

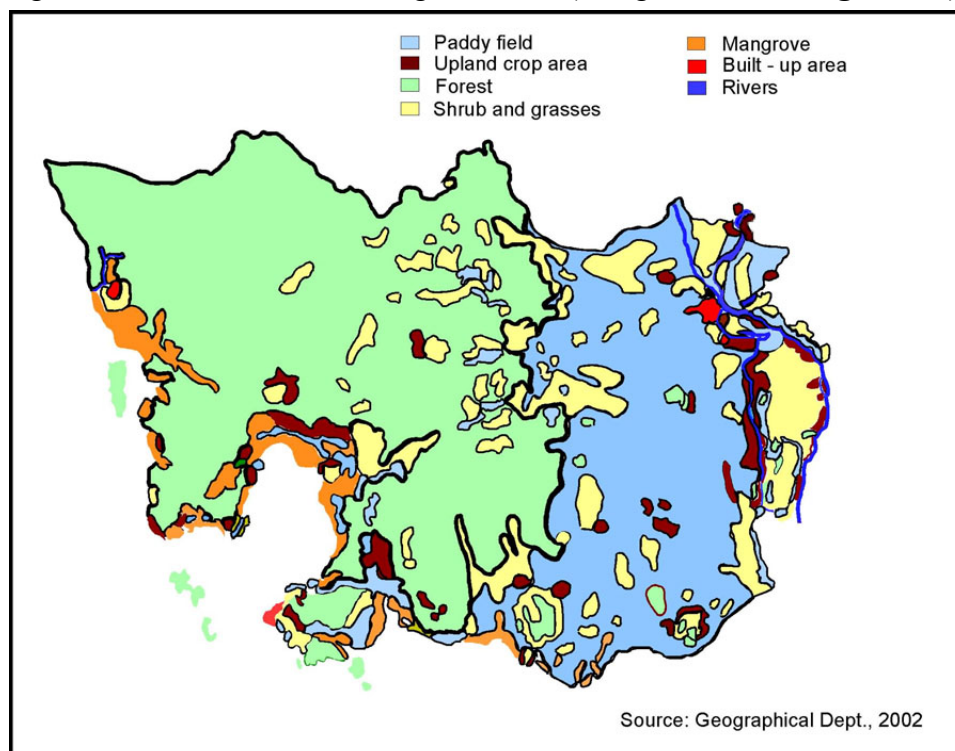
## 4.2 SPATIAL FEATURES

### 4.2.1 Land Use

Present land use almost exactly follows the land capability of the area. Three types of land use are dominant.

- In the plains, rain fed, and single cropping paddy is predominant (light blue).
- In the mountains, lands are covered with forests and shrubs (green).

Along the coast, there are rich mangrove areas (orange colored in **Figure 4-7**).



**Figure 4-7** Current Land Use in the Study Area

**Figure 4-8** shows the location of national parks in the Study area. The areas surrounded in red circles are designated national parks. The hilly lands adjoining to the coast line are mostly protected forests.

Sihanoukville is surrounded by these National Parks.

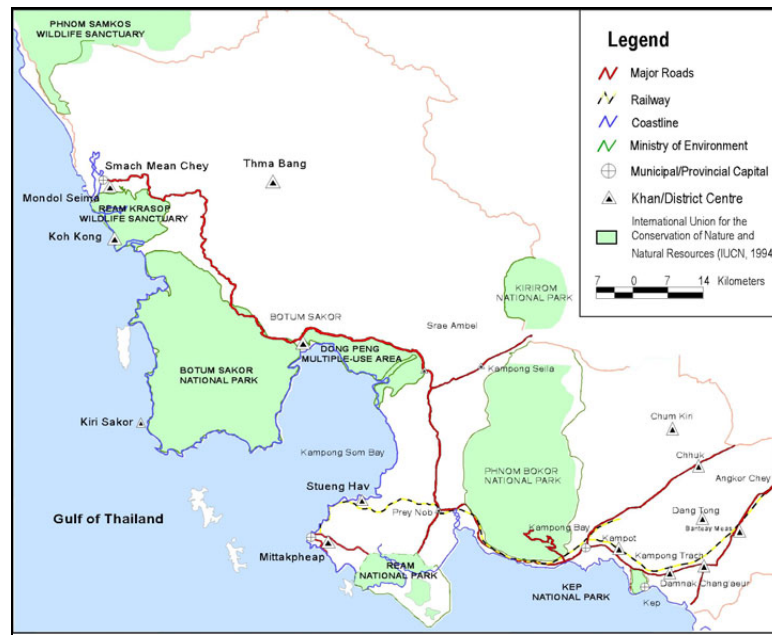


Figure 4-8 Location of National Parks

#### 4.2.2 City Centers and Economic Links

Phnom Penh and its suburban areas including Kandal and urban sub-centers in Kampong Spueu and Takaev accommodate various urban functions. They hold nearly 85% of the manufacturing employment in Cambodia. As already noted, there is an international link to Ho Chi Minh City and to the Tonle Sap.

Other minor towns and sub-centers within the study area are all located along the coast, including Kaoh Kong, which is a gateway to Thailand along the coast, Kampot, and Sihanoukville (Krong Preah Sihanouk). Between the Phnom Penh metropolitan area and the coastal cities, there are no substantial urban (non-agricultural) concentrations. National Road No.4 connects the Capital to the Sihanoukville port, and thus to the world.

As already described, the coastal strip is geo-economically separated by the hilly region of the Cardamom and Elephant Mountains where the land capability is low and area unsuitable for agricultural production. Thus, the present role of National Road No.4 is limited as a transport corridor connecting the Sihanoukville Port to Phnom Penh.

In case of National Road No.3, more population concentration is present from suburban areas of Phnom Penh to lowland part of Kampot. The majority of the population is engaged in low productivity agriculture due to limited land capabