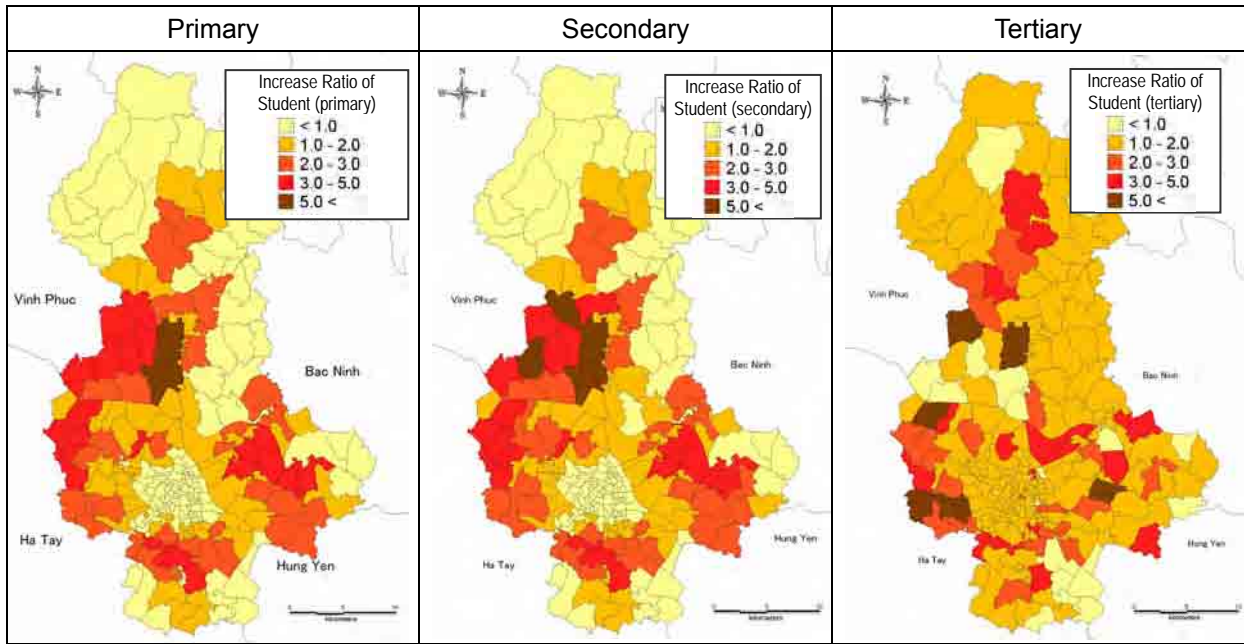
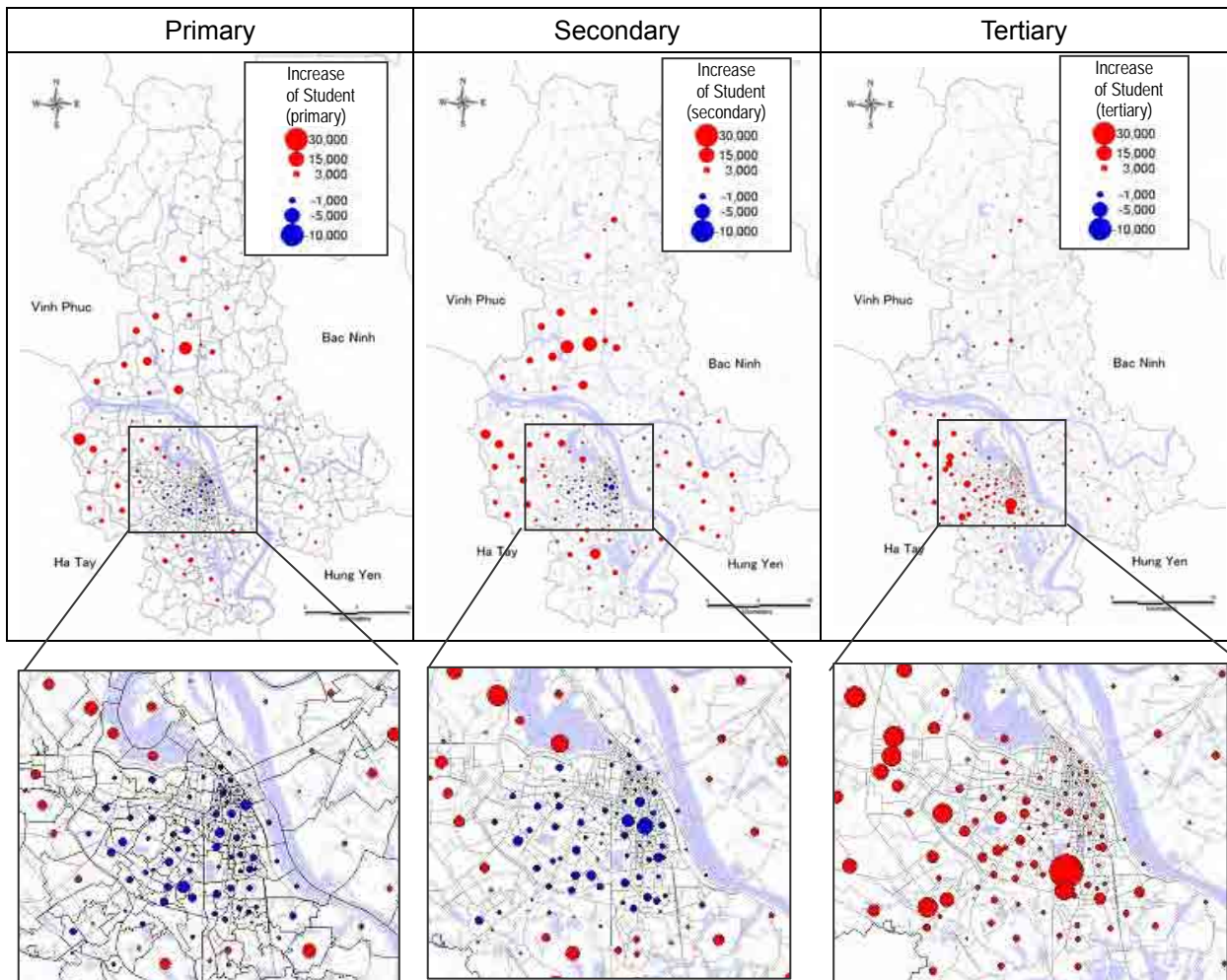


Figure 5.4.6 Increases in Student Population by Education Level, 2003 - 2020



Source: HAIDEP Study Team.

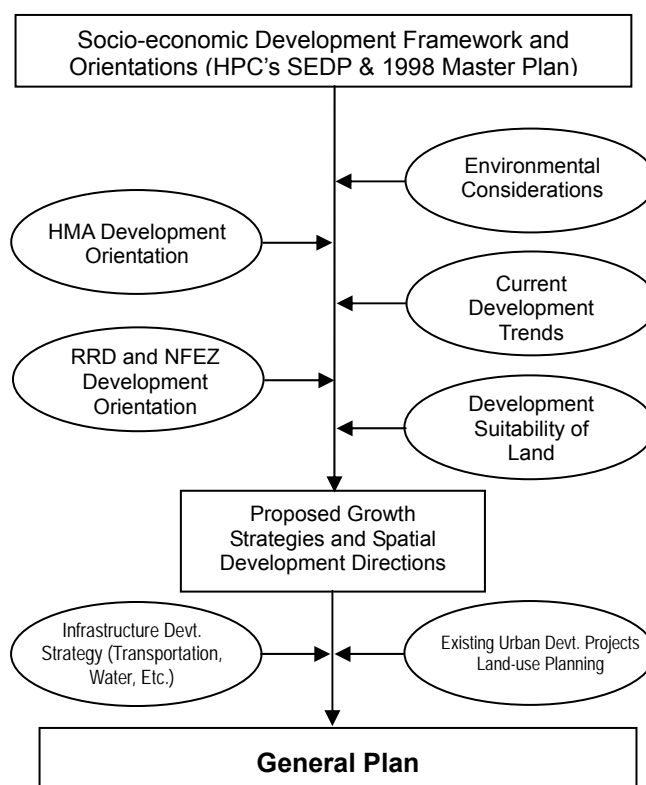
5.5 Key Planning Principles for Spatial Development and Growth Management

1) Approach

The primary objective of spatial planning is to provide the orientation for the overall use of the land and the growth of urban areas. The plan translates the socio-economic development orientation of an area, including its vision and development strategies, into how urban areas are to be developed spatially. Spatial structures determine the direction or pattern of the physical growth of an area, thereby providing the foundation for its sustainable development in terms of good living conditions, competitive economic development and employment, and well-preserved natural and cultural environment (see Figure 5.5.1).

Integration is the key concept in the HAIDEP Study as a whole and in spatial planning, in particular. An integrated plan makes it clear where coordinated development is required, something which has not been sufficiently practiced in urban and regional development in Vietnam, but is critical in guaranteeing synergy in investments and maximized benefits. An integrated approach can generate the parallel effects of robust economic growth and reduced poverty levels. Main areas where integration is needed are discussed in subsequent sections.

Figure 5.5.1 Spatial Development Planning Framework



Source: HAIDEP Study Team.

2) Compliance and Integration with Existing Plans

Main orientations stated in existing plans at the regional and city levels were considered in planning. These are:

(a) Integration of Socio-economic Development Orientation for Hanoi with

Spatial Development Plan: A spatial development plan aims to provide society with adequate infrastructure and conducive environment to carry out efficient and effective socio-economic activities as well as improve the quality of life. To achieve this, future population and policies on industry/employment structure as well as living conditions must be properly incorporated into the spatial development plan. Locations of major activity centers must be strategically planned to meet society's diverse needs, minimize travel distances and times, and mitigate traffic congestion. Economic development must be encouraged by providing competitive infrastructure and space for domestic and foreign investors with different scales including SMEs and micro enterprises. Living conditions must be enhanced through the proper allocation of residential lands provided with necessary infrastructure services.

(b) **Integration with the Orientations of Regional Plans:** Spatial development strategy at the regional level must be properly incorporated. The respective development orientations of the HMA plan currently being formulated by MOC's NIURP and the RRD and NFEZ plans were given particular consideration in HAIDEP. The orientations of these regional plans related to Hanoi's spatial development are the following:

- (i) Hanoi must continue to be the region's center for policy making, economy, education, science and technology, as well as information and services, while supporting the corresponding development of other provinces and urban areas.
- (ii) Transportation corridors to and from Hanoi are important to the development of the region. In particular, NH2, NH5, and NH8, linking Viet Tri - Vinh Phuc - Hanoi - Hai Duong - Hai Phong - Quang Ninh, are the most significant in pushing industrial growth and urban development. Regional ring roads must also be provided to further support interprovincial interaction and integration.
- (iii) The urban development of various cities and urban areas distributed along the region's corridors must be promoted to ensure balanced regional development and to curb excessive in-migration to Hanoi.
- (iv) Hanoi must seriously consider the integrated development of urban areas in adjoining provinces particularly because its own urban areas have expanded and continue to do so.

(c) **Integration with the Orientation of the 1998 Master Plan:** The 1998 Master Plan provides the basic urban development orientation for 2020, giving specific orientations on spatial development of the city. Its main points are summarized as follows:

- (i) While many parts of the city center suffer from various problems, such as cramped living spaces, traffic congestion, and environmental degradation mainly due to an extremely dense population, the 1998 Master Plan intends to gradually reduce the density in the urban core.
- (ii) Increase in the future population will be accommodated mainly in three areas, namely the urban fringe particularly along RR3, the northern parts of the Red River, and the satellite cities and urban chains in adjoining provinces.
- (iii) To support the above basic orientation, the 1998 Master Plan clearly indicates four ring roads and the strengthening of the road network including bridges connecting both sides of the Red River.

Land-use Criteria: Hanoi has set benchmarks, such as overall population density (100 m²/person), parks and green spaces (16 m²/person), transportation infrastructure (25% of land), among others, for selected areas.

3) International and Regional Integration

In order to ensure the future growth of Hanoi is sustainable and balanced with that of the region and that the region's provinces can benefit from the growth of Hanoi, spatial integration at international and interprovincial levels is important through strategic multimodal transportation networks and balanced development of regional urban centers.

Regional integration must be considered at two levels:

- (a) **Integration of Northern Vietnam:** To promote collective growth and share the benefits equitably, the region must be integrated more effectively particularly through efficient transportation networks and a cohesive urban structure.
- (b) **Integration at Metropolitan Level (30-50 km radius of Hanoi):** Integration at this level is also critical for the effective management of Hanoi and the sustainable growth of adjacent cities. Sharing of roles and functions and effective networking among the cities must be duly considered. For example, industrial development along the NH18 - NH2 - NH5 corridor can relieve the excessive burden on Hanoi, while benefiting Vinh Phuc, Bac Ninh, and Hung Yen provinces. Focused development on software and knowledge-based industries along the Hoa Lac corridor can generate similar effects for Hanoi and Ha Tay province. The tourism sector also stands to benefit from regional integration brought about by the progress made in the transportation sector.

4) Integration of Hanoi's Urban Areas and Those in Adjacent Provinces

The expansion of urban areas in the adjoining provinces is expected to progress further along major transportation corridors and toward all directions. Thus integration with urban areas immediately adjacent to Hanoi must also be achieved. Possible areas include Ha Dong, Hoai Duc, and Tram Troi in Ha Tay Province; Me Linh and Phuc Yen in Vinh Phuc Province; Tu Son in Bac Ninh Province; and Chi Trung in Hung Yen Province (see Figure 5.5.2).

5) Integration of Urban Areas in Hanoi City

The urban areas of Hanoi are expected to expand rapidly toward the outer areas. In the process of growth, development pressures will be seen both on existing urban areas as well as on new lands. In order for Hanoi City to function, efficient urban areas with different characteristics must be adequately integrated. Main areas are as follows:

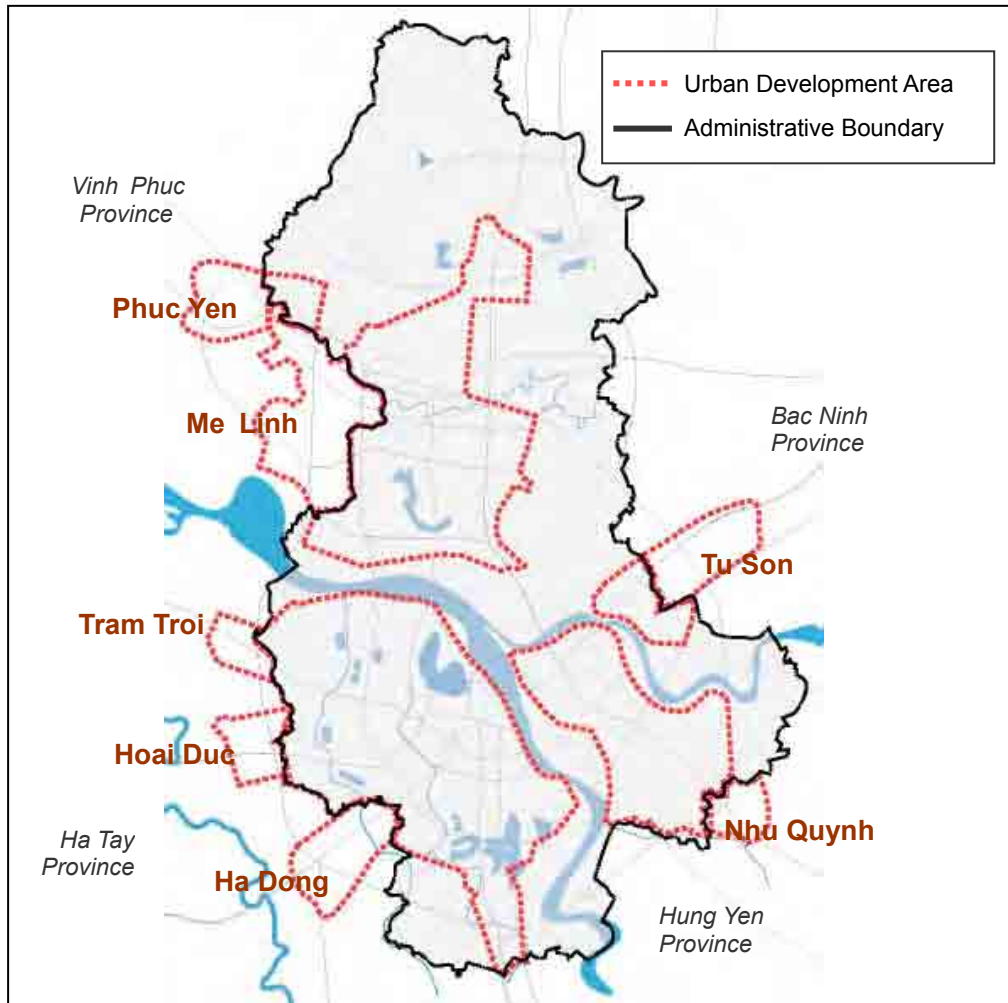
- (i) Effective integration of areas north of the Red River, which have large potentials and favorable land development conditions, with existing urban areas in the south of the Red River.
- (ii) Effective integration of the growing urban fringe with the existing city center.
- (iii) Effective integration of growing urban areas along major transportation corridors with existing urban centers.

6) Integration of Urban and Transportation Infrastructure Development

Infrastructure is a determinant in ensuring that the desired urban development is achieved. Where there is good infrastructure, development takes place and activities become dynamic. Infrastructure development itself should not be an objective but a means to promote the planned urban development and achieve an improved quality of life for the

people. To achieve these, infrastructure provision must be undertaken in a more integrated manner with urban development. Infrastructure must also be provided as a package covering the necessary subsectors such as roads, drainage and water supply systems, and other public facilities.

Figure 5.5.2 Integration of Hanoi's and Adjacent Urban Areas



While the city is growing and urban areas are expanding, one of the most important aspects in urban planning and development is to have a clear strategy and mechanism on integrated development of urban and transportation sectors. When areas are provided with good roads, development takes place and not vice versa. Therefore, when roadside developments are not properly integrated with road development, unplanned urban development and land uses cause serious traffic congestion due to ineffective use of road space. Economic returns on investments in infrastructures as well as land values also decrease.

This is also critical in the case of developing metro and urban rail. Unintegrated development reduces patronage for the system because of difficult access to the stations and other inconveniences. While the viability of urban rail is strongly dependent on how many passengers are willing to use it, unintegrated development substantially reduces the economic and financial feasibility of planned infrastructures.

7) Urban-Rural Linkages

To achieve sustainable economic and social development, the government has to integrate the rural and urban areas as a matter of policy. Stimulating balanced development between urban and rural constituencies means strengthening national, regional, and local planning bodies. Main markets for local, national, and international trade are located in urban centers. They benefit from rural demand for their outputs. However, a sustainable development can only be reached in both areas if they are holistically part of the same integrated system. The link between urban and rural areas depends on the infrastructure connecting them, which means improving the road, rail, and other critical communications networks between them.

By improving the infrastructure network, rural production increases. This gives people in rural areas better access to markets, information, and jobs. The better the links between cities and their hinterlands, the easier it is for rural people to get jobs in the cities and thus ease the problem of rural unemployment. It is further important that cities access rural labor. Human flows refer to people moving between rural and urban settlements, commuting regularly, going for occasional visits to urban-based services and administrative centers, or migrating temporarily or permanently.

For those engaged in farming, direct access to markets is essential. Markets are usually located in the urban centers both for local consumers and for forwarding to regional, national, and international markets. Better access to markets can increase farming incomes and encourage shifts to higher-value crops or livestock. In the opposite direction, flows of manufactured and imported goods go from urban to rural settlements. Synergy between agricultural production and urban-based enterprises is often key to the development of more vibrant local economies and to less unequal and more pro-poor regional economic growth.

Flows of information between rural and urban areas include information on market, merchandise, and employment opportunities for potential migrants. Financial flows include, primarily, remittances from migrants, from migrants returning to their rural homes, and investments and credit from urban-based institutions.

Population growth and distribution patterns affect the availability of good agricultural land and can contribute to rural residents moving out of farming. With the expansion of urban centers, land uses change from agricultural to residential and leads to shifts in the livelihoods of different groups—with the poorest often losing out. In Hanoi, many farmers have lost their land to Hanoi's urban development agency's residential or commercial developments and they rarely get compensation for the real value of their land. Local governments in rural districts around Hanoi lose their control over lands under their jurisdiction in favor of the city government whenever these are needed for urban development purposes.

Many areas remain rural in Hanoi City and much more in adjoining provinces. In order to support development and growth of rural areas, the urban plan should not exclude the rural areas but must integrate urban and rural areas and strengthen the linkages between the two by incorporating such measures as the promotion of urban agriculture, eco-tourism, village tourism, and the development of support infrastructure.

8) Clear Orientation for Conservation and Development

(1) Emphasis on Environment

Incorporating environment in urban planning and development policy for Hanoi is very much important because the environment in Hanoi has both positive and negative elements which bring about significant impacts in many ways. Large water spaces, abundant greeneries, and a rich cultural heritage are the city's valuable resources that can enhance the landscape, maintain ecological balance, contribute to the reduction in global warming, promote recreation and tourism, and preserve traditional values, among others.

Meanwhile, natural hazards, such as floods, inundations, land subsidence, riverbank erosion, and earthquakes, affect the city negatively. In order to manage the city's future growth in a sustainable manner, environmental conservation and improvement/development were considered in HAIDEP by proposing environmental zones.

(2) Consideration of Development Suitability of Lands

In order to provide a scientific basis for urban land-use planning and development, urban land uses were evaluated. Results of evaluation can be used not only for planning but also for site selection for engineering works. Proper selection of suitable lands for development will achieve maximum socio-economic benefits at minimum environmental costs.

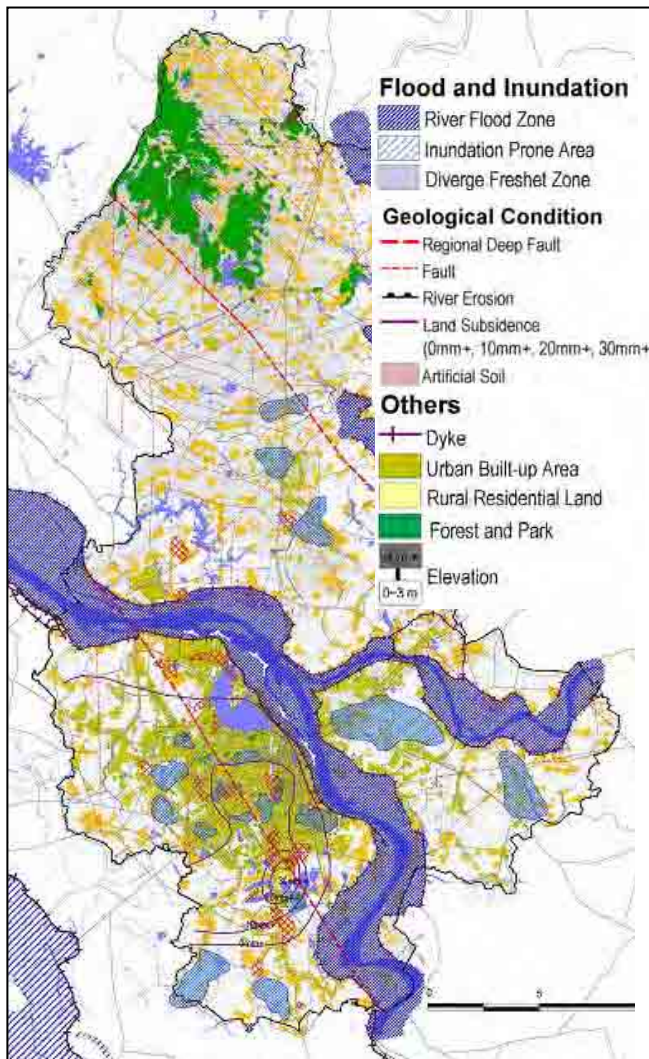
The evaluation was based on 13 factors under the categories of topography, geodynamics, engineering, geology, groundwater, geological hazards, and man-induced hazards (see Table 5.5.1 and Figure 5.5.3). As there are many factors that affect land suitability, a multi-criteria analysis was adopted. The evaluation results take the form of a suitability map which was developed using score combinations of the factors. As the evaluation required spatial information, geographical information system (GIS) was utilized.

The suitability of land for development has five categories: A (highly favorable), B (favorable), C (moderate), D (unfavorable), E (highly unfavorable). Figure 5.5.4 illustrates that the land highly favorable for development extends to the north of the Red River. On the other hand, unfavorable lands are located north of Hanoi (mountainous area), areas along major rivers, and the current highly urbanized area to the river's south. These results were carefully considered in proposing future land development.

Table 5.5.1 Factors Considered in Land Evaluation

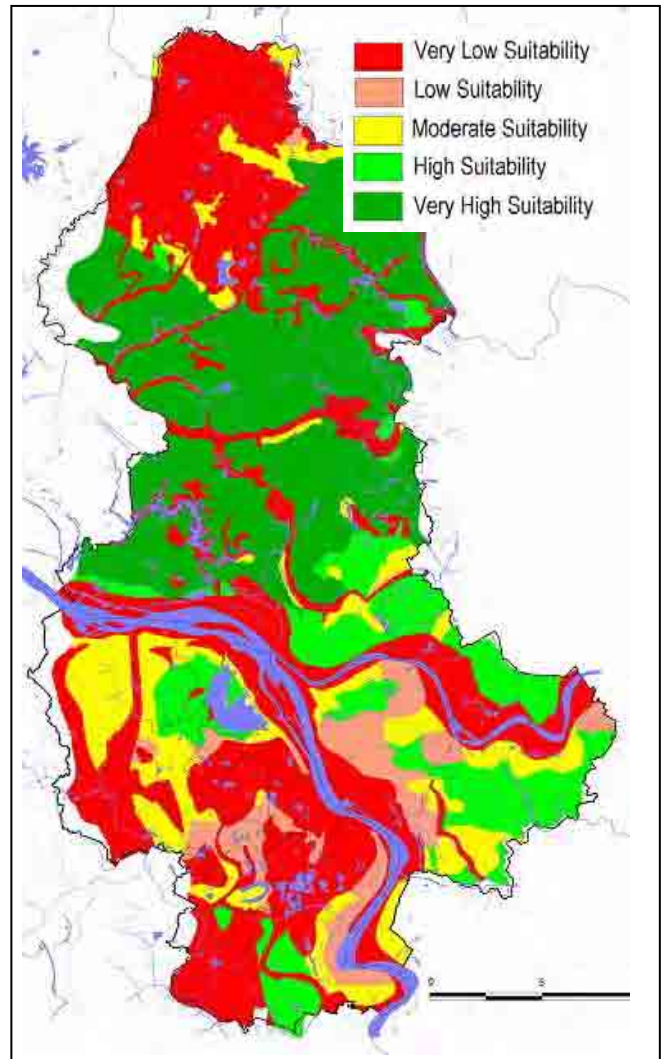
Category	Factor
Topography	1. Slope
	2. Elevation
Geodynamics	3. Uplifting/ subsidence
	4. Density of fault of distance to fault
Engineering Geology	5. Surfical geology
Groundwater	6. Depth to groundwater level
	7. Corrosive potential of groundwater
	8. Distance to intensive groundwater extraction area
Geological Hazards	9. Earthquake
	10. Distance to river bank erosion
	11. Distance to weak river dyke segment
Man-induced Hazards	12. Land subsidence
	13. Inundation

Figure 5.5.3 Hazard Map of Hanoi



Source: HAIDEP Study Team.

Figure 5.5.4 Development Suitability of Lands



Source: HAIDEP Study Team.

(3) Environmental Mapping

While the negative aspects in Hanoi’s environment are discussed in the previous section, the variety of environmental resources distributed all over the city must be properly identified, conserved, and optimized to enrich the city and its people. These resources include:

- (i) Water space including the Red River and its tributaries, as well as lakes and ponds of different sizes (see figures 5.5.5 and 5.5.6).
- (ii) Greeneries including forests and parks (see Figure 5.5.7).
- (iii) Agricultural lands (see Figure 5.5.8).

These resources must be integrated as a network and zoned together with hazard areas as well as cultural heritage sites to form the region’s development foundation. Although the resulting network may not be fully considered in decision making due to considerations given to economic conditions and existing urban structures, this environmental mapping can provide useful information to guide the future urban development of Hanoi City.

Figure 5.5.5 Water System

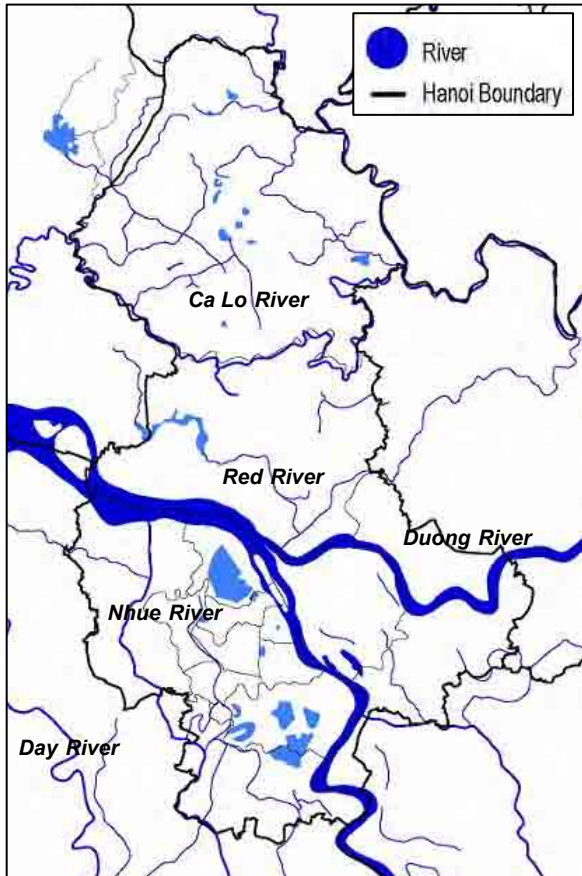
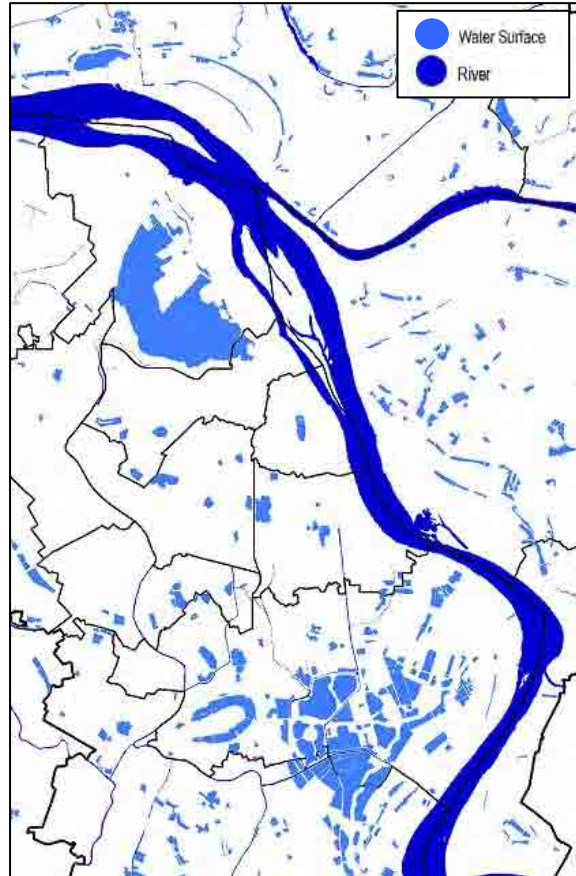
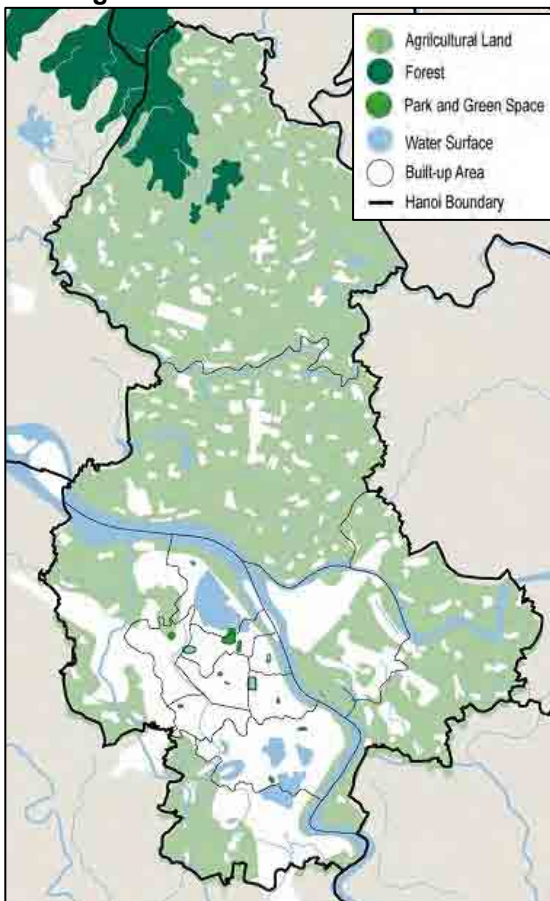


Figure 5.5.6 Major Lakes in Urban Areas



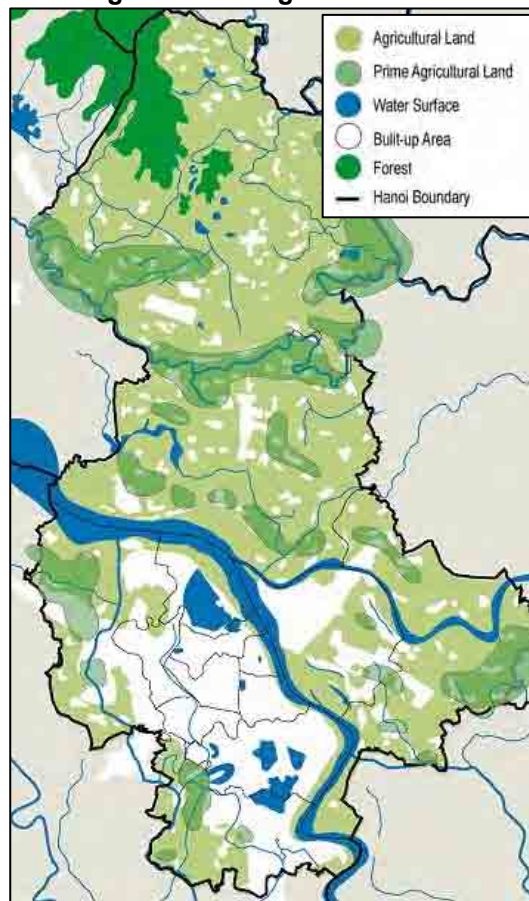
Note: Developed by the HAIDEP Study Team based on available data.

Figure 5.5.7 Green Resources



Source: HAIDEP Study Team.

Figure 5.5.8 Agricultural Lands



Source: HAIDEP Study Team.

9) Consideration of Current Development Trends

Development trends must be considered because urban development is difficult to control in large urban areas where the demand for economic growth and market forces are strong. This was particularly the case of Hanoi during the last decade when urban population and the economy grew rapidly. From 1999 to 2003, the population of Hanoi City increased at an annual growth rate of 3%. This translates to 332,000 people, of which 212,000 have migrated from other provinces.

Population increases are observed to have taken place mostly in the existing built-up area which is already dense and which the master plan for Hanoi City aims to decongest. Current expansion of the urban area is mainly toward the west to Tu Liem, where large-scale urban development activities are taking place, and south to Hoang Mai. New urban development activities in the north of the Red River as forecasted in the 1998 Master Plan have not occurred. Because of this, differences in planned and actual populations can be observed in many locations (see Table 5.5.2). Such differences were considered in formulating the future development framework and in modifying the existing master plan for Hanoi City.

There are two reasons for the discrepancies mentioned above, that is: (i) the current institutional framework and measures have been ineffective in controlling the development, and (ii) the mechanisms to promote development in planned areas, such as sufficient supply of lands for housing, adequate infrastructure to support planned developments, have been inadequate. Thus, future increases in population and the transfer of population from the city center to areas with suitable development conditions must be properly guided.

Table 5.5.2 Comparison of 1998 Master Plan Population Forecast for 2005 and Population by District in 2005

	Population			Pop. Change		Difference (Actual and MP)
	1999	2005		1999-2005		
	Actual	MP Forecast ¹⁾	Actual	MP Forecast		
Hanoi City	2,680	3,150	2,900	480	220	250
Urban Core	960	1,100	880	130	-80	210
Ba Dinh	200	230	180	30	-20	50
Hoan Kiem	170	180	150	10	-10	30
Hai Ba Trung	270	310	280	40	10	30
Dong Da	330	370	270	40	-60	100
Urban Fringe	670	890	830	210	160	50
Tay Ho	90	110	110	20	20	0
Thanh Xuan	150	200	160	50	10	40
Cau Giay	120	170	170	50	50	0
Hoang Mai	160	230	180	70	20	50
Long Bien	150	180	220	30	70	-40
Suburban	340	420	390	80	50	20
Tu Liem	190	260	220	70	30	40
Thanh Tri	150	160	170	10	20	-10
Rural	700	750	790	60	90	-40
Soc Son	250	260	280	20	40	-20
Dong Anh	260	280	270	20	10	10
Gia Lam	190	210	240	20	50	-30

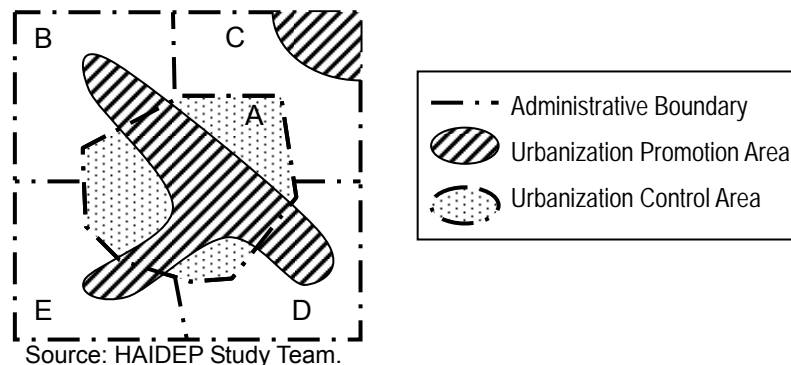
1) A rural population of 1,150,000 is distributed in proportion to the distribution of current rural population.

10) Introduction of the Concept of Urban Growth Boundaries

Both the planning and the management of large urban areas are difficult. Resources are limited, and requirements are large and different by area. In many cities, a system of urban growth boundaries (UGBs) is practiced to stop the sprawl of urban areas, protect conservation areas, such as green spaces, and prime agricultural lands, and promote the development of efficient urban areas with adequate infrastructure. With this, limited public investments can be prioritized in urban areas within UGBs. This system is conceptually seen in Figure 5.5.9, and is briefly explained as follows:

- (a) **City Planning Boundary:** This delineates the boundary within which planning must be made and includes rural areas. In the case of Hanoi, it may be the same as the administrative boundary, although the inclusion of the integrated urban areas of adjoining provinces is preferable.
- (b) **Urban Growth Boundary:** This boundary delineates the areas which will become urbanized within 10 - 15 years. The boundary must be reviewed, say, every five years to match development needs. In the case of Hanoi, this is similar to the currently followed urban area boundary. Areas within the UGB are defined as the urbanization development promotion areas (UDAs) where infrastructure provision will be prioritized. A conducive institutional framework to promote the planned development is provided including the conversion of land uses, the adjustment of various rights, and the facilitation of development procedures, among others.
- (c) **Urban Development Control Area:** Areas outside the urban growth boundary are defined as urban development control areas (UCAs). This does not preclude any development activities in the area, only that they are more controlled and guided more strictly to comply with the urban development master plan. In the case of Hanoi, public investments will be mainly allotted for environmental and infrastructure improvements in rural areas and villages within urban development control areas.

Figure 5.5.9 Concept of Urban Growth Boundary



11) Classification of Urban Areas into Urban Clusters

It is also proposed that the entire urban areas be classified into urban clusters each of which will have its own distinguishing characteristics. This proposal is based on the following reasons:

- **To Facilitate Effective Planning and Management:** It is difficult to manage large urban areas at the central level. Planning and management functions must be adequately delegated to lower level government. While districts fulfill the administrative

function, it is also necessary to classify urban areas into specific functions and allow their respective district governments to coordinate with each other.

- **To Enhance Urban Function and Image:** While Hanoi as a whole must enhance its image, it is also important to develop an image for each area. So far, Hanoi has two unique urban areas—the Ancient Quarter and the French Quarter—but it is also important to develop the remaining areas into similarly distinctive areas by capitalizing on their strong characteristics.

Clustering urban and rural areas was made by taking account of the following aspects (see Table 5.5.3 and Figure 5.5.10):

- (i) Adjoining areas that have a common image or characteristics distinct from others.
- (ii) Physical characteristics of existing urban areas.
- (iii) Administrative boundaries of the city.

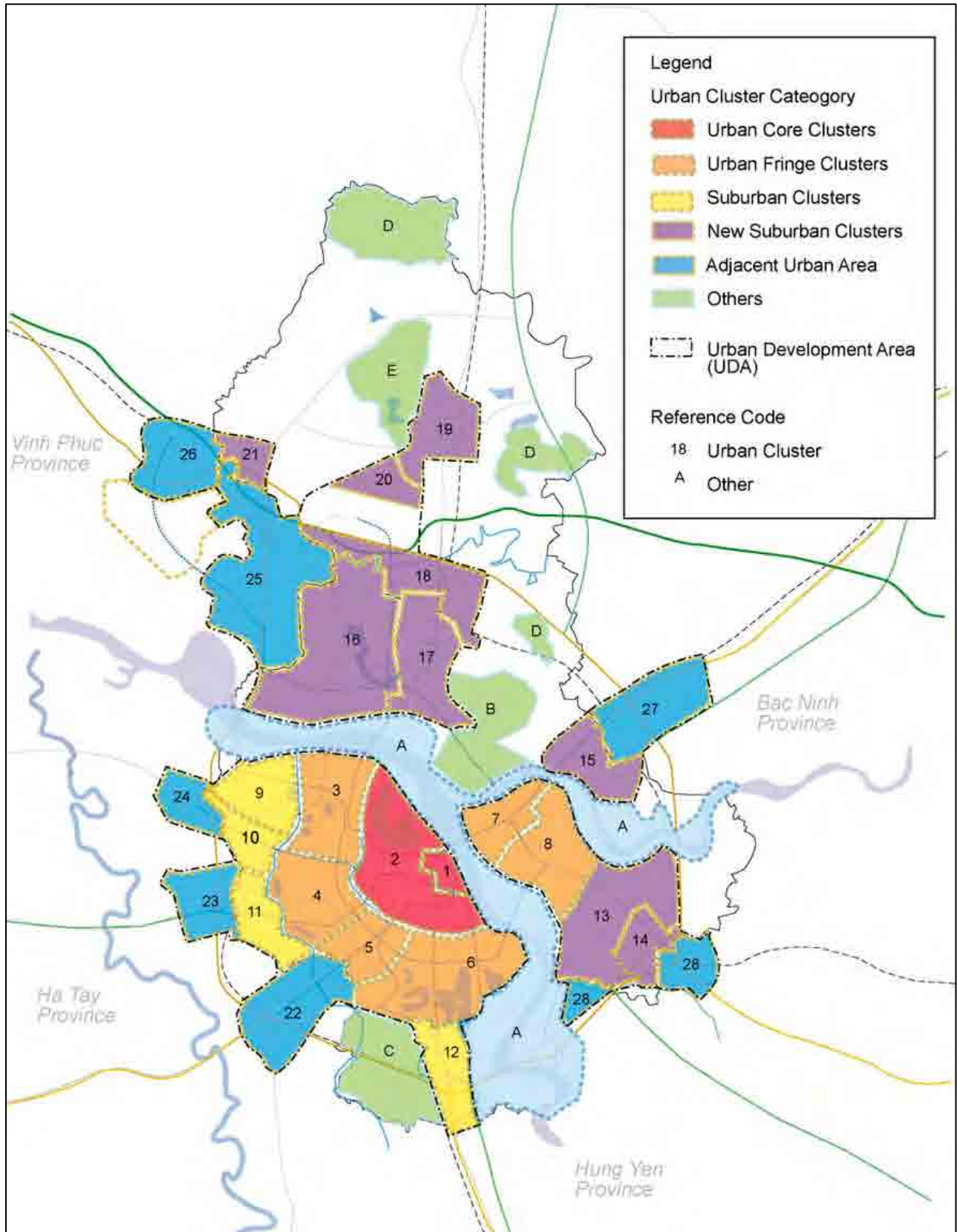
The proposed clusters must be developed under the overall shared vision for the city. Moreover, these clusters do not aim to cover merely the urban areas; those that need special attention and those located outside urban development promotion areas were also included to be able to follow a strategic development. Although the clustering does not comply with district boundaries, close coordination among the district offices under the guidance of the city authority is expected.

Table 5.5.3 Identified Urban Clusters for Strategic Action (Tentative)

	Urban Cluster	District ¹⁾	Size (ha)	2020		Main Land Use										Appealing Point/Use (tentative)
				Urban (UDA) Pop. (000)	Average Density (pop/ha)	Environment				Economic						
						Natural	Manmade	Cultural	Landscape	Residential	Business	Commercial	Industrial	Institution	Tourism	
Urban Core	1. Hanoi Historical Center	HK, BD	500	120	223	C	A	A	A	A	A	A	C	C	A	AQ, HK Lake, FO, TL Citadel with traditional culture and life
	2. Hanoi Core Town	TH, BD, DD, HBT	3,300	738	226	C	A	B	B	A	A	A	C	A	B	Restructuring old urban area by modern infrastructure
Urban Fringe	3. New Government Center	TH, CG, TL	2,700	305	112	C	A	C	A	C	A	A	C	A	C	New capital center of Hanoi City
	4. Hanoi New Urban West	CG, TX	2,200	250	113	C	A	C	A	B	B	B	C	B	B	New CBD with competitive urban function
	5. Thanh Xuan Central	TX	700	146	204	C	A	C	B	B	B	B	C	B	C	Restructuring old urban area by relocating factories
	6. Hanoi South	HM, TT	3,600	523	145	B	B	C	B	A	C	C	C	C	B	
	7. Long Bien Gate Town	LB	1,100	123	116	C	A	C	B	B	B	B	B	C	C	Eastern gateway town
	8. Long Bien New Urban Center	LB, GL	2,600	220	83	C	A	C	A	B	B	B	C	C	C	Subcenter of Hanoi City
	9. North Tu Liem	TL	1,900	227	118	B	B	C	B	A	C	C	C	C	C	New residential area development
Suburban	10. NH32 Urban Corridor	TL, Hoai Duc (Ha Tay)	500	41	86	B	A	C	B	B	B	B	C	C	C	Northwestern gateway town
	11. Hoa Lac Urban Corridor	TL, Hoai Duc (Ha Tay)	1,000	70	68	B	B	B	B	B	C	C	C	B	C	Western gateway town and higher education center (SME support)
	12. Thanh Tri Industrial Corridor	TT	1,400	118	87	C	B	C	C	C	C	C	A	C	C	Southern gateway town
New Suburban	13. Gia Lam Trau Quy Town	GL	2,800	143	51	C	B	B	B	B	B	B	C	A	A	Higher education center & Ba Trang ceramic village
	14. Gia Lam Industrial Park	GL	1,000	40	39	C	A	C	C	C	C	C	A	C	C	Export processing zone
	15. Yen Vien NH1 Corridor Town	GL	1,500	125	84	C	A	C	B	B	B	B	B	C	C	Northeastern gateway town
	16. New Van Tri Lake Town	DA	4,800	328	68	B	A	C	A	A	B	B	C	C	B	Subcenter of Hanoi City
	17. Dong Anh Town	DA	2,700	251	93	C	A	C	B	B	B	C	A	B	C	Service town for urban industries
	18. NH2/18 Industrial Corridor	DA	1,900	94	48	C	A	C	C	C	C	C	A	C	C	Export processing zone
	19. Soc Son Green Town	SS	1,500	51	34	A	B	B	A	A	C	C	C	C	A	Satellite urban service town focusing on recreation
	20. Soc Son Airfront Industrial Park	SS	700	42	57	C	A	C	C	C	C	C	A	C	C	Export processing zone
	21. Tan Dan Industrial Town	SS	900	6	7	C	B	C	C	B	C	C	A	C	C	Service town for industrial corridor
Adjacent Area to Hanoi	22. Ha Dong New Urban Center	Hoai Duc (Ha Tay)	1,700	220	130	C	A	C	B	A	A	A	C	A	C	Ha Tay capital and city center
	23. Hoai Duc Town Center	Hoai Duc (Ha Tay)	1,200	50	42	B	A	C	B	B	B	B	C	C	C	Suburban center with desirable urban services for local communities
	24. Tram Troi (NH32) Town Center	Hoai Duc (Ha Tay)	700	30	43	B	A	C	B	B	B	B	C	C	C	
	25. Me Linh Industrial New Town	Me Linh (Vinh Phuc)	3,900	120	31	B	A	C	B	B	B	B	A	C	C	New residential area development with industrial park
	26. Phuc Yen Industrial Town Center	Phuc Yen (Vinh Phuc)	4,300	120	28	C	A	C	B	B	B	B	A	C	C	Satellite service town and export processing zone
	27. Tu Son Town Center	Tu Song (Bac Ninh)	1,000	30	30	B	A	A	B	A	A	A	B	B	A	Heritage village and service town
	28. Chi Trung Industrial Town	Nhu Quynh (Hung Yen)	1,300	30	23	C	A	C	C	A	A	A	A	C	C	Export processing zone and service town
Other	A. Red River and Duong River	HK, HM, TT, TL, LB, GL, DA	--	--	--	A	C	A	A	C	C	C	C	C	A	Natural-cultural backbone and economic corridor
	B. Co Loa Historical Center	GL	--	--	--	A	C	A	A	C	C	C	C	C	A	Hanoi ancient citadel with green tourism
	C. Thanh Tri Rural Area	TT	--	--	--	B	C	B	B	C	C	C	C	C	B	Village & green tourism
	D. Handicraft Villages	DA, SC	--	--	--	B	C	A	A	B	C	C	C	C	A	Village tourism
	E. Soc Tourism Forest	SC	--	--	--	A	C	A	A	C	C	C	C	C	A	Weekend recreation area

Notes: A = strong, B = moderate, C = average, HK=Hoan Kiem, BD=Ba Dinh, DD=Dong Da, HBT=Hai Ba Trung, TH=Tay Ho, CG=Cau Giay, TX=Tanh Xua, HM=Hoang Mai, TL=Tu Liem, LB=Long Bien, GL=Gia Lam, DA=Dong Anh, SC=Soc Song

Figure 5.5.10 Location of Identified Urban Clusters



Source: HAIDEP Study Team.

12) Urban and Activity Centers

The urban structure is also shaped by a combination of major activity centers, such as commercial centers, industrial estates, government center, and other special centers such as university complexes, medical centers, high-tech parks, sports centers, etc., of which modern and competitive commercial centers and industrial estates/zones are the most important for promoting growth and generating employment. Main urban and activity centers proposed are shown in Table 5.5.4.

Table 5.5.4 Facilities and Possible Location of Urban and Activity Centers

Urban and Activity Center	Major Function	Recommended Facility	Possible Location
1. Commercial and Business	• International Trade and Communication	<ul style="list-style-type: none"> • World trade center • Convention and business center • Satellite telecommunications center • Airport service center 	<ul style="list-style-type: none"> • Urban core • Van Tri urban center
	• Financial Center	<ul style="list-style-type: none"> • Stock exchange • Offshore market center • Financial support center & foundations for industries • Insurance and support 	<ul style="list-style-type: none"> • Urban core of Hanoi • Long Bien urban center
	• Trade Center	<ul style="list-style-type: none"> • Wholesale market (fresh food) • Regional wholesale market (commodities) 	<ul style="list-style-type: none"> • Long Bien urban center • Van Tri urban center
	• New Business Center	<ul style="list-style-type: none"> • Software development center • Development center for venture and service industries • Local product promotion center • Product design center 	<ul style="list-style-type: none"> • Urban core • Long Bien urban center • Van Tri urban center
	• Retail Commercial	<ul style="list-style-type: none"> • Hypermarket, mega mall • Department store • Hardware and home center, etc. • Agriculture materials center 	<ul style="list-style-type: none"> • Long Bien urban center • Van Tri urban center
	• Administration & Political Center	<ul style="list-style-type: none"> • Information and knowledge center (ITC) • e-Government center • Center for political science (think-tank) 	<ul style="list-style-type: none"> • New government center
2. Industry and Logistics	• Industrial Park	<ul style="list-style-type: none"> • Export-oriented industrial estate • Research & development park • Software development 	<ul style="list-style-type: none"> • Long Bien/Gia Lam • Dong Anh/Soc Son
	• Light industry	<ul style="list-style-type: none"> • Supporting and consulting center • SME industrial village • Handicraft manufacture center 	<ul style="list-style-type: none"> • Urban fringe area • Suburban area
	• Logistics Service	<ul style="list-style-type: none"> • Post office logistics center • Regional logistics terminal • Urban service logistics center 	<ul style="list-style-type: none"> • Ring Road 4 + NH2, NH5, NH6, NH18
3. Education and Culture	• Higher Education	<ul style="list-style-type: none"> • Training capacity development • Political & administrative studies • Thematic college institutes and studies 	<ul style="list-style-type: none"> • Urban fringe area • Suburban area
	• Research and Development	<ul style="list-style-type: none"> • Research & institutions for light industry • Advanced technology training center 	<ul style="list-style-type: none"> • Urban fringe area • Suburban area
	• Museum and Art Gallery	<ul style="list-style-type: none"> • Digital museum • Performing arts center • New national theater 	<ul style="list-style-type: none"> • Urban core
4. Health and Medical Care	• Advanced Medical /Health Care	<ul style="list-style-type: none"> • Advanced medical center • Regional healthcare center 	<ul style="list-style-type: none"> • Long Bien urban center • Van Tri urban center
	• Regional Health Care	<ul style="list-style-type: none"> • Infectious disease control center • Regional public health institute 	<ul style="list-style-type: none"> • Long Bien urban center • Van Tri urban center
5. Tourism and Recreation	• Tourist Information and Hospitality	<ul style="list-style-type: none"> • Hanoi tourist information center • Regional tourism information center 	<ul style="list-style-type: none"> • Urban core
	• Tourism Trade and Promotion	<ul style="list-style-type: none"> • Hanoi tourism promotion center • MICE promotion center 	<ul style="list-style-type: none"> • Urban core
	• Sports and Recreation	<ul style="list-style-type: none"> • Cycling and trekking network • Water sports center (canoe, yacht, etc.) • River cruise center 	<ul style="list-style-type: none"> • Urban core • Long Bien urban center • Van Tri urban center

5.6 Proposed Urban Growth Management Orientation

1) Goals and Objectives

Hanoi has been growing and is expected to develop further. Hanoi must accommodate effectively a future (2020) population of 5.1 million including 3.9 million of urban population, 0.6 million rural population, and 0.6 million of urban population in integrated urban areas of adjoining provinces. Hanoi shall also be prepared for further population growth beyond 2020. Hanoi must accommodate effectively a constant inflow of people for different socio-economic purposes, such as education, employment, etc., and at the same time shall respond to changing compositions of population.

Under the above situation, the main objectives of urban growth management must be placed on the following:

- (i) Ensure that Hanoi becomes more competitive, livable, and environmentally sustainable by preparing for the challenges of managing a very rapid urbanization and the huge impacts associated with economic growth, motorization, and globalization.
- (ii) Implement a public-transportation-based urban growth strategy to promote the development of, compact, efficient, and effective urban areas.
- (iii) Provide a high quality of life and living conditions for all, particularly the low-income group and the poor.

2) Proposed Strategies, Actions, and Strategic Projects

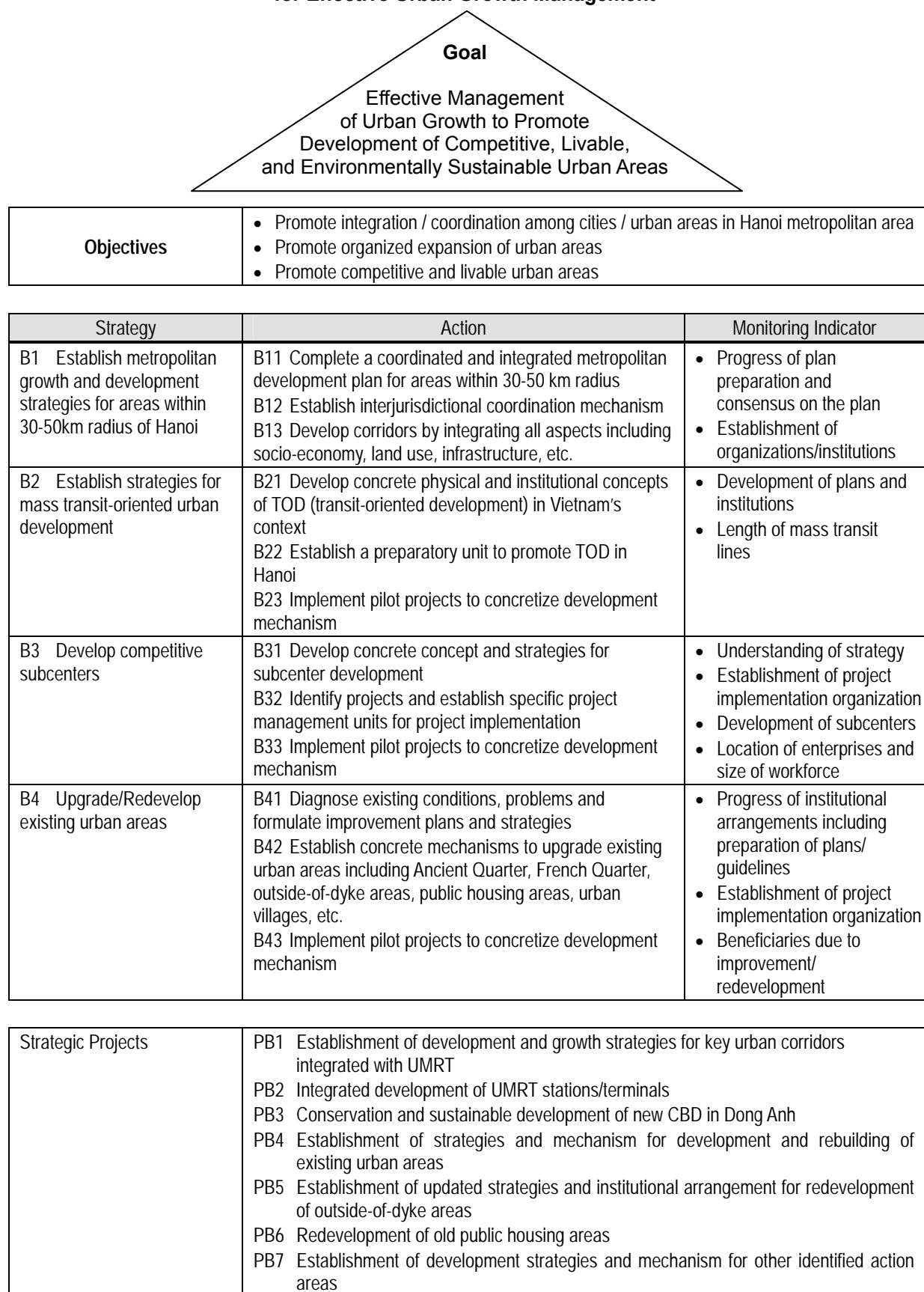
In order to effectively manage urban growth, four strategies are set for which more concrete actions and strategic projects are proposed (see Figure 5.6.1). The basic strategies are as follows:

- (i) Establishment of metropolitan growth and development strategies for areas within a 30-50km radius of Hanoi
- (ii) Establishment of strategies for mass transit-oriented urban development
- (iii) Development of competitive subcenters
- (iv) Upgrading or redevelopment of existing urban areas

Strategic projects for priority action are the following:

- (i) Establishment of development and growth strategies for key urban corridors integrated with UMRT
- (ii) Integrated development of UMRT stations/terminals
- (iii) Conservation and sustainable development of new CBD in Dong Anh
- (iv) Establishment of strategies and mechanism for development and rebuilding of existing urban areas
- (v) Establishment of updated strategies and institutional arrangement for redevelopment of outside-of-dyke areas
- (vi) Redevelopment of old public housing areas
- (vii) Establishment of development strategies and mechanism for other identified action areas

Figure 5.6.1 Proposed Strategies, Actions, and Strategic Projects for Effective Urban Growth Management



Source: HAIDEP Study Team.

6 GENERAL PLAN

6.1 Roles and Functions of the General Plan

1) General

An urban master plan has two basic objectives. One is to show a clear vision and orientation which the society can share and through which they can understand where the city is heading for. Two is to incorporate a workable mechanism to implement the plan. Urban development is not the sole responsibility of the public sector; rather it is a joint effort of both public and private sectors including individual citizens. For this, the master plan should provide clear strategies and actions supported by the necessary institutional framework in order for all stakeholders to be able to actively participate in, and equitably benefit from, development.

Cities in the world have been struggling and exerting tremendous effort to effectively implement their respective urban development plans and policies. During the periods of rapid growth of urbanization in Japan, the central government formulated a wide range of institutional and development methods to support local authorities in carrying out their mandate. Specific institutional framework was formulated for specific development objectives. For example, the types of project include, among others, urban renewal/redevelopment, new town development, land acquisition for infrastructure and urban development, development of industrial estates/logistics centers, townscape/environmental improvement, parking development, underground space development, public housing provision, development of parks and green space, etc. For these projects, various regulations and institutions have been formulated. Some measures which may be applicable in Hanoi include land readjustment system, development permission system, agreements on green area conservation, local planning system, transferable development rights, scenery preservation guidance, residential land construction control system, car parks installation, and outdoor advertisement control.

2) Review of Construction Law and Scope of Current Master Plan

Statutory urban planning follows a two-tier system of plans, i.e. the General Plan and the Detailed Plan. The General Plan is prepared city-wide, while the Detailed Plan is done at the local level. The Construction Law stipulates the contents of urban construction general planning to include: (i) analysis and evaluation of current conditions, (ii) potentials for urban development, (iii) orientation for spatial development, (iv) orientation for urban technical infrastructure development, (v) prioritization of projects for development and resources for implementation, (vi) urban design, and (vii) environmental impact evaluation. The output of the general planning includes drawings with adequate scales and reports.

Both the General Plan and the Detailed Plan under the Construction Law seem to be of similar content except for the scale of maps which is much larger for the latter. The purpose of having a two-tier statutory urban plan should also be clarified.

The development in Hanoi City is currently guided by the 1998 Master Plan. The plan is essentially a land-use and infrastructure plan for urban construction purposes and does not encapsulate the notion of a land-use zoning system that could be utilized to guide land and building use in the city. The master plan, however, has technical controls for the years 2005 and 2020 by planning zone to cover the following aspects:

- (i) Area of the planning zones.
- (ii) Residential area (ha) within the planning zones.
- (iii) Average building-to-land ratio.
- (iv) Average number of floors in the zones.
- (v) Target population in the zones.

3) Proposed Role-sharing of General Plan and Detailed Plan

Following other countries that have a two-tier city planning system, such as the UK which had the Structure and Local Plan system, the General Plan should be a strategic development plan which is vision-led and establishes broad targets for growth, e.g. population, employment, urban structure, infrastructure network, transportation system, and environmental improvement, etc., while development controls pertaining to detailed land-use zoning, FAR, site coverage, height control, and other detailed planning controls are best applied at the Detailed Plan stage.¹ Notwithstanding this, some of the strategic planning controls that could be applied at the General Plan level are as follows:

- (i) Target population 2010 and 2020 by planning zones.
- (ii) Land-use zone guide and a guide on building use control.
- (iii) Urban growth boundary.
- (iv) Designation of key urban facilities.
- (v) Designation of action areas for which detailed plans could be prepared.

In this context, it is preliminarily proposed that the urban planning system be provided with a clearer function among the city, provincial, and project site levels (see Figure 6.1.1).

4) Proposed General Plan

(1) Functions of the General Plan

Based on the discussion in previous sections, the proposed General Plan in HAIDEP has the following two main objectives:

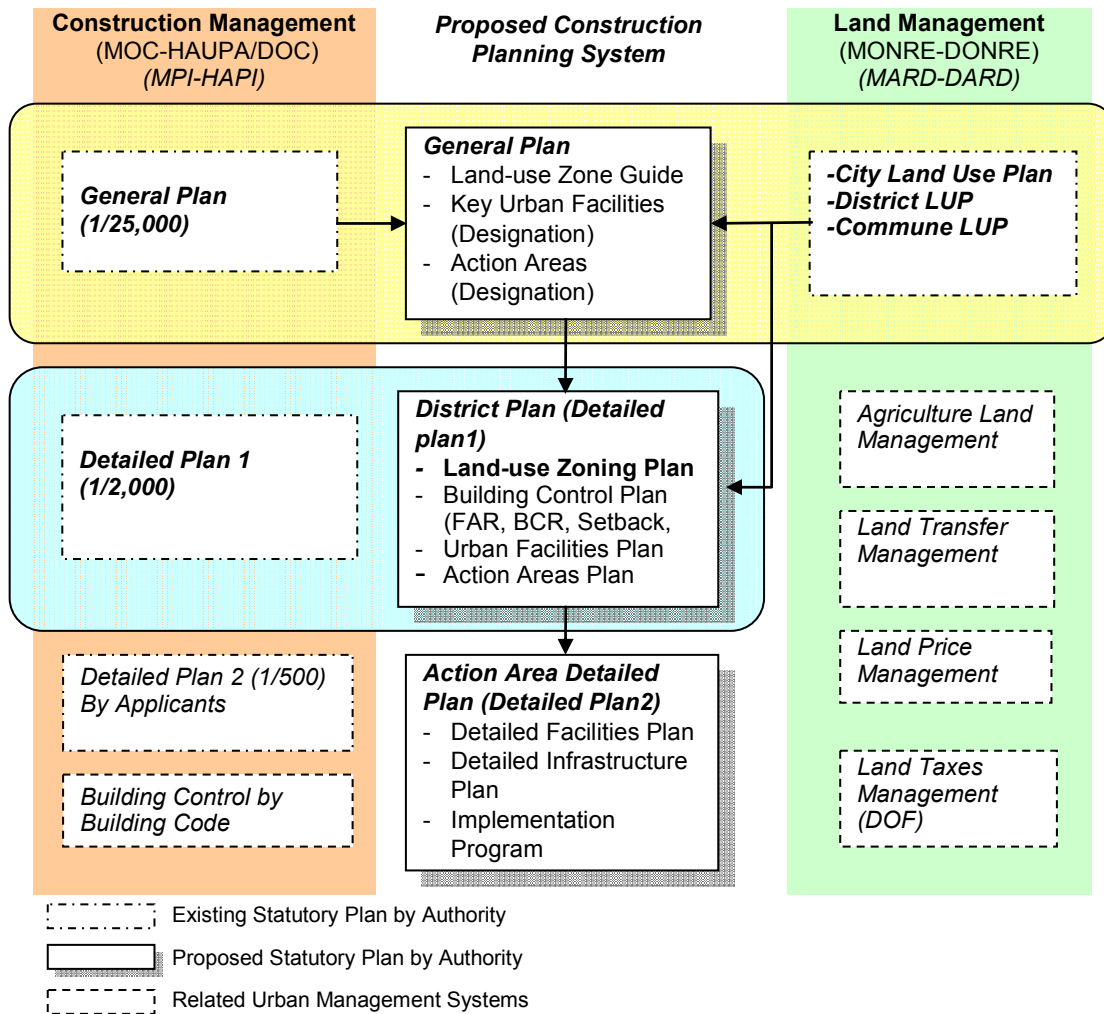
- To show the vision and the orientation for development and conservation, the basic urban structure including the transportation network, key facilities, urban centers, land use, parks and green space.
- To show the institutional framework for the management and control of urban development through the designation of planning areas, land-use zoning, designation of key urban facilities, and other spatial control measures.

(2) Spatial Development in the Proposed General Plan

The proposed General Plan (see Figure 6.1.2) was prepared based on a comprehensive study of socio-economic factors, natural and physical conditions, urban growth management strategies, coordinated planning among subsectors covering urban transportation, water, living conditions, etc., as well as based on the development orientations of existing master plans. While the proposed General Plan is an update of the

¹ Of the five main aspects covered in the 1998 Master Plan, the aspects of average building to land ratio and average number of floors can be better formulated at the detailed planning stage (probably at the District Plan level). Meanwhile, the aspects of area of planning zone, residential area within the urban planning zone, and population size in the zone can be tackled in the general planning stage.

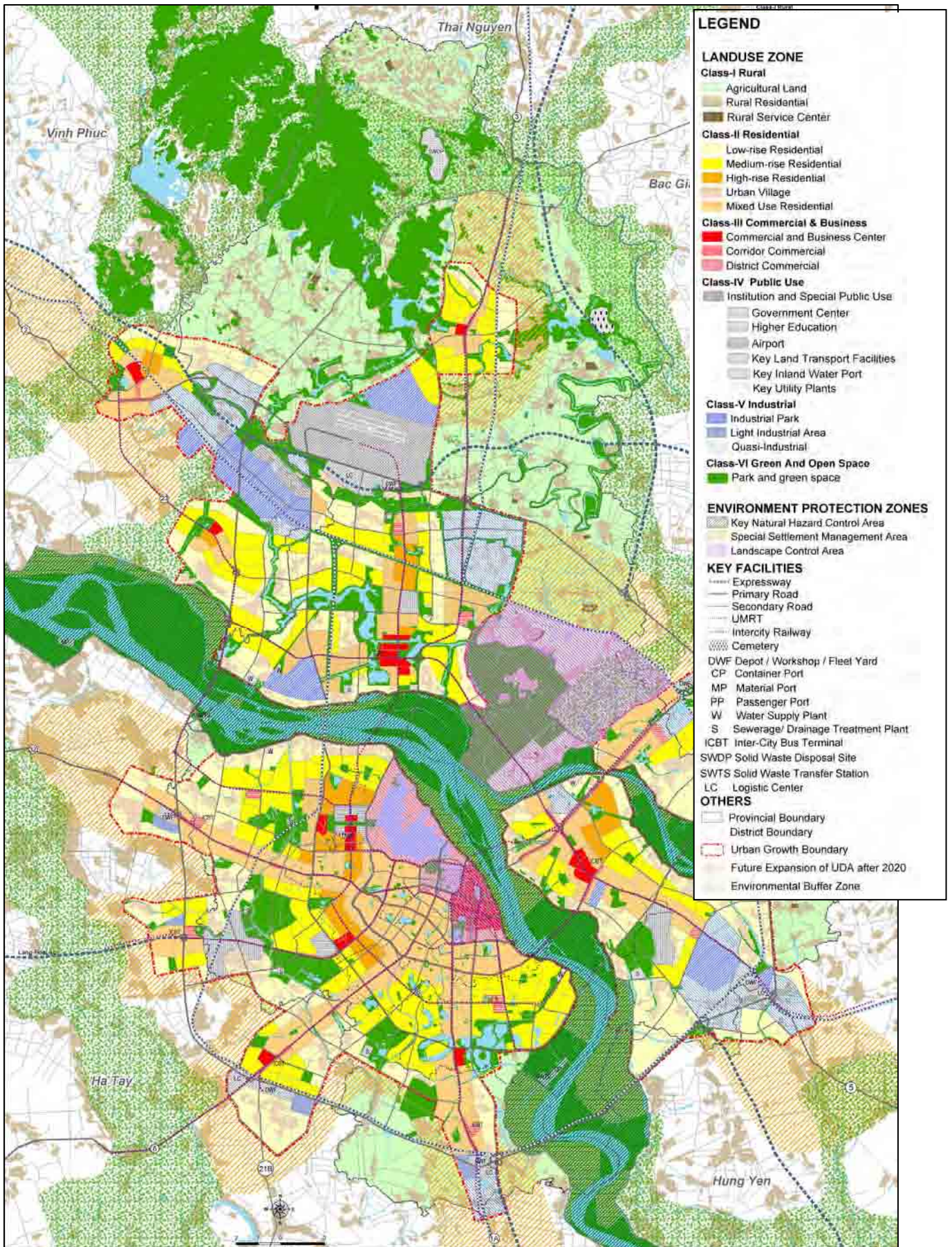
Figure 6.1.1 Proposal on Function of General Plan and Detailed Plan



of the existing master plan, i.e. the 1998 Master Plan, some of the main features that are highlighted in the proposed General Plan are as follows:

- Clear Indication of Environment Zone comprising Water Bodies, Green Network, and Cultural Zones:** The environmental network of Hanoi is further integrated with a proposed regional green belt.
- Clear Orientation for Mass Transit-based Urban Development and Land-use Management:** This is a concept introduced in the proposed General Plan which recommends the interconnection of all major urban centers through an urban mass rapid transit (UMRT) network and designates higher-density development along the UMRT corridors, especially at and around the potential stations/terminal areas.
- Clear Interface and Strategic Integration of Regional and Urban Transportation and Socio-economic Activities:** Ring Road 4 and the ring rail route will function as strategic corridors for effective interface of urban and regional activities. In principle, interprovincial/regional transportation (ie expressways and rail) will terminate at the ring corridor and interface with the urban transportation network. Interprovincial traffic will pass through Hanoi but will not cut through the urban area. Instead, it will be diverted to the ring corridor, which will also interconnect the urban centers in adjoining provinces.

Figure 6.1.2 Proposed Draft General Plan 2020



Source: HAIDEP Study Team.

(3) Institutional Development in the Proposed General Plan

The proposed General Plan indicates a broad institutional framework which provides a legal basis to promote the specific orientations expressed in the plan. These orientations are explained in more detail in the following sections.

5) Proposed Land-use Zoning System

(1) Contemporary Zoning Practices

Land-use zoning practices vary by country. Basically, there appears to be two forms, to wit:

- **Exclusionary Land-use Zoning:** Excludes all land and building uses that do not conform to the zones.
- **Inclusive Land-use Zoning:** Applied with use class tables.

Under the exclusionary land-use zoning, the land use of each parcel of land is determined and only building uses that conform to the land-use zoning are permitted in the zone. This practice followed the master plan style of planning which was applied to new towns where the planners play a prescriptive role in determining the appropriate land use for each parcel of land. The main criticisms of this approach are:

- (i) It was very rigid and not flexible to change.
- (ii) It does not respond well to changes in market trends and the needs of property development.
- (iii) It does not accommodate multiple uses of land and buildings.

The current trend in land-use zoning is to adopt a more inclusive form that allows for various types of complementary land-use and building use in a particular zone subject to certain limiting conditions. This is widely practiced in Japan, USA, and Australia. To a great extent the land-use zoning for an area is determined by the general urban / land-use character of the area. Particular land-use and building use activities that need to be controlled further are determined in the use class tables.

(2) Format of Use Class Tables

The use class table is widely used in many countries, including Japan, Malaysia, USA and Australia, in conjunction with the land-use zoning system as a means of further regulating land and building use. The use class tables are not stand alone statutory instruments like the Use Class Orders (United Kingdom) but have to relate to the physical plan, i.e. land-use zoning map. Examples of various formats include the paragraph format used in New South Wales, Australia and the city of Irvine, California, which among others list land-use zones, permitted uses, conditional uses, and prohibited uses. In addition, there may be other technical planning controls on land development in the zone (see Table 6.1.1).

The format used in Japan is mainly used to restrict certain building uses according to land-use zones (see Table 6.1.2). The list of building uses generally includes those that need to be controlled by planning and not all business activities which are usually regulated by the business licensing system of the country. Large public facilities, such as stadiums, that are built by the government are secured as designated public facilities and not through the zoning system. The building types cover the following:

- (i) Dwelling units.
- (ii) Retail shops (200, 2000m²).
- (iii) Businesses, offices.
- (iv) Tourism.
- (v) Public facilities.
- (vi) Factories.
- (vii) Special uses such as transportation facilities, wholesale market, waste disposal plant, crematoria, etc.

(3) Proposed Land-use Zones Guide for the General Plan

A comparison was made on the various land-use zoning practices in other countries. The types of land-use zone vary among countries. In new cities which are built on green field sites such as Putrajaya, Malaysia, and Irvine, California, the range of land-use zones tends to be much more extensive than that of developed cities as there is greater latitude to prescribe a particular land-use and exercise development control on it. The purpose of land-use zoning is to exercise development control on the type of building uses that could be permitted in the zone. The proposed zoning system should have the following characteristics:

- (i) Sufficiently flexible to allow various types of complementary urban uses to be permitted in a particular zone.
- (ii) Restrict inconsistent uses that have injurious impacts on health, environment, traffic and amenity of a particular zone
- (iii) Reflect the urban characteristics of the area

Special land-use zones are often created if there is a need to apply a special treatment for the area. For example in Kuala Lumpur, the Malay Reserve is treated as a land-use zone, while in Putrajaya, government use is prescribed as a land-use zone. In Hanoi, urban village area seems to be clearly identified in the official plans as an urban land-use character that needs to be protected.

Land-use zoning as a development control concept has not been practiced in Hanoi. It is proposed that the HAIDEP master plan will introduce a notion of land-use zoning guide which, if accepted by the authorities, could be adopted in the urban planning system for the city. The enforcement of the land-use zoning, however, should be done in the District Plan on a more detail level with a cadastral base map. The proposed land-use zones for the HAIDEP master plan is shown in Table 6.1.3. This is still preliminary and will have to be reviewed by the government counterpart. In addition to the land-use zones, there can be demarcation of specific areas on the master plan for which specific building use controls could apply. Examples of such areas are:

- (i) Historic and heritage areas.
- (ii) Landscape zones.
- (iii) Height control zones to protect vistas and access to sunlight.

Table 6.1.1 Sample of a Use Class Table (paragraph format)

Land-use Zone: Residential B (medium density) zone	
1. Objectives of Zone:	
(a)	To provide for the housing needs of the population
(b)	To promote a variety of housing types and other land uses compatible with a medium density residential environment
(c)	To provide for development that is within the environmental capacity of a medium density residential environment.
2. Permitted Uses:	Dwelling houses, special care homes, and works which in the opinion of the city are minor and will not cause significant environmental impact.
3. Conditional Uses (Permitted only with Planning Permission):	
(a)	Child care centers, community facilities, housing for the aged and disabled persons, multi unit housing, recreation facilities, recreation uses, utility installations
(b)	Subdivision
(c)	Any other uses that is not provided in (2) and (4)
4. Prohibited Uses:	Bulky goods sales rooms, industries, intensive agriculture, mines.
5. Description on Map:	Colored brown with red edging and lettered B
6. Other Planning Controls (optional):	
(a)	Minimum plot size xxxx
(b)	Maximum Site Coverage (Plinth ratio) xxxx
(c)	Maximum Building Height xxxx
(d)	Minimum Site Landscaping xxxx
(e)	Building Setbacks xxxx

Source: Adapted from the Zoning Tables (Environment Planning and Assessment Act 1979 NSW, Australia and Zoning Ordinance City of Irvine California.










Table 6.1.2 Restrictions on Building Use According to Use Zones

Use restrictions on buildings in zoning		Category I low-rise exclusive residential zone	Category II low-rise exclusive residential zone	Category I mid-to-high rise exclusive residential zone	Category II mid-to-high rise exclusive residential zone	Category I residential zone	Category II residential zone	Quasi-residential zone	Neighborhood commercial zone	Commercial zone	Quasi-industrial zone	Industrial zone	Exclusive industrial zone	Remarks	
Building that can be constructed	Building that cannot be constructed														
Houses, apartments, dormitories, boarding houses															
Houses used for business in which the non-residential area is under 50m ² and less than half of the total building floor area															
Stores, etc.	Stores, etc. with a floor area of 150m ² or less		①	②	③								④	① Only those establishments that provide services such as stores selling daily necessities, coffee shops, hairdressers and construction material stores. To have a maximum of 2 floors. ② as well as only those establishments providing services such as stores selling goods, cafes and restaurants, property insurance agents, bank branches and real estate agents. To have a maximum of 2 floors. ③ To have a maximum of 2 floors. ④ Excluding stores selling goods, cafes and restaurants	
	Stores, etc. with a floor area over 150m ² but not over 500m ²			②	③								④		
	Stores, etc. with a floor area over 500m ² but not over 1,500m ²				③										④
	Stores, etc. with a floor area over 1,500m ² but not over 3,000m ²														④
	Stores, etc. with a floor area of more than 3,000m ²														④
Offices, etc.	Offices, etc. with a floor area of 150m ² or less													▲ To have a maximum of two floors	
	Offices, etc. with a floor area over 150m ² but not over 500m ²				▲										
	Offices, etc. with a floor area over 500m ² but not over 1,500m ²				▲										
	Offices, etc. with a floor area over 1,500m ² but not over 3,000m ²														
	Offices, etc. with a floor area of more than 3,000m ²														
Hotels and Inns															
Entertainment establishments	Bowling alleys, skating rinks, swimming pools, golf practice areas, batting practice areas...					▲								▲ 3,000m ² maximum	
	Karaoke boxes, etc.													▲ 3,000m ² maximum	
	Mahjong parlors, shooting ranges, horse race and vehicle race betting ticket booths, etc.							★	★					★	
	Theaters, cinemas, arts centers, exhibition centers								▲	▲				▲ Audience seating area to be a maximum of 200m ²	
	Cabaret and dance halls, etc and bath houses with private rooms...										▲			▲ Excluding private room bathing facilities	
Public facilities, hospitals and schools etc.	Kindergartens, elementary schools, junior high schools, senior high schools														
	Universities, technical colleges, vocational schools, etc.														
	Libraries, etc.														
	Police boxes and post offices below a certain size, ...														
	Shrines, temples, churches etc.														
	Hospitals														
	Public bathing facilities, clinics, day care centers, etc.														
	Facilities for the aged, the physically handicapped ...														
	Welfare facilities for the aged, children, etc.	▲	▲											▲ 600m ² maximum	
	Driver training centers					▲								▲ 3,000m ² maximum	
	Individual garages (excluding attached garages)					▲								▲ Floor area 300m ² maximum with 2 floors or less	
	Garages attached to buildings [For ①, ② and ③, garage area shall be, at most, half the total building area and the restrictions mentioned in the Remarks column will also apply]	①	①	②	②	③	③							① Floor to be 600m ² maximum and one floor only ② Floor to be 3,000m ² maximum and two floor or less ③ Floor to be two floor or less	
	Separate restriction exist for garages on estates														
	Storage warehouses														
	Livestock sheds (over 15m ²)						▲								▲ Floor to be 3,000m ² maximum
Bakeries, rice merchants, tofu, cake makers, clothes shops, tatami mat makers, building materials stores, bicycle shops, etc., where the work area is 50m ² or less			▲	▲	▲									Restriction on motors ▲ To be two floor or less	
Factories with extremely little degree of risk or threat of adverse effects on the environment							①	①	①	②	②			Restriction on motors and type of work	
Factories with little degree of risk or threat of adverse effects on the environment										②	②			Area of work area to be ① 50 m ² maximum ② 150 m ² maximum	
Factories with some degree of risk or threat of adverse effects on the environment															
Factories with quite a large degree of risk or threat of adverse effects on the environment															
Cars repair shops						①	①	②	③	③				Area of work area to be ① 50 m ² maximum ② 150 m ² maximum ③ 50 m ² maximum Also restriction on motors	
Facilities storing and treating hazardous items such as explosives, oil and gas etc.	Very small quantities				①	②								① Floor area to be 1,500m ² maximum with two floors or less ② Floor area to be 3,000m ² maximum	
	Small quantities														
	Fairly large quantities														
	Large quantities														
Wholesale markets, crematoria, slaughterhouses, waste disposal plants, refuse incineration plants, etc.		A city planning decision is required if within the city planning district													

(Note) This table is the outline restrictions taken from the revised Building Standard Law not included all restrictions

★ Restriction on building use according to prefecture regulation

Table 6.1.3 Proposal on Land-use Zone Guide for General Plan

	Land-use Zone	Color Code	
	Subzone		
Class I: Rural	1-1 Agricultural Land	Light green	
	1-2 Rural Residential	Warm beige	
	1-3 Rural Service Center	Dark Brown	
Class II: Residential	2-1 Low Rise Residential	Cream	
	2-2 Medium Rise Residential	Yellow.	
	2-3 High Rise Residential	Dark ochre	
	2-4 Urban Village	Cool beige	
	2-5 Mixed use Residential	Light ochre	
Class III: Commercial and Business	3-1 Commercial and Business Center	Carmine red	
	3-2 Corridor Commercial	Brick.	
	3-3 District Commercial	Brick hatch.	
Class IV: Public Use	4-1 Institution and Special Public Use	Grey	
Class V: Industrial	5-1 Industrial Park	Blue violet hatch	
	5-2 Light Industrial Area	Blue grey	
	5-3 Quasi-industrial Area	Blue grey.	
Class VI: Green and Open Space	6-1 Green Space in Urbanization Control Area	Green	

Source: HAIDEP Study Team.

(4) Comparison of Proposed Land-use Zones with Existing Categories

A comparison between the proposed land-use classification and the existing land-use categories for urban areas applied in the Building Code of Vietnam (1997) and the Land Law (2003) is shown in Table 6.1.4. The existing land use categories in the two Laws are also different. The Building Code mainly categories land uses into two, Civil Area and Non-civil Area, which are further classified into eleven categories. On the other hand, land use categories in the Land Law are rather for resource management planning, which include more detailed 18 categories with two major classes of Agricultural Land Group and Non-agricultural Land Group.

The comparison identifies applicability of the proposed land use zone class. Some of the proposed land use does not correspond to existing land use, where existing land uses are combined or separated for more effective land use control. For example, entertainment use of green parks defined by the Building Code is incompatible for residential areas in terms of good living environment and should be separated from green parks. On the other hand, land categories of agricultural use in the Land Law are too detailed for urban planning and should be combined. Further examination is required in order to formulate adequate land-use zones integrated with existing land-use categories.

Table 6.1.4 Comparison between Proposed Land-use Zones and Existing Land-use Categories

Proposed Land-use Zone	Existing Land Use Category		Land Law 2003																						
	Building Code 1997						Agricultural Land Group												Non-Agricultural Group						
	Civil Area			Non-Civil Area			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Class I: Rural	Subzone	1 Residential	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		1-1 Agriculture Land	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1-2 Rural Residential	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Class II: Residential	Subzone	1-3 Rural Service Center	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2-1 Low Rise Residential	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2-2 Medium Rise Residential	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2-3 High Rise Residential	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2-4 Urban Village	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2-5 Mixed use Residential	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Class III: Commercial and Business	Subzone	3-1 Commercial and Business Center	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		3-2 Corridor Commercial	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		3-3 District Commercial	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Class IV: Public Use	Subzone	4-1 Institution and Special Public Use	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		5-1 Industrial Park	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Class V: Industrial	Subzone	5-2 Light Industrial Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		5-3 Quasi-industrial Area	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Class VI: Green and Open Space	Subzone	6-1 Park and Green Space	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Source: Land-use categories of urban land use are based on the Building Code of Vietnam 1997, and another set of land-use categories is based on the Land Law (Article 13: Land Categorization, 2003).
 Note: ● = Applicable, ○ = Conditional, - = Not Applicable, N = Difficult to define due to combined or unknown uses.

6.2 Spatial Control Framework

1) Land-use Zoning Guide

A new zoning system that stipulates certain urban activities in each land-use zone is proposed to enhance rational and effective economic activities supported by a sufficient urban transportation system and to formulate attractive and livable living environment, taking account of local characteristics and environment. The land-use zones are proposed based on the directions and considerations below.

(1) Residential with Five Subzones

Residential zones play a key role in formulating adequate living conditions with effective control measures by height control and volume control (floor area ratio or FAR and building coverage ratio or BCR). Hanoi City which has relatively high dense living areas in comparison with other countries has been set with a gross density target of 100m² per capita (100 persons/ha) by 2020. Five subzones have been set in terms of height, from low-rise to high-rise residential areas in combination with adequate FAR and BCR.

The following are principles and considerations to apply residential subzones in Hanoi City:

- (i) To apply highly dense residential areas to locations near public transportation lines or stations to secure efficient ridership.
- (ii) To formulate a gradual change in height and density of residential zones (e.g. low-mid-high rise) taking account of a landscape in harmony with adjacent land use or environment.
 - Low-rise residential subzone should be applied to historical areas, those near existing village areas, and to farm lands, riverside or lakeside areas, in principle.
 - Medium or high-rise residential subzone is recommended for locations near arterial roads and similar land-use zones in terms of spatial volume and height control (e.g. commercial zone or mixed-use zone).
- (iii) To apply mixed-use residential Subzone to the urban core and roadside areas to encourage various urban activities within the limit of allowable building uses.

(2) Commercial with Three Subzones

Commercial zone shall be applied to areas where urban centers need to be developed in order to support daily life services as well as regional and international business activities. Three subzones are set in terms of levels of commercial and business service and activity.

- (a) **Commercial and Business Center (CBC):** In order to achieve a competitive urban center in Hanoi City, this zone would play an important role in encouraging and consolidating commercial and business activities with spatial incentives to create economic and effective floor area in spatial consideration with:
 - (i) Core area of urban center as central business district (CBD).
 - (ii) Terminals or public transportation hub handling large passenger volumes.
 - (iii) Places along arterial roads requiring efficient traffic volumes and accessibility.

The draft General Plan proposes to apply CBC to eight sites in Hanoi, namely the Ancient and French quarters, new government center, Cau Giay center, Tap Giap Bat center, Long Bien urban center, Van Tri urban center, and Soc Son urban center.

- (b) **Corridor Commercial (CC):** Corridor commercial zone is applied to locations where various urban activities would be encouraged to locate by providing good accessibility and convenient places along arterial roads. This zone with a depth limit of 100m from arterial roads with considerable traffic volumes in the urban core and 50m from primary roads is applied to selected important roads. This zone can be applied to areas where commercial or office buildings numbering over 30 are concentrated.
- (c) **District Commercial (DC):** District commercial zone provides services catering to daily urban life of local communities, taking account of appropriate location in residential zones.

(3) Public Use (Institution and Special Public Use)

This zone aims to designate special public use land for key public facilities to be developed in future. These include government centers, higher education and research facilities, utilities, transportation terminals, cemeteries, etc., which are important at the national or capital level.

- (a) **Government Center:** A new government center in a strategic location in front of Ho Tay is designated as one of the candidate key facilities of Hanoi City.
- (b) **Higher Education Facilities:** Higher education is expected to play a key role in leading future economic development and in developing a prosperous society. Hanoi where major higher education facilities are concentrated needs to reorganize and consolidate their roles and functions. The three key areas of Tu Liem, Gia Lam, and Dong Anh are proposed to be the sites for research and development facilities to support economic development activities such as agriculture and other industries.
- (c) **Other Public Facilities:** These aim to secure necessary area and location for expected changes in the sites of public facilities which will be determined in each necessary development program.

(4) Industrial Zone with three Subzones

Industrial zones, including logistics facilities, shall be distributed in strategic areas along the regional industrial corridors in Hanoi City, such as NH1A, 2, 5, and NH18, where export-oriented industries will be located. On the other hand, urban-service-oriented industries, such as daily goods production, industrial production, printing, and building materials production, are proposed to locate in suburban areas outside Ring Road 4 in conjunction with the relocation program for unsuitable industries currently located in the urban core.

Three subzones are proposed under the industrial zone, namely Industrial Park, Light Industrial Area, and Quasi-industrial, to apply to locations with due consideration to accessibility and rational combination with other uses, as follows:

- (a) **Industrial Park (IP):** Industrial park zone, where regional trunk roads are located enabling the efficient delivery of products. It requires advanced infrastructure and sufficient land area that can easily be converted, such as agricultural land in strategic location, without creating negative impacts on neighboring settlements and competitive facilitation. Three major IP zones are proposed for areas in Duong Xa of Gia Lam District on NH5 and in Mai Dinh in Soc Son District close to the Noi Bai International Airport and an existing industrial park in North Thang Long.

- (b) **Light Industrial Area (LI):** Light industrial areas aiming at consolidating urban service industries are proposed for areas where RR4 and the radial trunk roads of NH32, Lang Hoa Lac road, and NH6 intersect.
- (c) **Quasi-industrial Area (QI):** Quasi-industrial zones including logistics facilities, allow other activities such as residential and commercial uses. This zone is proposed to apply to locations where existing industrial facilities and other uses coexist and is desirable for mixed-use development that does not cause negative impacts to neighbors such as in Dong Anh, Duong Xa, and Yen Vien in Gia Lam District along the regional primary road.

(5) Green and Open Space (GO)

This zone is defined as necessary open space and green area to be protected and secured in the city. It includes natural environments, such as natural forests, natural vegetation, wetlands, and water surface, as well as parks for amenity and buffer green areas or open space for security and hazard protection. Park facilities in urban areas fall under this zone as “Urban Facilities” to be developed.

2) Special Control Areas for Further Considerations

In addition to the land-use zoning system, special control areas may be applied to designate specific areas as historical and culturally important areas, landscape control areas, hazard control areas, and others. These control areas are overlaid on the land-use zoning map to consolidate control measures over activities in each zone.

On the other hand, detailed spatial control, using such measures as FAR and BCR, and height control shall be designated in the next planning level, the district plans. Figure 6.2.1 shows the conceptual direction in the general planning level, taking the following considerations:

- (i) Commercial zone followed by Corridor Commercial zone is given higher FARs in order to ensure economic feasibility and promote intensive development and land use in the urban center. However, it is necessary to consider the necessary public space in commercial and business facilities by adopting BCR.
- (ii) Residential areas are proposed to have various options to meet the differences in environmental conditions in combination with FAR and BCR.
- (iii) Industrial areas need sufficient buffer area to avoid generating negative impacts on neighboring land uses and facilities.
- (iv) The special district tag is proposed to apply to the Co Loa citadel area and its surroundings to guide the development activities in the Thang Long-Co Loa historical area thereby ensuring that these harmonize with the area’s cultural environment and landscape.

3) Identified Key Urban Facilities

Urban facilities play an important role in determining future land use and in providing key facilities that require certain scales of land area to accommodate expected activities in terms of transportation, logistics, utilities, recreation, and other specific public facilities such as cemeteries. The area and location of the following urban facilities must be designated based on the expected requirement for such facilities by 2020:

(1) Parks

Urban parks to be provided by local governments have several categories, i.e. city parks, district parks, neighborhood parks, and special parks like zoos and botanical gardens. Sports areas are proposed within the green and open space zone

(2) Transportation and Logistics

(a) **Airports:** Two airports are proposed as fundamental transportation facilities in Hanoi. The Noi Bai airport will play a key role until at least 2020.²

(b) **Key Land Transportation Facilities:** The following are designated as key land transportation facilities to be developed by 2020:

- (i) Railway (UMRT and inter-city railway) related facilities (depot, workshop, and marshalling yard, fleet yard, city air terminal, intermodal transfer facilities).
- (ii) Public transportation facilities (inter-city bus terminal, depot, intermodal transfer facilities).
- (iii) Logistics truck terminal for products and wholesale market center.
- (iv) Primary and secondary roads.
- (v) UMRT and intercity railway.

(3) Key Utilities

The following are proposed as key utilities to be developed or implemented till 2020:

- (i) Water supply plants (pumping stations, purification plants, etc).
- (ii) Sewerage treatment plants.
- (iii) Solid waste transfer stations.
- (iv) Solid waste disposal sites.

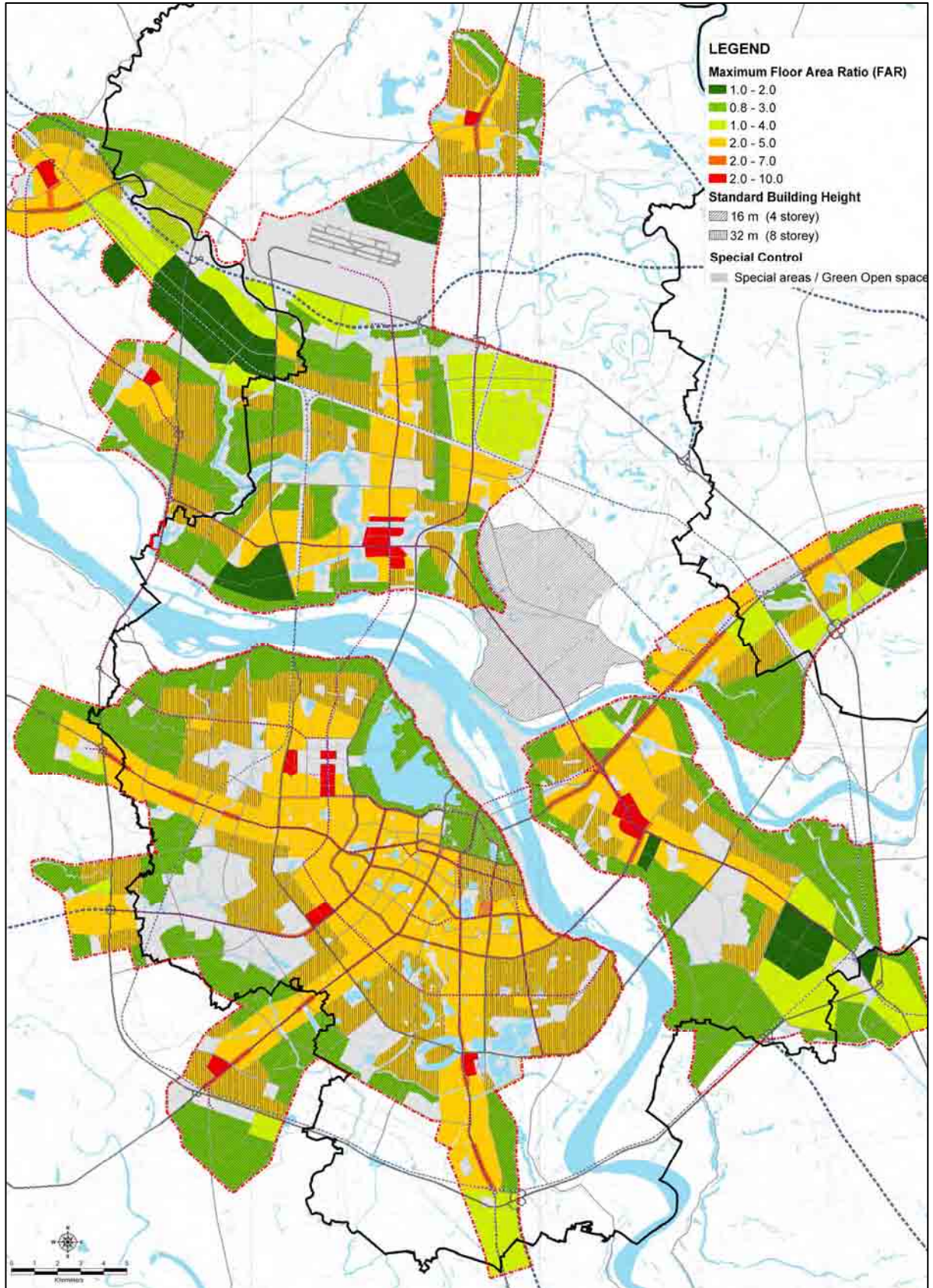
(4) Others

The following are considerable urban facilities to be designated as other urban facilities:

- (i) Cemeteries.
- (ii) Social welfare facilities (health care facilities, regional hospitals, regional recreational facilities).
- (iii) Cultural facilities (specialized museums, municipal art galleries, others).

² It is proposed that Gia Lam Airport site be converted to urban development use and Bach Mai Airport be for limited use only, ie as part of the central facilities for helicopter operations and emergency and relief activities.

Figure 6.2.1 Conceptual Spatial Control Scheme



Source: HAIDEP Study Team.

6.3 Identified Strategic Action Areas

1) Objectives

The General Plan must be implemented comprehensively not only to meet its spatial objectives but more importantly to achieve its socio-economic and environmental objectives for the city. While the General Plan basically shows the orientation and basic rules for development, it has to be further interpreted in more detailed plans. However, detailed plans are meant for actual construction of projects and do not usually retain sufficient coherence to the vision and aim of the General Plan. In order to bridge the gap between the General Plan and the detailed plans, it is proposed that areas that must be planned and developed in an integrated and coordinated manner be identified in the former plan.

It is further recommended that strategic action areas in the proposed urban clusters be identified for which development concepts and detailed orientation will be formulated. With this, it is expected that the General Plan orientations and regulations can be more effectively implemented. Areas for strategic actions are preliminarily identified in Table 6.3.1.

2) Identified Action Areas

Based on the above framework, areas for each prioritized action were identified. Objectives and main components of each action area are summarized in Table 6.3.2 and their locations are shown in Figure 6.3.1.

Table 6.3.1 Priority Urban Development Actions and Criteria

Objective	Action Theme	Compliance with Development Strategy ¹⁾							Development Need
		1	2	3	4	5	6	7	
1. Greenery Improvement and Cultural Promotion	1-1 Historical cultural heritage site improvement	●	○	●	-	●	○	●	<ul style="list-style-type: none"> • Rapid change of building needs to be controlled • Heritages in danger
	1-2 Red River Revitalization	●	-	●	-	●	●	●	<ul style="list-style-type: none"> • Unclear institutional treatment for residences • Severe living conditions and vulnerability to the flood damage
	1-3 Co Loa- Thang Long Green Axis Development	●	○	-	-	-	○	○	<ul style="list-style-type: none"> • Green axis as a backbone of the Hanoi City
	1-4 Greenery improvement	●	-	○	-	-	●	○	<ul style="list-style-type: none"> • Deterioration of urban environment and amenity
	1-5 Education and Research Facilities development	●	-	○	-	-	○	○	<ul style="list-style-type: none"> • Needs to develop education al and research –development center
2. Redevelopment of Existing Urban Areas	2-1 Poor living conditions improvement	○	○	●	-	○	●	●	<ul style="list-style-type: none"> • Severe living conditions in urban core with high pop. Density
	2-2 Urban redevelopment with public transport	-	●	●	●	●	-	●	<ul style="list-style-type: none"> • Integrated development of urban area and public transport in need
	2-3 Redevelopment of factory relocation site	-	○	●	●	●	●	●	<ul style="list-style-type: none"> • Relocation of factories in need to protect environment and to utilize urban area
3. New Development in New Urban Areas	3-1 Ongoing or committed new urban development of urban fringe area	○	○	-	●	●	-	○	<ul style="list-style-type: none"> • Housing development for high-income class • Little specification of business and commercial center
	3-2 Van Tri New Town	●	●	-	●	●	○	●	<ul style="list-style-type: none"> • Effective and appropriate development method in need
	3-3 Competitive urban center development	-	●	○	●	●	○	●	<ul style="list-style-type: none"> • Formulation of the core of new urban area to promote development
	3-4 Transportation-oriented development for residential area	-	●	○	○	●	○	●	<ul style="list-style-type: none"> • Integrated development of urban area and public transport in need
	3-5 Low density residential area development	○	-	○	-	●	-	●	<ul style="list-style-type: none"> • Uncontrolled development in village area (subdivision) • High-dense urban area in original village area
4. Rural Area Improvement	4-1 Improvement of community service center in rural area	●	-	-	-	●	-	●	<ul style="list-style-type: none"> • Lack of urban services in rural area
	4-2 Craft village improvement	●	-	-	-	-	-	●	<ul style="list-style-type: none"> • Deterioration of living environment in village area
5. Industrial and Logistics Improvement	5-1 Industrial park development	-	○	●	○	●	-	-	<ul style="list-style-type: none"> • Development of industrial sector
	5-2 Logistic system improvement	-	●	○	○	●	○	-	<ul style="list-style-type: none"> • Lack of efficient logistic system causing negative impact

Source: HAIDEP Study Team.

Note: ● strongly contribute, ○ relatively contribute, - not applicable.

1) Development strategies are 1.Green & Water Foundation, 2.Transit Oriented Dev, 3.Urban Area Revitalization, 4.Competitive Urban Center, 5. Effective Infrastructure, 6.Urban Disaster Control, 7.Institutional Strengthening.

Table 6.3.2 List of Urban Development Action Areas

Action Area	Code	Action Name	District (ha)	Main Component
1. Greenery Improvement and Cultural Promotion				
1-1 Historical and Cultural Heritage Site Improvement	UD01	Ancient Quarter revitalization	Hoan Kiem (100)	<ul style="list-style-type: none"> Restoration of historical/ cultural heritage Living conditions improvement Guidelines for urban design (height/ FAR/ etc) Improvement of pedestrian facility Tourism development (information center) Strengthening of SME program Traffic Management program
	UD02	French Quarter preservation and redevelopment	Hai Ba Trung (140)	<ul style="list-style-type: none"> Utilization of government office for office/ commercial space Pedestrian environment improvement (sidewalk, green route network) Park Network from Ho Tay to Yen So (UD08) Landscape improvement along Trang Tien road Regulation on height/ FAR /landscape
	UD03	Son Temple Historical and Natural Tourist Zone	Soc Son (2,100)	<ul style="list-style-type: none"> Revitalization of historical heritage Access road improvement/Nature Trail Improvement Tourism development (information center) Guidelines for environmental protection
1-2 Red River Revitalization	UD04	Green River Corridor Development	TH, HK, HBT, HM, GL, LB, DA (85km)	<ul style="list-style-type: none"> Embankment and disaster prevention IWT and tourism port improvement Recreation network (bicycle lanes, walkways, etc.)
	UD05	Thang Long-Hoan Kiem River Waterfront Development	Hoan Kiem- Hai Ba Trung (115)	<ul style="list-style-type: none"> Formulation of redevelopment plan Voluntary resettlement scheme IWT improvement Tourism and recreation development Embankment and disaster prevention
1-3 Co Loa- Thang Long Green Axis Development	UD06	Co Loa Citadel Renovation	Dong Anh (755)	<ul style="list-style-type: none"> Restoration of heritage of Co Loa citadel Waterway improvement around Co Loa citadel Park and green space development Infrastructure rehabilitation Tourism development program
	UD07	Co Loa South Green Zone Development	Dong Anh (1,290)	<ul style="list-style-type: none"> Low-density, high-value development Development guidelines for Co Loa green zone (height control, land use control) Landscape enhancement Pedestrian path linking Co Loa and Thang Long
	UD08	Recreation network development (cycling and pedestrian) along Ho Tay	Tay Ho (40)	<ul style="list-style-type: none"> Relocation of residents Embankment and infrastructure provision Greenery network and footpath
1-4 Green Network Development	UD09	Park Network from Ho Tay to Yen So	T. Ho-B. Dinh- H. Kiem- H. B. Trung- H. Mai (10.9km)	<ul style="list-style-type: none"> Pedestrian walkway improvement Street tree improvement Footpath development along Set River Yen So park development
	UD10	Park within retention ponds	City wide	<ul style="list-style-type: none"> Retention ponds Tree planting Recreational facilities
	UD11	Lake side park development	City wide	<ul style="list-style-type: none"> Embankment of lake Dredging and water quality improvement of lakes Tree planting Recreational facilities
	UD12	Community-level park development	City wide	<ul style="list-style-type: none"> Park development in each commune Renovation of open space in existing urban area Planning standard of community park for new development
1-5 Education & Research Facilities	UD13	School Network Development	City wide	<ul style="list-style-type: none"> School facility development (in line with school network plan) Traffic management for safe accessibility

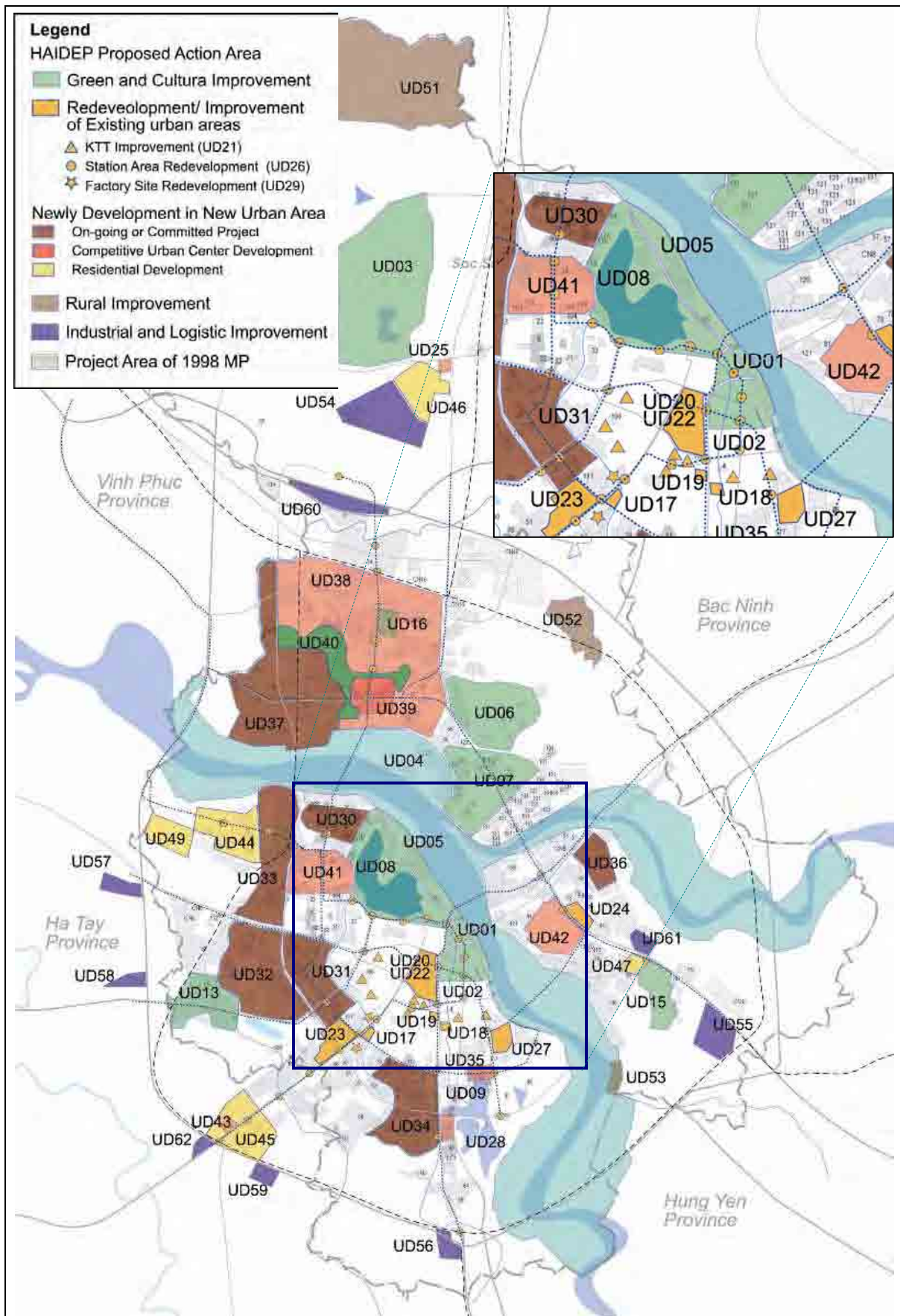
Action Area	Code	Action Name	District (ha)	Main Component
Development	UD14	Higher Education and Research Center Development in Tay Mo	Tu Liem (397)	<ul style="list-style-type: none"> Relocation program of university Academia-industrial complex program (research and institute) Bus service for students Dormitory provision
	UD15	Higher Education and Research Center Development in Trau Quy	Gia Lam (150)	<ul style="list-style-type: none"> Academia-industrial complex program (research and institute) Bus service for students Dormitory provision
	UD16	Higher Education and Research Center Development in Van Tri	Dong Anh (149)	<ul style="list-style-type: none"> Relocation program of university Academia-industrial complex program (research and institute) Bus service for students Dormitory provision
2. Redevelopment And Improvement of Existing Urban Areas				
2-1 Poor Living Conditions Improvement	UD17	Tools No.1Factory Area (KTT) Redevelopment (along with UMRT No.2)	Thanh Xuan (8)	<ul style="list-style-type: none"> Housing redevelopment Infrastructure provision Station terminal Guidelines for redevelopment of KTT area Commercial development
	UD18	Dong Tam Area (KTT) Redevelopment (along with UMRT No. 1)	Hai Ba Trung (11)	
	UD19	Phuong Mai Area (KTT) Redevelopment (along with UMRT No. 1)	Hoang Mai (11)	
	UD20	Van Chuong Area (including KTT) Redevelopment (along with UMRT No. 1/3)	Ba Dinh (97)	
	UD21	Other KTT improvement	19 KTT	
2-2 Urban Redevelopment with Public Transport	UD22	Hanoi Station Area Redevelopment in relation to UMRT No.1	Dong Da (53)	<ul style="list-style-type: none"> Station square (UD26) Redevelopment of Station terminal Infrastructure provision Commercial development
	UD23	Thanh Xuan Area Urban Redevelopment in relation to C3-NH6	Thanh Xuan (90)	<ul style="list-style-type: none"> Redevelopment of villages Infrastructure provision Commercial development
	UD24	Long Bien Commercial Center Area Redevelopment on NH5	Long Bien (140)	<ul style="list-style-type: none"> Redevelopment of villages Infrastructure provision Commercial development
	UD25	Soc Son Commercial Center Area Redevelopment on NH3	Soc Son (20)	<ul style="list-style-type: none"> Redevelopment of villages Infrastructure provision Bus terminal development Commercial development
	UD26	Station area redevelopment	City wide	<ul style="list-style-type: none"> Station square Infrastructure provision Relocation of residents
2-3 Redevelopment of Factory Relocation Site	UD27	Minh Khai Area (industry area) Redevelopment	Hoang Mai (155)	<ul style="list-style-type: none"> Infrastructure Station square (UD26) Relocation program of SOE and private factories Commercial/business development
	UD28	Phap Van Area Redevelopment for Town Commercial Center on NH1a	Hoang Mai (24)	<ul style="list-style-type: none"> Infrastructure Relocation program of SOE and private factories Commercial/business development
	UD29	Redevelopment of SOE factory site	Hoang mai Thanh Xuan	<ul style="list-style-type: none"> Relocation program for SOE factory Feasibility study for redevelopment
3. New Development in New Urban Areas				
3-1 Ongoing or Committed New	UD30	Ciputra urban area development	Tay Ho- Tu Liem (353)	<ul style="list-style-type: none"> Ongoing project of South Thang Long urban zone (CIPUTRA)

Action Area	Code	Action Name	District (ha)	Main Component
Urban Development in Urban Fringe and Suburban Area integrated	UD31	Cau Giay new urban zeon	Cau Giay (680)	<ul style="list-style-type: none"> Ongoing urban development project of Trung Yen, Trung Hoa- Nhan Chinh, Yen Hoa Commercial area on C3-Lang Hoa Lac Retention pond park Station square of UMRT 3 (UD26)
	UD32	My Dinh new urban zone	Cau Giay- Tu Liem (880)	<ul style="list-style-type: none"> Ongoing urban development project of My Dinh, Me Tri, Phu My National Stadium park of My Dinh
	UD33	East Nhue new urban zone	Tu Liem (600)	<ul style="list-style-type: none"> Ongoing urban development project of Co Nhue- Xuan Dich Retention pond park along Nhue River
	UD34	Dinh Cong- Linh Dam new urban zone	Hoang Mai (640)	<ul style="list-style-type: none"> Ongoing urban development project of Dinh Cong, Linh Dam, Dai Kim
	UD35	Den Lu District center development	Hoang Mai (110)	<ul style="list-style-type: none"> Ongoing Den Lu urban development project Station square for UMRT 3 (UD26) /Bus terminal for UMRT 4 Development guidelines for Den Luu area
	UD36	Viet Hung New Town Development	Long Bien (302)	<ul style="list-style-type: none"> Ongoing urban development project in Viet Hung Long Vien NewDistrict Office
	UD37	Dong Anh New Town Development (Phase IA)	Dong Anh (2100)	<ul style="list-style-type: none"> Ongoing urban development project in South-west of Dong Anh district Thang Long Industrial Park extension NH 5 extension Van Tri Lake drainage system and other infrastructure
3-2 Van Tri New Town (3,550 ha)	UD38	Van Tri new urban housing development with UMRT NO.2	Dong Anh (1,435)	<ul style="list-style-type: none"> Infrastructure provision Feeder bus network Housing supply Community development
	UD39	Van Tri urban center development along the NH5 extension / UMRT NO.2	Dong Anh (68)	<ul style="list-style-type: none"> Infrastructure provision Station square and bus terminal
	UD40	Van Tri water front park development	Dong Anh (180)	<ul style="list-style-type: none"> Rearrangement of Van Tri lake Park and green spaces Water quality improvement
3-3 Development of Competitive Urban Centers	UD41	Ho Tay West Area New Development around New URMT Terminal	Tay Ho- Tu Liem (490)	<ul style="list-style-type: none"> Relocation program of government offices Park and open space Basic and advanced infrastructure Station square (UD26) Circular bus network Development guideline for West Ho Tay area Urban Design guideline Relocation of residents
	UD42	Gia Lam Airport Urban Center Development	Long Bien (385)	<ul style="list-style-type: none"> Relocation program of Gia Lam airport Basic and advanced infrastructure Station square (UD26) Circular bus network Connection with Long Bien commercial area (UD24) Development guideline for Gia Lam area Special area designation for height district
	UD43	New Ha Dong Business Commercial Center	Ha Tay Province (75)	<ul style="list-style-type: none"> Basic and advanced infrastructure Station square (UD26) Circular bus network Development guideline fo rUrban Center Special area designation for height district
3-4 Transportation-oriented Development of Residential Areas	UD44	Thuy Phuong New Urban Housing Development integrated with UMRT No.4	Tu Liem (390)	<ul style="list-style-type: none"> Station square (UD26) Bus network from UMRT station Infrastructure
	UD45	Ha Dong New Urban Housing Development integrated with UMRT No.2	Ha Tay prov. (443)	<ul style="list-style-type: none"> Designation as medium density area Station square (UD26)
	UD46	Soc Son New Urban Housing Development integrated with Dong Anh Industrial Park	Soc Son (1,075)	<ul style="list-style-type: none"> Station square (UD26) Bus network from UMRT station

Action Area	Code	Action Name	District (ha)	Main Component
	UD47	Thach Ban- New Urban Housing Development integrated with UMRT No.1	Long Bien (100)	<ul style="list-style-type: none"> • Infrastructure • Designation as medium density area
3-5 Low-density Residential Area Development	UD48	Urban Village Improvement	City wide	<ul style="list-style-type: none"> • Infrastructure for low-rise residential area • Basic infrastructure improvement in village area • Green buffer surrounding existing village area with access road • Guidelines to convert agricultural land into urban land and mechanism to rearrange land plot
	UD49	Tay Huu urban village improvement	Tu Liem (195)	<ul style="list-style-type: none"> • Bus network from UMRT station • Basic infrastructure improvement in village area • Green buffer surrounding village area with access road • Guidelines to convert agricultural land into urban land and mechanism to rearrange land plot
4. Rural Area Improvement				
4-1 Improvement of Community Service Centers in Rural Areas	UD50	Rural service center development	City wide	<ul style="list-style-type: none"> • Community service center • Basic infrastructure • Access to major road
	UD51	Soc Son Rural Area Improvement	Soc Son (3,015)	<ul style="list-style-type: none"> • Community service center • Basic infrastructure • Access to major road
4-2 Craft Village Improvement	UD52	Lien Ha Handicraft Village Area Improvement	Dong Anh (810)	<ul style="list-style-type: none"> • Access road from primary road • Green buffer around villages • Basic infrastructure improvement in village area • Cultural Park
	UD53	Bat Trang Handicraft Village Area Improvement	Gia Lam (87)	<ul style="list-style-type: none"> • Tourism development (information system, bus network) • Guidelines to preserve craft villages
5. Industrial and Logistics Improvement				
5-1 Industrial Park Development	UD54	Soc Son Airfront Industrial Park	Soc Son (550)	<ul style="list-style-type: none"> • Basic Infrastructure • Advanced infrastructure development • Distribution center of Noi Bai airport • Access road to airport • Residential area for factory labor • Tax incentives to promote industrial development • Regulation on environmental protection
	UD55	Duong Xa Industrial Park at NH5	Gia Lam (360)	<ul style="list-style-type: none"> • Basic Infrastructure • Advanced infrastructure development • Tax incentives to promote industrial development • Regulation on environmental protection
	UD56	Light Industry Park Development in Ngoc Hoi at C4-NH1A	Thanh Tri (64)	<ul style="list-style-type: none"> • Basic Infrastructure • Advanced infrastructure development • Tax incentives to promote industrial development • Regulation on environmental protection
	UD57	Light Industry Park Development in Tram Troi at C4-NH32	Ha Tay Prov. (85)	
	UD58	Light Industry Park Development in Van Canh at C4-Hoa Lac	Ha Tay Prov (67)	
	UD59	Light Industry Park Development in Nhan Trach at C4	Ha Tay Prov (87)	
5-2 Logistics Improvement	UD60	Regional Logistics Terminal Development in Phu Cuong at NH2-NH18	Soc Son (140)	<ul style="list-style-type: none"> • Logistic terminal • Infrastructure provision • Administration development for customs
	UD61	Wholesale (fresh food, commodities) Market East Center at NH5-NH1a	Long Bien (74)	<ul style="list-style-type: none"> • Marketplace • Infrastructure provision • Administration development for custom
	UD62	Wholesale (fresh food, commodities) Market West Center at C4-NH6	Ha Tay Prov. (67)	

Source: HAIDEP Study Team.

Figure 6.3.1 Location of Urban Development Action Areas



Source: HAIDEP Study Team.

6.4 Formulation of the District Plan

1) Role and Function of District Planning

District plans are statutory development control plans that guide urban and rural activities within the jurisdiction of each district based on the land-use zoning in the General Plan. District plans play a key role in urban management at the district level in line with the government policy to decentralize more functions to district offices.

District plans are required to provide the necessary technical controls to develop adequate urban and rural areas in line with the spatial structure of the General Plan. More specifically the following are required of district plans:

- (a) **Conformity to Spatial Structure of the General Plan:** District plans are control plans within district jurisdiction and aim to describe the spatial structure of the General Plan in detail. It is inevitable for districts to coordinate with neighboring districts in order to achieve a well-organized spatial structure and efficient public investment in an integrated manner.
- (b) **Application of Statutory Spatial and Development Control Measures:** Spatial control plays a key role in creating and guiding the development of adequately integrated urban areas based on the General Plan, thereby achieving a safe urban environment, effective land use and comfortable living environment. Control measures cover building density and landscape standards, such as FAR, BCR, setback line, and others, which are considerable tools to secure the target spatial form.
- (c) **Setting of Spatial Development Framework at District level:** When formulating a detailed development framework for each district, the development framework of the General Plan needs to be examined together with the existing conditions and history of a particular district. These help in determining the demand for urban facilities and social infrastructure in such district.

2) Contents and Element of District Planning

The district plan consists of the three elements of a statutory urban development plan. These are the analysis of natural and socio-economic conditions, the identification of problems and issues, and the establishment of vision and strategy with a numerical development framework.

(1) Land-use Zoning and Urban Development Control Measures

(a) Land-use Zoning Control

The purpose of land-use zoning is to exercise development control on the types of building use that can be permitted in the zone. The proposed zoning system should have the following characteristics:

- (i) Sufficiently flexible to allow various types of complementary urban uses to be permitted in each land-use zone.
- (ii) Able to keep out nonconforming uses that have injurious impacts on health, environment, traffic and amenity in each zone.
- (iii) Responsive to the characteristics of the area.

A total of 20 land-use zones is proposed. Key control measures for urban activities are:

- (i) **Permitted Uses:** Activities that can be allowed in the land-use zone.
- (ii) **Conditional Uses:** Activities that will require further scrutiny before being approved for each zone and will usually require planning permission.
- (iii) **Prohibited Uses:** Building uses that are not permitted in the zone. If the proposed activity is not identified, an application for planning permission is required.

Potential investors may apply for changes in land-use zoning if they wish to develop projects that do not conform to the zone, e.g. applying to change from mixed use residential to commercial corridor. The city may approve the land-use change if the merits of the project outweigh the demerits. The investor will be required to pay a development charge to the city for the land-use zoning change and also to pay the cost for public information to inform adjoining land owners about the change of land zoning. While adjoining land owners can object to the proposed change within a prescribed time, the city is not bound to decide in favor of the objectors.

The use class table is used in conjunction with the land-use zoning system to provide guidance on the types of land and building use permitted in each zone. The detailed description is described in the Urban Development Subsector Report.

(b) Development Permission by Land Use Zoning

Land-use zoning also provides guidance on the types of development that require planning permission. It specifies the sizes of land area or building floor areas in each land-use zoning class and the offices in charge of inspection and appraisal of documents on development and construction.

(2) Spatial Control Planning

Spatial control aims to exercise control on the shape and form of buildings that could be permitted in a zone. The proposed control measures include FAR, BCR, density control, and height control, which are well-used tools for zoning systems in many cities in the world and should have the following characteristics:

- (i) Sufficiently flexible to allow various types of complementary urban uses to be permitted in a particular zone.
- (ii) Able to keep out nonconforming uses that have injurious impacts on health, environment, traffic, and amenity in a particular zone.
- (iii) Responsive to the characteristics of the area.

7 SOCIO-ECONOMIC DEVELOPMENT

7.1 Overview

During the last decade Hanoi has achieved substantial progress in socio-economic development and has contributed to the upliftment of the people's quality of life in spite of the various crises that hit the region such as the 1997 Asian crisis, the SARS epidemic, and the bird flu pandemic. The economy has grown at high rates and peoples' incomes have increased. The economic sector is being restructured and modernized. The industrial, commercial, business, and service sectors have expanded so much that employment opportunities have greatly increased and have diversified. The foreign and domestic tourism sector has started to grow, too. The agriculture sector has shifted to cash crops intended for the urban market, although the growth is still moderate compared to other sectors. The initial impacts of a rapid and robust economic growth have proven to be intense and extensive. The city has to be prepared in managing and guiding growth in a way that the envisioned development can be achieved.

Even as the overall economic growth has been remarkable, the future prospect, however, does not look as bright, unless proper measures are taken immediately to correct the weaknesses that have come to fore in this first stage of Vietnam's economic development. While the initial success has been achieved mainly due to the growth of conventional industries, this will not suffice in the face of economic globalization, especially after Vietnam's accession to the WTO community takes effect. Many industries still have low added value and low productivity. FDI industries lack local supporting industries. The supply of consumer goods still depends on imports. The commercial and service sectors are mostly small scale, providing relatively low-quality services. In order for Hanoi City to be a driving force of economic development, the upgrading and expansion of industries and services are needed to meet diversifying market demands.

To achieve this, the development of necessary infrastructure, human resources, and investment-friendly institutions is very much necessary. To facilitate the smooth movement of goods and people, the traffic situation must be improved through, among others, accelerated development of roads, efficient public transportation such as urban rail, and effective traffic management, improved logistics, and multimodal transportation. The telecommunications system and urban utilities need further expansion and upgrading. Supply of lands and building floors equipped with adequate facilities at reasonable prices is also critical to encourage new investments. The development of human resources will become a critical success factor in the next stage of economic development. To ensure that this happens, the quality of higher education needs to be improved and the training of existing manpower has to further expand in coverage and contents. Local and foreign private sector participation must be further promoted by providing a level playing field, as well clear and fair rules and regulations.

7.2 Socio-economic Characteristics

1) Main Indicators

Under the strong and huge impact of urbanization, the overall socio-economic situation in Hanoi has quickly improved, as shown in various indicators (see Table 7.2.1). Gross regional domestic product (GRDP) has grown constantly at 11% a year since 1995, while per capita GRDP growth has been more than 7% a year. While poverty rate has sharply dropped, the ownership of vehicles as well as other durable household goods has increased significantly. The development during this period is largely fuelled by the rapid progress of industrialization led by the government sector and FDIs. Contribution due to the growth in tourism, both from domestic and foreign tourists, is also notable.

2) Economy and Employment

During the last decade, GRDP has increased by 11% per year, and employment has likewise increased. However, the increase is only slightly higher than that of population, indicating that Hanoi cannot provide sufficient job opportunities to a growing population.

A characteristic of Hanoi is that the share of the tertiary sector (services) decreased, from 64% in 1995 to 60% in 2000 and further to 58% in 2003. Meanwhile, that of the secondary sector (industries) increased from 31% in 1995 to 36% in 2000 and 38% in 2003. In many other large cities, urbanization has generated more employment in the tertiary sector. Since appropriate locations within Hanoi for the secondary sector are getting constrained, it is expected that there will, and should, be more employment opportunities in Hanoi in the tertiary sector.

Compared to 1995, turnover of import and export has increased rapidly. The same trend can be seen in the drastic increase in FDIs. The growth rate of export and import is at 9% and 21%, respectively, and notably, it increased by more than 40% per year in the last few years.

3) Poverty

As the country's economy has grown, poverty incidence in the Red River Delta, to which Hanoi belongs, has quickly decreased, from 62.7% in 1993 to 29.3% in 1998 and 22.4% in 2002¹. Hanoi's HDI² is a strength that can further help eradicate poverty and contribute to competitive economic development. In 1999, it ranked second overall in HDI, at 0.798.

4) Education

As of 2005, the number of students in Hanoi City was 203 thousand in primary, 182 thousand in lower secondary, and 108 thousand in higher secondary school, accounting for 67, 60, and 33 students per 1,000 population, respectively. General schools, including primary, lower secondary, and higher secondary levels, are equally distributed in the whole city in accordance with the planning criteria specified in the School Network Plan. The criteria states one primary school per commune, 420-1,050 students per school for lower secondary, and one higher secondary school per 50,000 population. Accordingly, the number of schools became 270, 214, and 96 in that order.

It is remarkable that Hanoi has a large population in the tertiary education compared with the lower level school. There were 376 thousand tertiary students in Hanoi City as of 2004.

¹ Vietnam Development Report, 2004

² Human Development Indicators. Political Publishing House (2001) National Human Development Report 2001.

Its share in Vietnam was 28.5% in 2004, while that for primary and secondary education was only about 3.0%. This is because Hanoi has many higher education facilities, which include 49 colleges and universities that attract students from other provinces. The number of students is particularly concentrated in some districts. Hai Ba Trung District has the highest share at 22%, which is followed by Dong Da and Cau Giay districts at 17% and Thanh Xuan District at 11%.

Table 7.2.1 Socio-economic Indicators of Hanoi

Indicator		1995	2000	2005	Growth Rate (%/ year)		
					1995-2000	2000-2005	
Area (km ²)		921			-	-	
Population	Total (000)	2,335	2,756	3,183	3.4	2.9	
	Urban (000)	1,221	1,593	1,990	5.5	4.6	
	% Urban	52.3	57.8	62.5	2.0	1.6	
Economy	GRDP (billion VND)	1994 Price	12,021	19,999	34,073	10.7	11.2
		Current Price	14,499	31,513	70,326	16.8	17.4
	Per Capita GRDP (million VND)		5,147	7,256	10,705	7.1	8.1
	Sector Share (%)	Primary	5.3	3.9	1.7	-6.0	-15.3
		Secondary	30.8	35.9	40.8	3.1	2.6
		Tertiary	63.8	60.2	57.4	-1.2	-0.9
	Share by Ownership (%)	Central State	60.3	54.2	52.4	-2.1	-0.7
		Local State	10.2	8.4	7.1	-3.8	-3.3
		Non-State	22.8	23.0	21.9	0.2	-1.0
FDI sector		6.7	14.5	15.5	16.6	1.3	
Employment ¹⁾	Total No. (000)		-	1,163	1,517	-	5.5
	Sector Share (%)	Primary	-	33.8	22.3	-	-8.0
		Secondary	-	23.3	21.9	-	-1.2
		Tertiary	-	42.9	55.8	-	5.4
	Government Workers (000)		363	416	544	2.8	5.5
Unemployment (000) ²⁾		-	42.3	47.7	-	2.4	
Student ³⁾	Number (000)	Primary	-	213	203	-	-1.0
		Secondary I	-	173	181	-	0.9
		Secondary II	-	125	109	-	-2.7
		Tertiary	-	364	380	-	0.9
	Enrolment Rate (%)	Primary	-	95	98	-	0.6
		Secondary I	-	97	97	-	0.4
Secondary II		-	60	63	-	1.0	
Trade	Export Turnover (million US\$)		-	1,402	2,860	-	15.3
	Import Turnover (million US\$)		-	3,886	10,838	-	22.8
FDI	(million US\$)		-	7,341	9,241	-	4.7
Social	Poverty Index ⁴⁾		-	16.08	-	-	-
	HDI ⁵⁾		-	0.798	-	-	-
Vehicle Ownership ⁶⁾	(% of HH)	Motorcycle	-	-	83.9	-	-
		Car	-	-	1.6	-	-
Visitors to Hanoi	Domestic (000 arrivals)		432	2,100	3,600	37.2	11.4
	Foreign Visitor (000 arrivals)		216	500	1,050	18.3	16.0

Source: Hanoi Statistical Office, 2005; UNDP, 2001; GSO 2000.

1) Population Census, 1999. HAIDEP HIS, 2005.

2) Number of registered job applicants.

3) Data from Population Census (1999) is used for 2000 data.

4) Viet Nam Living Standards Survey 1997-1998. The index denotes the share (%) of people living below poverty line to the total population of a province.

5) Index as of 1999. Hanoi is ranked second among all provinces in Vietnam.

6) HAIDEP HIS, 2005.

5) Motorization

Parallel to population growth, motorization has made rapid progress, too. Vehicle ownership, particularly that of motorcycle, has increased sharply. As of 2005, there were 164 thousand cars and 1,566 thousand motorcycles in Hanoi City, which increased from 97 thousand and 786 thousand, respectively. In the period of 2000-2005, the number of cars and motorcycles has increased with 13 thousand and 156 thousand or at an average annual growth rate of 11.1% and 14.8%, respectively. It should be noted that the growth rate of motorcycles in 2004-2005 was quite low at 1.5%, which is the result of the restriction policy on motorcycle registration introduced in Hanoi City.

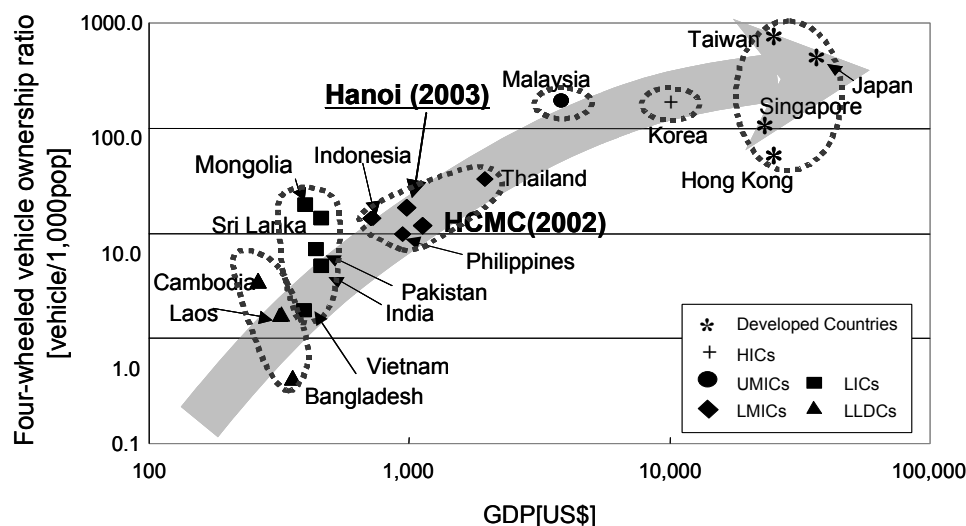
Table 7.2.2 Number of Vehicles in Hanoi by Type

Vehicle Type	2000	2005	Growth Rate (5%/r)	Ownership Per 000 Pop'n	
				2000	2005
MC	786	1,566	14.8%	285	492
Car	97	164	11.1%	35	51
Total	883	1,729	14.4%	320	543

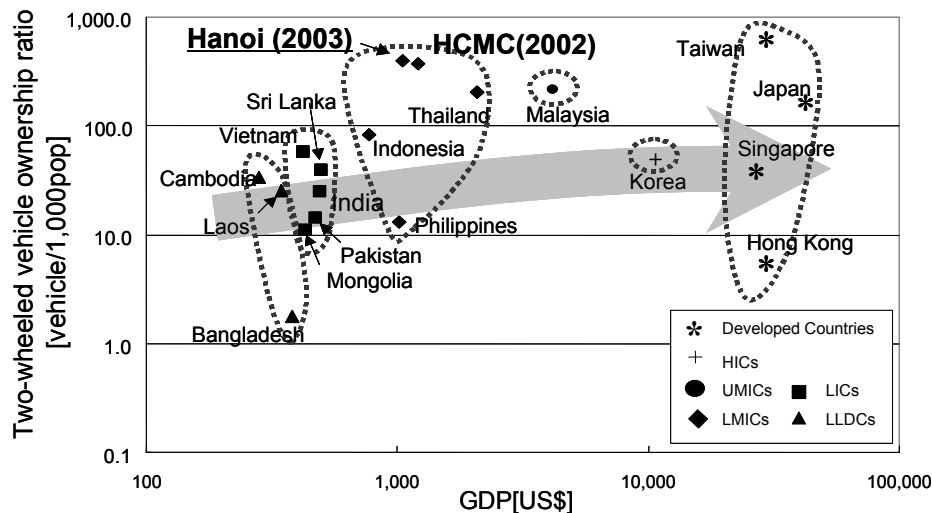
Note: Trips inside Hanoi only.

Figure 7.2.1 International Comparison of Vehicle Ownership and Per-capita GRDP

Car Ownership (in the year of 2000)



Motorcycle Ownership (in the year of 2000)



Source: HAIDEP Study Team.

As for ownership, 84% of households own a motorcycle, of which 40% have more than two. Although car ownership is still low at 1.6% of the total population in Hanoi, this figure has increased rapidly, posing a threat to smooth traffic flow in some locations. While bus services have quickly expanded, its share in the total urban transportation demand is still insignificant. Rapid economic growth at a rate of 11% per year is expected to further accelerate ownership of private vehicles such as motorcycles and cars.

6) Industry

Industrial activity is mostly centered in two regions in Vietnam, the Red River delta and the southeast. The Red River delta in the north, including the capital of Hanoi (8% share of the national output in 2004) and the port of Hai Phong, generates around 22% of the total output. The southeast region includes the major city of Ho Chi Minh (24%), and accounts for more than 49% of the total output.

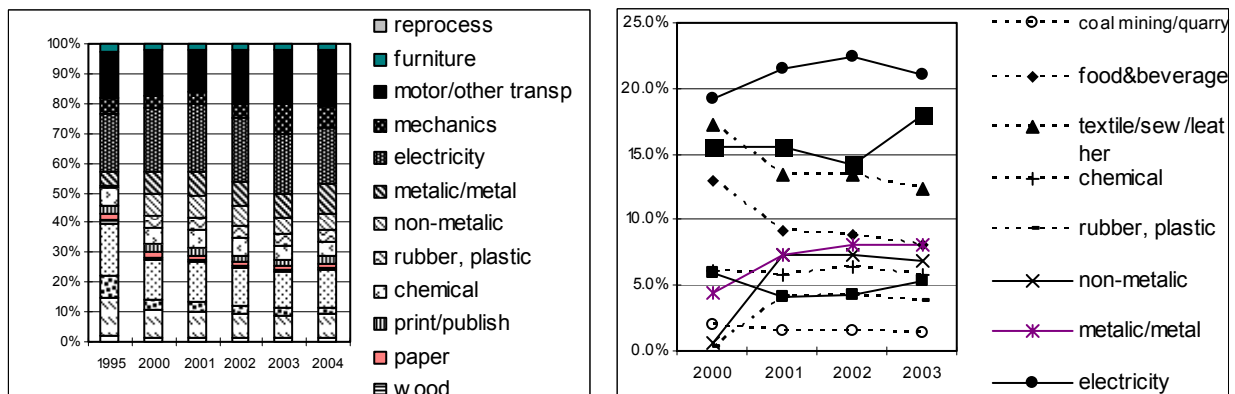
The industrial structure of Hanoi is characterized relatively by a higher share of manufacturing industries (electricity, motors, textile, and machines) in line with export processing and which shared 50.1% of total gross outputs in 2004. Other industries, mainly for urban service products targeting domestic consumption such as food and beverage, garments and medicine, take the next higher position.

As other provinces in the surroundings of Hanoi have developed a similar industrial structure, the key issue would be for Hanoi to cooperate with, and demarcate its role and functions vis a vis those of, other provinces taking account of their respective advantages and disadvantages in order to promote competitive industries.

Hanoi's state-owned enterprises (SOEs) in the industrial sector lead in terms of scale of outputs (72%) and employment (36% in all sectors). Figure 7.2.3 shows the distinct share of SOEs comprising central and local SOEs. The government is now undertaking a privatization program for state enterprises. This would be a key issue in encouraging and promoting efficiency in state enterprises.

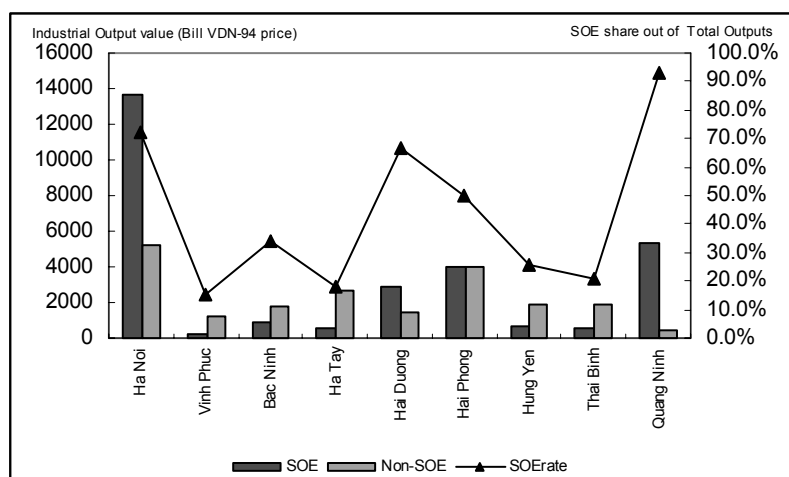
Foreign direct investment (FDI) lead in terms of annual growth ratio (19.5% in the 2000-2004 period), output share (33.7%) out of total in Hanoi, while private manufacturers have achieved the largest growth (46.3%, 2000-2004) among all manufacturers' gross outputs.

Figure 7.2.2 Share of Industrial Output Values in Hanoi



Source: Statistical Yearbook 2004, GSO.

Figure 7.2.3 Industrial Output Values and SOE Shares by Province in NFEZ



Source: Statistical Yearbook 2004, GSO.

The NFEZ industrial development plan has given a spatial orientation and redirection to the industrial development of Hanoi and its surroundings toward 2010 and 2020, covering the eight provinces of Hanoi, Hai Phong, Quang Ninh, Hai Duong, Hung Yen, Ha Tay, Vinh Phuc, and Bac Ninh, as follows:

- (i) To develop industrial zones along NH18 and NH5, NH1A, NH21, and NH10.
- (ii) To prioritize the development of industrial zones in Hanoi's neighboring areas (Vinh Phuc, Bac Ninh, Hung Yen, and Ha Tay) in combination with the relocation of land-intensive industries from Hanoi City to outside of the city.
- (iii) To ensure coordinated development of industrial zones in the region.

Current industrial investment plan for industrial areas has allocated around 2,300ha in Hanoi City as additional areas to existing industrial areas (1,684ha), while provinces in the study area have plans to invest more than 1,600ha up to 9,500ha till 2010, as indicated in the HMA plan.

Hanoi City has plans to relocate unsuitable manufacturers (84 enterprises through a Decision 32/2003-QB-QD and 34 enterprises on their own accord) including large SOEs and small and medium factories from the inner city of Hanoi and offered them incentives (Decree 74/2003-QD-UB) to move. At present, these manufacturers have not been relocated yet sufficiently and successfully due to lack of funds or issues about the proximity of their relocation sites to their factories. At the same time, they cannot afford to improve their facilities to mitigate the generation of pollution brought about by outdated production technology.

Results of the Enterprise Survey (HAIDEP survey in May, 2005) indicate that small factories (enterprises) have plans to move to the fringes of Hanoi City such as Tu Liem District, while large factories (SOEs) have plans to move to remoter areas in neighboring provinces.

Table 7.2.3 Current Industrial Area and Development Plan

Area	Name	Area (ha)		Adjacent Province	Future Industry (ha)			
		Existing	Planned		Name	MPI	MOC 2010	
Northern Hanoi	Soc Son (NoiBai)	32	398	Thai Nguyen	na	na	na	
	North Thang Long	110	240	Vinh Phuc	Kim Hoa ¹⁾	50	266	
	West Thang Long	---	47		Quang Minh ¹⁾	344	445	
	West railway	12	26		Binh Xuyen	100	250	
	--	--	---		Others	0	1,005	
	Dong Anh	92	688	Bac Ninh	Tien Son ¹⁾	35	600	
East Coa Loa	--	105	Que Vo		212	700		
Eastern Hanoi	Gia Lam-(Duc Gian)	38	---	Hung Yen	NamSon-HapL	0	300	
	Sai Dong A	---	447		DaiDong-HoaS	0	300	
	Sai Dong B	80	---		Cho-YenPhong	0	150	
	--	--	---		Cluster	0	700	
Southern Hanoi	Co Bi	---	60	Hung Yen	Pho Noi A/B ¹⁾	485	615	
	Cau Buou	70	---		Others	0	620	
Western Hanoi	South Thang Long	---	275	Ha Tay	Phu Cat	327	1,200	
	Cau Dien	76	44		Hoa Lac	50	1,050	
	--	--	---		Others	0	1,600	
Inner Hanoi (within Ring3)	Minh Khai-Vinh Tuy	155	n.a.	Total			1,603	9,501
	Giap Bat	60	n.a.					
	Truong Dinh	125	---					
	Van Dien Phap	68	---					
	Chem	20	---					
	Others	686 ²⁾	---					
Whole industries		1,684 ³⁾	2,330					

1) Industrial estates relatively close to the boundary of Hanoi.
2) 686ha of small- and medium-scale industrial areas in inner Hanoi was estimated.
3) 1,684ha of industrial use was estimated by updated GIS land-use data, 2005 (JICA Study Team based it on the MONRE Land Use Map, 2003).

7) Tourism

As the capital city, Hanoi functions as the gateway to the country, but it also has an important role to play in the north as one of the three major hubs of Vietnam tourism. Considering the importance of economic development through the tourism sector, each local government in the northern region has created a Tourism Development Bureau and it is committed to tourism promotion and development. In the last five years, the growth rate in the number of international tourists to Hanoi has been high, hovering at a stable rate of 30% nationwide. In contrast, the growth rate of domestic tourists has achieved an increase by the local population's travel demand associated with economic development.

Many tourists who stay in Hanoi often make one or two-day trips to visit tourist sites including World Heritage sites in the surrounding provinces. Since 1995, the largest number of international tourists has come from China (21.7% in 2005). China being a neighboring country has come under the spotlight, offering a huge market for Hanoi (the second-ranked Chinese tourists overtook the first-ranked French in 2000 [26% in 2004]). The southern region, where beach resorts encourage longer stays, and the central region, where culture and history are the big attractions, enjoy higher growth rates compared to the north. Developing tourist sites in the northern region, including Hanoi, to encourage longer-staying guests, will be a major challenge.

Tourism activities have brought immeasurable tourism income to Hanoi's economy, which has been stable at around 10% of total GRDP of Hanoi in the past five years since 2001.

Tourism products in the city of Hanoi are underdeveloped compared to other cities in the world. The stimulation of attractive urban tourism resources including those for evening activities and other promotional measures are necessary. As the gateway to Vietnam and the capital city, it is also important to enhance its services function by providing information, tour guides, and others about the city and its surrounding provinces.

Table 7.2.4 Key Figures in Hanoi's Tourism Sector

	2001	2002	2003	2004	2005	AAGR01-05(%)
Hanoi Tourist Arrivals (000)	3,000	3,781	3,880	4,450	4,650	11.6
International	700	931	850	950	1,050	10.7
Domestic	2,300	2,850	3,030	3,500	3,600	11.9
HN share (international) (%)	30.0	35.4	35.0	32.4	30.3	--
Vietnam (international)	2,330	2,628	2,430	2,928	3,468	10.5
ALS- International (day) ¹⁾	--	3.1	3.25	3.3	3.35	--
ALS- Domestic (day) ¹⁾	--	2.3	2.45	2.55	2.65	--
Tourism Value-added (bil. VND)	3,850	4,500	4,600	5,300	6,400	13.5
Tourism Sector Share (%)	10.8	10.7	9.4	9.5	n.a.	--
Hanoi GRDP (bil VND-current)	35,717	41,944	49,090	55,996	n.a.	--

Source: VNAT (web-site), Hanoi Dept of Tourism.

1) ALS = Average length of stay indicates the estimated figure by the Revised Master Plan for Hanoi 2002.

Some adverse impacts on tourist sites and the environment have started to come up due to the expansion of urban areas which is associated with the urban growth of Hanoi. Conservation of nature and tourist resources, like historical and cultural sites, and the preservation of the landscape are major issues that should be balanced with urbanization.

Craft industry is another of Hanoi's tourism pillar. Although some production base and craft villages are found inside the city, most are still located in the surrounding provinces in the Red River delta. Products are collected in Hanoi, a major consumer center, for selling to international tourists and distribution to domestic and international markets. The sales of craft products contribute to foreign currency acquisition. Craft retailers including those in the Hanoi's Ancient Quarter have a significant role to play as they showcase craft items produced in the surrounding provinces. Hereafter, understanding the market needs, cultivating markets, developing designs, and other efforts will be inevitable for the sector's sustainable development.

Key to the sustainability of craft villages in the rural areas of Hanoi is promoting the craft industry to secure non-farm income. Therefore, technical assistance on product development vis a vis with those of other craft villages in the nearby provinces, quality improvement to enhance competitiveness, and improvement of the distribution are important.

Hanoi, the capital city, has relatively good tourism infrastructures: roads, transportation, communications, accommodation, etc., to accommodate tourists. However, a scarcity of accommodation has been brought to fore due to the recent increase in both domestic and international tourists. In particular, the capacity of mid-range and high-class international hotels is inadequate. Securing enough capacity for the international conference season, improvement of service quality in the hotel industry, and the development of human resources all in a comprehensive manner are necessary.

At the same time, a number of issues must be addressed including the deterioration of the environment due to increase traffic increase in major tourist sites, lack of safe and attractive transportation (tourist-friendly public transportation such as water transport), and lack of facilities including information boards.

8) Lifestyle

Currently, about 27% of Hanoi's households belong to the low-income class, 41% to the middle-income class, and 32% to the high-income class. Most households live in detached houses. The ratio of apartments and high-rise residents is still low and only high-income class households live in such kind of housing. No matter how low or high-income, most households in Hanoi own one or more motorcycles. Car ownership is still low at 2% in the whole city. Seven percent of the lowest-income group does not have any vehicle of their own. Television is in widespread use all over the city. However, other kinds of electric appliances, such as washing machine, air-conditioner, computer or mobile phone, are still only available for high-income people.

Differences in lifestyle can be observed by urban classification. As Table 2.2.7 indicates, households in the urban core, as well as Thanh Xuan and Cau Giay districts, in the urban fringe have high income (more than VND 3 million / month) and own more electric appliances as well as vehicles than those in suburban and rural areas. The ratio of households who live in apartments is also high in the urban core. However, households in the urban core have smaller living spaces and tend to live in relatively old housing, while those in suburban and rural districts enjoy larger housing space in spite of their low income level. It is remarkable that more than half of households in suburban and rural districts own more than one motorcycle even if their incomes are relatively low. This indicates that people in these areas still have less accessibility to public transportation or other means of transportation. As observed above, there are still disparities in lifestyles between the haves and the have-nots, and between urban and rural areas in Hanoi City. Local characteristics, convenience, and affordability should be carefully considered in planning. In addition, urban-rural linkages should be enhanced to avoid the further widening of disparities.

Table 7.2.5 Profile of Hanoi Households by Income Group

		Income Class (VND mil/day)						Total (Hanoi City)	
		Low		Middle		High			
		under 0.8M	0.8- 1.5M	1.5-2.0M	2.0-3.0M	3.0-4.0M	more than 4.0		
Household	% of Household	9	18	18	23	15	17	100	
	No. of Households (000)	68	138	139	172	113	129	760	
	Ave. No. Living Together	3.7	4.0	4.2	4.3	4.6	5.0	4.3	
	Ave. No. Living outside	0.1	0.2	0.2	0.5	0.9	1.0	0.2	
Housing	Self-owned	95	95	93	91	91	91	92	
	Type (%)	Detached	91	89	85	82	81	78	82
		Apartment	4	7	11	14	16	17	14
		Traditional	5	4	3	4	3	4	4
		High-rise	0	0	0	1	1	1	1
	Ave. No. of Rooms	2.8	3.1	3.4	3.6	4.0	4.6	3.7	
	Ave. Space (m2/person)	21.4	21.2	20.1	20.3	20.6	21.2	20.6	
Ave. Age (years)	32	30	30	31	32	30	32		
Vehicle Ownership (%)	Car	0	0	1	1	2	6	2	
	Motor-cycle	One	42	59	55	47	30	15	43
		More than 2	4	12	29	46	66	77	40
	Bicycle	46	26	14	5	2	1	12	
	No Vehicle	7	2	2	1	0	0	2	
Goods Ownership (%)	TV	92	97	99	99	99	100	98	
	Radio	38	47	56	59	64	71	58	
	Refrigerator	24	43	61	75	87	94	71	
	Washing machine	6	14	25	40	56	72	41	
	Air-con	2	4	8	16	25	44	19	
	Computer	4	8	17	31	45	63	32	
	Mobile phone	5	12	24	44	66	82	43	

Source: HAIDEP Household Interview Survey (HIS).

Table 7.2.6 Socio-economic Profile of Hanoi City by District

		Urban Core				Urban Fringe					Suburban		Rural			Hanoi City	
		Ba Dinh	Hoan Kiem	Hai Ba Trung	Dong Da	Tay Ho	Thanh Xuan	Cau Giay	Hoang Mai	Long Bien	Tu Liem	Thanh Tri	Soc Son	Dong Anh	Gia Lam		
Land-use Right: % of Self-Owned		81	71	81	80	94	78	88	85	92	96	98	98	95	92	89	
Housing	% of Self-owned	86	74	86	87	96	90	91	90	95	95	98	99	98	99	92	
	Type	Detached	69	54	72	72	92	75	83	84	88	91	91	95	94	94	82
		Apartment	26	29	24	26	5	24	15	11	8	4	6	0	1	1	14
		Traditional	3	16	4	1	3	0	3	2	3	5	3	4	5	5	4
		High-rise	1	1	0	1	0	1	0	3	1	0	0	0	0	0	1
	Ave. No. of Rooms	3.6	2.7	3.6	4.1	3.8	3.8	4.4	3.7	4.1	4.0	3.2	3.1	3.4	3.4	3.7	
Ave. Space (m ²)	72	48	71	77	103	78	103	89	98	130	89	85	109	96	88		
Ave. Age (ears)	36	63	41	36	21	32	24	25	29	28	30	25	26	31	32		
Vehicle Ownership (%)	Car	2	2	2	2	2	1	4	2	3	2	0	0	0	1	2	
	Motor-cycle	One	55	47	51	51	55	51	59	48	44	36	27	14	26	43	
		More than 1	31	37	34	34	34	35	29	36	40	45	44	60	53	40	
Bicycle	8	7	9	9	8	10	7	12	9	15	24	23	16	15	12		
Goods Ownership (%)	TV	99	99	99	99	99	99	100	99	99	98	96	96	97	98	98	
	Radio	58	63	60	66	57	61	66	60	61	53	45	49	46	67	58	
	Refrigerator	92	93	86	91	84	86	92	80	73	61	44	24	43	46	71	
	Washing Machine	60	57	57	63	50	52	67	43	37	27	13	4	15	18	41	
	Air-com	36	31	29	36	20	23	32	18	12	7	2	0	2	4	19	
	Computer	49	41	41	51	36	45	57	34	26	22	9	3	10	11	32	
Mobile Phone	64	58	57	61	51	56	65	46	37	31	18	8	21	18	43		
Ave. HH Income (VND 000/month)		3,323	3,297	3,307	3,179	2,905	3,005	3,373	2,757	2,594	2,233	1,848	1,534	2,034	2,207	2,700	

Source: HAIDEP, Household Interview Survey (HIS).

7.3 Socio-economic Development Orientation

1) General Orientation

Socio-economic development is an important part of urban planning and is integrated with the physical development of a city. The sustainability of socio-economic development is greatly affected by the quality and the configuration of infrastructure which is critical to the promotion of competitiveness of economic activities and the livability of the urban areas.

The goals for socio-economic development are to maintain a stably high economic growth in the future, improve living conditions, and promote culture. These goals are further elaborated into a number of specific objectives including the further opening up to a market-oriented economy, the expansion of the service sector, the integration with the international economy, the development of transportation infrastructure including primary roads and urban rail, the development of subcenters and urban areas, and the strengthening of human resource capacity, among others (see Table 7.3.1).

Table 7.3.1 Target Socio-economic Indicators, 2020

Indicator		(Unit)	2005 ¹⁾	2010	2020
Population	Total population	000	3,183	3,650	4,500
	Urban population	000	1,990	3,050	3,950
	Urbanization rate	%	62.5	83.4	87.8
Economy	GRDP growth rate	%	11.2	11.5	11.0
	GRDP ²⁾	billion VND	32,915	98,443	287,691
	GRDP structure (pri /sec /ter)	%	2 / 41 / 57	1 / 42 / 57	1 / 45 / 54
	Per capita GRDP ³⁾	US\$	1,350	2,350	6,000
Employment	Total employment	000	1,517	1,650	2,000
	Employment structure	%	22/22/56	15/31/54	7/35/58
Enrollment	Enrollment (pri/low-sec/sec)	%	95/95/78 ⁴⁾	100/100/90	100/100/100
	Number of tertiary students ⁵⁾	000	447	456	518

Source: HAIDEP Study Team, 5-year Socio-Economic Development Plan.

1) Forecast of socio-economic framework was based on 2004 data.

2) At 1994 prices.

3) Per capita GRDP is estimated in the five-year socio-economic development plan for Hanoi City.

4) As of 1999 (population census).

5) Including universities, colleges, and technical vocational schools.

7.4 Economic Development

1) Industrial Development

Hanoi is now at a crossroad, facing new challenges in the future of industrial development which has served as the country's engine of growth. As urbanization progresses and infrastructures in the region develop, the competition from other provinces increase and the negative impacts of conventional industries on the environment become readily apparent. Hence further industrial development in Hanoi needs to be pursued under a more strategic role-sharing with adjoining provinces to boost the synergy of an integrated region. While other provinces and cities in the region intend to further promote economic and industrial development, Hanoi must shift to more knowledge-based economic activities to take the lead in the region's economic development. Toward this end, Hanoi's edge in providing higher education must be strengthened and collaborations with the economic sector need to be promoted to ensure that the latter's human capital needs are met. At the same time, research and development companies must also be provided with quality infrastructures and a conducive investment environment.

The main areas that need action to ensure further industrial development are more specifically as follows:

- (i) Further improvement in the performance of provinces and the region with regard to entry costs, proactivity and transparency in dealing with business and investments, treatment given to both private enterprises and SOEs, private sector development policy, time costs of regulatory compliance/ inspections, access to land, informal charges, etc.³
- (ii) Promotion and expansion of supporting industries to strengthen the basis for a more competitive industrial development.
- (iii) Restructuring of SOEs to make them competitive with the private enterprises.
- (iv) Provision of adequate support for SMEs.
- (v) Development and promotion of diversified high-tech industries such as electronics, computers, information technology, etc.

The overall orientation stated in the policies of the Ministry of Industry⁴ is for Hanoi to take advantage of the accumulation of higher-quality human resources, the concentration of knowledge-based institutions and facilities focusing on telecommunications and IT industries, and the large market potential in Hanoi. They are more specifically as follows:

- (i) Export industries led by FDI manufacturers (electrical products, automobiles and motorcycles, garment, textile and shoes, etc).
- (ii) Supporting industries for FDI manufacturers (parts production for above manufacturers such as electronic and plastic components, etc).
- (iii) Research and development supporting industries (machine control system development, mechanical design and management, prototype production, industrial design and software development, etc).
- (iv) Urban service industries (paper and printing, publishing, food processing, building construction materials and parts, furniture, business support software development).

³ USAID-VCCI (2005). The Provincial Competitiveness Index on the Business Environment in Vietnam.

⁴ Industry: Strategy Toward WTO Accession / Ministry of Industry, 2003.

In order to promote high-tech industries, Hanoi must provide a concrete mechanism to attract investors. An approach is to encourage research and development activities and strengthen coordination between universities and research organizations on one hand and various establishments on the other to improve the technology base, creation and marketing of new products.⁵

A spatial development strategy for industries is becoming critical to maintain Vietnam's competitive edge over other countries in the region. This involves two aspects: one is the relocation of polluting factories from urban areas, and the other is the accommodation of strategic industries targeting foreign trade. For the former, adequate sites for relocation must be provided, while taking account of the sustainability of operations. For the latter, industrial estates or zones must be provided along primary transportation corridors, such as NH2, NH18, and NH5, in coordination with other provinces.

2) Commercial and Business Development

The expansion of the business, commercial, and service sectors in Hanoi is critical. With a growing economy, socio-economic activities diversify and the people's lifestyles change. In all this, the role of the service sector becomes more significant as it supports such changes. For Hanoi's sustainable development, however, the development of quality urban centers equipped with modern and efficient infrastructure and services is necessary. Moreover, Hanoi must also make available quality housing and better living conditions with necessary amenities.

The strategy to develop the commercial/business sector must entail the improvement of institutional arrangements to ensure a conducive investment environment and the determination of a clear orientation for the locations of the establishments. Commercial and business enterprises at the regional and city levels must be located in the city center or in subcenters of planned development areas for the people to have better access to them and for the investors to benefit from such strategic locations. In addition to the Ancient Quarter and the French Quarter, new centers must be developed to accommodate future demands in an organized manner. When Hanoi succeeds in revitalizing the Ancient Quarter and the French Quarter while preserving their cultural value and meeting new development needs, these areas could become globally competitive cultural-cum-commercial/ business centers. An adequate mix of residential function in urban centers is also desirable. At the community level, commercial and business activities must also be promoted in a way that they are integrated with residential areas and other land uses without congesting local traffic and disturbing the environment. This can be done through adequate land-use zoning and development control.

SMEs and the informal sector play an important role in employment generation and economic development of the city. Moreover, they add value and color to the socio-cultural scene of Hanoi. While they may transform in many ways as the economy grows, it is crucial to establish a clearer policy for supporting them. Traditional handicraft businesses are one of the important sectors that can further contribute to the city's economic development and cultural enhancement. At the same time, they also strengthen urban-rural linkages, benefiting not only craft villages in the rural areas of Hanoi but those in the hinterland provinces, as well.

⁵ Industry: Strategy Toward WTO Accession / Ministry of Industry 2003

3) Tourism Development

Tourism is a strategic industry in Hanoi not only because it is labor-intensive and thus employs many, but because the city has a variety of resources that are unmatched elsewhere. Moreover, it serves as a jump-off point or base for tourism destinations in the hinterland, in the north, or elsewhere. Tourism can even be developed based on infrastructure that can be shared with other industries.

Hanoi's tourism sector has grown rapidly at a growth rate of 10.7% and 11.9% in terms of international and domestic tourist arrivals, respectively. In 2005 the number of international and domestic tourist arrivals was 1.05 million and 3.6 million, respectively. That year tourism's contribution to the city's economy was a remarkable VND 6,400 billion (US\$ 400 million), accounting for about 10% of the total city GRDP. It is expected that the number of international visitors will increase to 4 million and that of domestic visitors to 19 million by 2020. Considering the high economic growth in the Asian region and the surging interest in Vietnam, the eventual figure may even exceed this forecast. Again, Hanoi must be prepared for such eventuality.

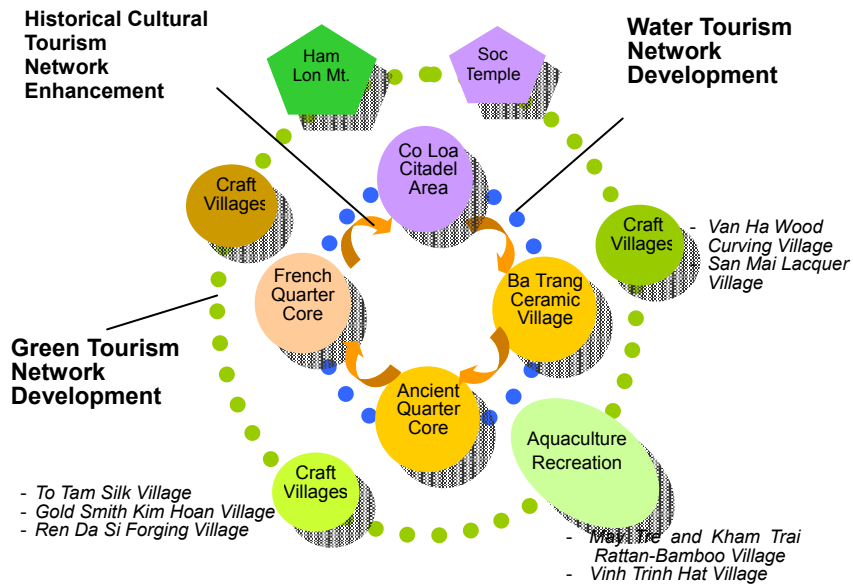
Table 7.4.1 Tourist Arrivals and Expenditure

	2005	2010	2020	Reference
Hanoi Tourist Arrivals (000)	4,650	8,000	23,000	Average Annual Growth: 11.2%
International	1,050	1,700	4,000	Hanoi tourism MP:1800 (2010)
Domestic	3,600	6,300	19,000	Hanoi tourism MP:5600 (2010)
Vietnam (international (000))	3,468	5,700	10,000	Average annual growth: 7.3%
Tourism Value-added (bil. VND)	6,400	12,100	43,000	

Sources: Supplement, Revision of the Master Plan for Hanoi Tourism Development 2002. Asia/Pacific Air Traffic-Growth and Constraints (ATAG-IATA 2001). Boeing Current Market Outlook 2005. WTO: Tourism Vision 2020.

Hanoi and its hinterland region offer many potential tourism experiences that have the underpinnings of a unique blend of rich culture, colorful history, and diverse nature in four seasons. Stable security conditions further bolster Vietnam's tourism industry. However, many of the region's resources remain largely untapped simply because infrastructure and services are not available. Transportation and accommodations are insufficient and services need to be improved. While the northern region as a whole offers a variety of tourism products, due consideration must be given to Hanoi as the most important tourism resource. It is a common observation that large cities, especially capital cities, are tourist destinations in themselves. Thus, tourism development and promotion for Hanoi must be an integral part of urban planning and development, especially in relation to the development strategy of adopting the water-greeneries-culture concept as the physical and cultural backbone for the city's development.

Figure 7.4.1 Tourist Destinations In and Around Hanoi



The requirement for hotel rooms to accommodate the 19 million tourists expected by 2020 is enormous at 52,700 rooms. This requires additional 32,500 rooms on top of the existing 12,500⁶ rooms in Hanoi. Moreover, the quality of hotels and hotel rooms has to improve. To increase the accommodation capacity, investment incentives must be offered to larger hotels. While guidelines and support measures have to be provided to improve small hotels, providing training to tourism personnel is also necessary. Where these additional hotels and accommodation will be located is an important urban planning and development agenda. The city must find adequate locations and provide investment incentives. It is HAIDEP’s view that investments must basically gravitate toward the planned green network and special areas such as the Co Loa – Thang Long axis which cover the Red River, Ho Tay, the Ancient Quarter, and the French Quarter.

Table 7.4.2 Accommodation Requirements

Type	2005 ¹⁾	2010	2020	Requirement	
				2005-2010	2010-2020
High Class (3-5 stars)	2,045	4,000	16,000	1,955	12,000
Low Class (2-1 stars)	6,285	13,000	27,000	6,715	14,000
Subtotal	8,330	17,000	43,000	8,670	26,000
Other Class	4,170	3,200	9,700	970	6,500
Total	12,500	20,200	52,700	9,640	32,500

Source: Estimated by the HAIDEP Study Team.

1) Existing hotel data is from the Ministry of Foreign Affairs website.

The Ancient Quarter and craft villages are two of Hanoi’s most unique and valuable tourism resources that can become very competitive in the international market. Besides sharing a very long history with the craft villages, the Ancient Quarter has a socio-cultural network and possesses intangible cultural values that have been handed down from generations past, forming the core value of the Ancient Quarter, as proven in the pilot project. Hence, the physical revitalization of the Ancient Quarter for tourism has to consider the area’s cultural preservation.

⁶ The existing 12,500 hotel rooms are composed of 2,045 rooms (with 3 to 5-star rating), 6,285 (1-2 stars), and 4,170 rooms (others).

4) Strengthening of Higher Education

The higher education sector must be looked into not only from the perspective of boosting research and development, but also from the economic point of view: with more competitive national and regional education facilities, Hanoi can attract more students and brains, which in turn can draw more auxiliary investments into Hanoi and provide a stable pool of quality human capital that will service other industries and sectors. Since Hanoi is heading toward knowledge-based economy and industries, the role of higher education must be more clearly defined and the strategy for upgrading its capacity and spatial development must be formulated. At the same time, closer collaboration between higher education and the industrial sector must be made to enable the former to contribute concretely to socio-economic development. This can be expected when the former is able to contribute to technological innovations, human resource development, and improved operation and management.

5) Agricultural Development

The agricultural sector must be given proper attention in two ways: one is in the provision of support to shift from traditional agriculture to urban market-oriented cash crops, and the other is in the conversion of agricultural lands. During the process of rapid urbanization, large tracts of agricultural lands must be converted into urban lands. Although urbanization is an irreversible trend, the process must be properly managed to achieve effective urban development and at the same time to protect the livelihoods and the traditions of farmers and communities. To achieve these, a detailed plan must be prepared involving affected communities in a way that resettlement is minimized and alternative economic activities are provided for affected communities. District plans are deemed best suited to attend to such local issues and needs but they should follow the overall orientation of the city's general plan. A comprehensive approach for integrating socio-economic and spatial development is therefore necessary.

7.5 Social Development

1) Education

Hanoi City has been and will be the center of education in Vietnam and is expected to take the lead in enhancing the people's knowledge, fostering talents, and developing qualified human resources. In Hanoi, the enrollment rates among school-age children have reached 98%, 97%, and 63% in primary, lower secondary, and higher secondary schools, respectively. At the same time, however, the sector is facing major shortcomings including the following:

- (i) Lack of schools, particularly primary schools and kindergartens, resulting in the high proportion of students to teachers and classrooms.
- (ii) Insufficient and uneven distribution of private schools and semi-public schools, as well as a lack of variety in education services.
- (iii) Inappropriate regulation of school land.
- (iv) Inadequate cohesiveness of relationships among school, family, and society, as well as among different levels of education, and between central and regional authorities.

While Hanoi has played a dominant role in the provision of higher education in Vietnam, with more than 28% of the country's universities located in the city, it is recommended that vocational and technical training be developed to provide well-trained labor to support industrial development. Therefore, the development direction for the education sector should move toward:

- (i) Promoting the privatization of high-level training, research training, or basic training in the natural sciences, technology and social sciences, and in key professions such as education, health care, agriculture, forestry, aquaculture, industry, construction, economics, etc.
- (ii) Promoting the establishment of private universities offering education in the fields of culture, arts, sports, economics, and technology and with expected capacities of 10,000-15,000 students for each field.
- (iii) Constructing new universities and colleges in Hanoi City as well as facilitating more educational programs and training opportunities across the country.
- (iv) Upgrading some colleges to become universities.
- (v) Strengthening the National University and other key universities.
- (vi) Developing the Hanoi Open Institute to provide higher and continuing learning through distance education at par with international standards.
- (vii) Making state universities financially self-reliant as stated in Decree No.10/2002/ND-CP.

2) Health Care Services

The socio-economic development plan of Hanoi City for 2000 - 2010 specifies the major development criteria for health care services for the period, as follows:

- (i) Reduce the proportion of sick people, improve the level of people's health, and raise life expectancy.
- (ii) Encourage private health care services along with state-owned ones. By 2010, the private sector should shoulder 40 - 50% of the total demand for medical services.
- (iii) Upgrade health care facilities and establish international cooperation.

A network of hospitals in Hanoi City is necessary to satisfy the medical service demand both at the commune and the city levels. There should also be balance in the distribution of hospitals in terms of health service capability (ie primary, secondary, and tertiary care hospitals) and classification (ie general and special hospitals). Currently health care centers are not rationally distributed.

Provincial hospitals and commune clinics should likewise be equipped with adequate medical equipment to handle patients, who would otherwise go to general or special hospitals in Hanoi City. For cases that cannot be attended to at commune health-care centers, these are often admitted to Hanoi City hospitals. Hence, health care services in Hanoi City need to improve.

The development indicators for the health sector specified in the socio-economic development for Hanoi City in 2010 - 2020 are summarized in Table 7.5.1.

Table 7.5.1 Development Indicators for Hanoi City for 2010 and 2020

		2005	2010	2020
Life expectancy				
Male	Year-old	69	76	80
Female			78	85
Malnutrition rate for children under 5 years	%	14	5	-
Vaccination rate	%	99.5	99.5	-
Hospital Facility				
Number of hospital bed	/10 thousand persons	12	14	17
Number of doctor	/10 thousand persons		12	14

Source: Socio-economic development plan for Hanoi City in 2000-2010 (for 2005),
 5-year Socio-economic development plan for Hanoi City in 2005-2010 (for 2010 and 2020)

Hanoi City has a plan to build new hospitals and relocate others to suburban areas in order to uplift the health care services in these areas and to ease the load of city hospitals. It includes the relocation of K Hospital and the obstetrics hospital as well as the development of a 1000-bed hospital in Dong Anh District.

7.6 Quality of Life

Based on the results of the HIS conducted in HAIDEP among 20,000 households in the city in March 2005 (see Table 7.6.1), households can be classified into four types: (i) “single households” with only one member; (ii) “shared households” composed of same-gender set of friends or siblings, which is often seen among students or young workers in Hanoi City; (iii) “nuclear households” comprise three types (ie one without children⁷, one with a parent and children, and one with both parents and children), and (iv) “multiple households” which are composed of members spanning more than 3 generations. The socio-economic characteristics of each type of households are summarized below.

- (a) **Single Households:** Most single households consist of older persons living alone. Those in their 50s and 60s account for 20% and 61%, respectively, of the total, with females comprising 61%. Since most of them are retired or jobless, the average household income of this group is the lowest among all household categories. Thus their ownership of vehicles and housing appliances is lower than the average. On the other hand, this group’s per capita average living area is the highest at 61m². Within this group, the share of households residing in apartments is 24%, which is higher than the average rate of 12% of the total respondents.
- (b) **Shared Households:** This type of household is popular among students or workers who share rooms with friends and colleagues, or among the elderly who share rooms with relatives or others. In this group, the share of households with members in their 20s is the highest at 28%. The average income of shared households is lower than the average of the total respondents. Regarding housing conditions, the per capita floor area is almost the average of the total respondents.
- (c) **Nuclear Households:** This type of household is becoming popular in Hanoi City among the young generation especially those in their 30s and 40s. Socio-economic conditions, housing standard, and its distribution are almost in the range of the average for the city. Per capita floor area range from 21m² to 40m², with 82% living in detached houses, and 77% owning motorcycles. However, households with a single parent and several children have lower socio-economic conditions. Motorcycle ownership among these households is only 46% and the average monthly household income is only VND 1.46 million, compared with VND 2.24 million for households comprising both parents and children.
- (d) **Multiple Households:** This type of household is composed of more than two generations. They account for 61% of total households in Hanoi City. Of these households, 42% have children and 58% have none. Socio-economic conditions are slightly higher than average owing to its large number of gainfully employed members. Per capita floor area is the lowest among all types of households at 18 - 21m², which is mostly the result of having a large household.

In general, the quality of life of Hanoi households is relatively higher compared to that of households in the same income levels in other countries. The ownership of basic household commodities, housing, and coverage of urban services is relatively high.

⁷ Persons younger than 16 years of age.

Table 7.6.1 Characteristics of Households in Hanoi

		Household Size						Total		
		Single	Shared Household ¹⁾	Nuclear Household			Multiple Households			
				Without Children	Single Parents	With Children	Without Children		With Children	
Household										
Number of HH (000)		7	17	53	13	205	266	194	755	
% to Total		1	2	7	2	27	35	26	100	
Average Size		1.0	2.8	2.0	2.6	3.8	4.5	5.4	4.3	
Household Member										
Gender (%)	Male	38.7	33.4	50.0	35.3	50.4	51.2	48.2	49.5	
	Female	61.3	66.6	50.0	64.7	49.6	48.8	51.8	50.5	
Age (%)	6-9	0.0	1.9	0.0	6.9	6.9	0.0	4.4	3.2	
	10-14	0.0	3.6	0.0	18.6	16.6	0.0	8.6	7.1	
	15-17	0.7	2.3	0.0	15.9	10.8	0.0	6.5	5.0	
	18-19	0.0	1.4	0.0	11.6	5.7	0.0	4.7	3.1	
	20-29	6.2	28.2	6.1	7.4	6.1	34.4	18.8	20.9	
	30-39	5.8	13.1	5.0	6.9	17.9	14.8	11.9	14.1	
	40-49	5.9	12.8	5.7	19.5	26.4	5.8	17.5	14.9	
	50-59	20.4	14.2	20.9	8.8	6.7	21.1	10.8	13.9	
60 more	60.9	22.5	62.4	4.2	3.0	23.9	16.8	17.7		
Housing										
Ave. Living Space (m ²)	Per HH	61	65	81	67	79	93	98	88	
	Per capita	61	23	40	26	21	21	18	21	
Housing Type (%)	Traditional house	6.0	5.5	4.1	2.4	3.1	4.0	4.6	3.1	
	Apartment	23.7	24.4	21.6	13.4	11.8	14.6	11.4	11.8	
	High-rise apartment	5.2	1.3	0.9	0.4	0.7	0.5	0.3	0.7	
	Detached house	65.1	68.8	73.3	83.8	84.5	80.9	83.7	84.5	
Period of Stay (year)		34	36	39	30	39	45	52	44	
	Urban Core	49	49	46	36	33	36	33	35	
	Urban Fringe	32	31	29	31	25	32	25	28	
	Suburban	13	10	10	14	15	13	14	13	
	Rural	6	9	14	19	27	19	28	23	
Economic Conditions										
Household Income	Ave. (mil VND/month)	1.08	1.98	1.81	1.46	2.24	3.21	2.89	2.69	
	(%)	0.8 below	52.5	17.4	16.8	45.5	12.5	3.9	5.6	9.0
		0.8 – 2.0	35.3	45.1	54.7	37.3	45.0	27.3	34.2	36.4
		2.0 – 4.0	10.0	29.7	22.5	10.9	32.4	43.9	41.3	37.5
		4.0 – 8.0	2.2	7.2	5.2	5.0	8.7	21.7	16.5	14.9
		8.0 above	0.0	0.6	0.7	1.3	1.3	3.2	2.4	2.2
Vehicle Ownership (%)	Bicycle	45	65	63	79	81	75	88	79	
	Motorcycle	29	72	57	46	84	92	91	85	
	Car	0	1	1	1	2	2	2	2	
Access to Urban Services (%)		100.0	99.4	99.8	97.8	99.5	99.8	99.5	99.6	
	Piped water supply	76.3	74.8	74.7	61.8	57.6	65.9	57.0	62.2	
	Toilet facility	87.1	82.8	83.3	73.0	77.5	81.3	76.7	79.2	
	Gas	69.8	78.2	81.3	62.9	73.7	80.4	73.5	76.4	
	Telephone (fixed)	67.7	79.9	82.9	59.2	74.5	88.5	82.2	81.8	
	Solid waste collection	87.2	88.5	87.4	81.6	82.0	87.1	80.8	84.0	
	Internet	9.2	10.7	7.9	4.9	7.5	12.0	9.4	9.7	
House Goods (%)	Air-con	14.2	16.8	23.2	11.4	18.0	19.9	18.0	18.9	
	Washing machine	25.8	35.7	41.5	25.0	38.6	45.0	39.2	40.8	
	Refrigerator	59.7	71.5	75.8	51.2	67.0	76.1	70.0	71.4	
	TV	93.4	96.9	97.6	91.9	98.1	98.9	98.7	98.3	
	Radio	56.2	50.9	60.6	39.5	51.8	63.4	59.0	58.2	
	Computer	16.1	32.3	18.8	25.6	25.8	38.8	32.3	31.7	
Mobile phone	20.4	38.8	22.7	18.7	35.7	54.2	42.8	42.8		

1) Households with members of the same gender.

7.7 Proposed Socio-economic Development Orientation

1) Goals and Objectives

While a high economic growth rate has been experienced in the past years and is expected to continue in the coming years, the growth process should focus on improving the social environment for the benefit of society now and in the future. Promoting sustainable development is thus a critical policy agenda.

It is likewise proposed that Hanoi should shift to more knowledge-based economic activities based on improved infrastructure and human resources. The service sector should also expand and diversify to cater to changing demands for services.

2) Proposed Strategies, Actions, and Strategic Projects

In order to promote the objectives of a sustainable socio-economic development, five strategies are set for which more concrete actions and strategic projects are proposed (see Figure 7.7.1). The basic strategies are as follows:

- (i) Establishment of a competitive economic base
- (ii) Updating of industrial development strategies
- (iii) Further Improvement of investment environment
- (iv) Establishment of a concrete support system for low-income groups and the urban poor
- (v) Strengthening of the capabilities of communities

Strategic projects for priority action are the following:

- (i) Establishment of updated urban economic development strategies and conducive investment environment
- (ii) Establishment of supporting mechanism for SMEs including informal sector
- (iii) Establishment of competitive urban industrial estates/zones
- (iv) Strengthening of capacity and technological linkages of higher education and urban industries
- (v) Strengthening of tourism promotion, infrastructure, and services
- (vi) Establishment of participatory community environment management system
- (vii) Development of effective mechanism to address urban poverty and rural issues

Figure 7.7.1 Proposed Strategies, Actions, and Strategic Projects for Socio-economic Development



Objectives	<ul style="list-style-type: none"> • Achieve sustainable, high economic growth through knowledge-based industries • Reduce inequalities and enhance quality of life of the people including the poor
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Strategy	Action	Monitoring Indicator
C1 Establish competitive economic base	C11 Establish interministerial coordination mechanism to promote new urban economics involving private sector and higher education C12 Develop new types of urban industries which combine culture, technology, and human resources C13 Provide strategic supporting infrastructure to enhance competitiveness of existing industries	<ul style="list-style-type: none"> • Share of new urban industries (output value, employment, number of establishments) • Institutional arrangements made
C2 Update industrial development strategies	C21 Relocate polluting industries C22 Establish concrete strategies for developing industries and industrial estates/zones in close coordination with other provinces in the region C23 Provide necessary supporting environment for industrial estates including housing, accessibility, and amenities for workers	<ul style="list-style-type: none"> • Number of polluting industries relocated and satisfaction of communities • Progress of projects • Satisfaction among industries
C3 Improve investment environment further	C31 Improve Hanoi's competitiveness in Vietnam and Asia on providing conducive environment for FDIs C32 Further improve investment information system for Hanoi and region C33 Establish coordinated one-stop center for Hanoi and region	<ul style="list-style-type: none"> • Competitiveness index and ranking • Satisfaction among investors and users • Accessibility to information and level of business facilitation
C4 Establish concrete support system for low-income groups and urban poor	C41 Define and identify the urban poor in Hanoi C42 Establish adequate policy on providing needed support for the poor in sustainable manner C43 Establish adequate monitoring mechanism	<ul style="list-style-type: none"> • Shared definition and indicators of the poor • Satisfaction among the poor • Accessibility to indicators and related information
C5 Strengthen capabilities of communities	C51 Define and identify issues at the community level C52 Establish adequate policy on providing needed support in sustainable manner. C53 Establish adequate monitoring mechanism	<ul style="list-style-type: none"> • Available mechanism for public participation • Available plans / programs • Number of meetings and participants

Strategic Projects	PC1 Establishment of updated urban economic development strategies and conducive investment environment PC2 Establishment of supporting mechanism for SMEs including informal sector PC3 Establishment of competitive urban industrial estates/zones PC4 Strengthening of capacity and technological linkages of higher education and urban industries PC5 Strengthening of tourism promotion, infrastructure, and services PC6 Establishment of participatory community environment management system PC7 Development of effective mechanism to address urban poverty and rural issues
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Source: HAIDEP Study Team.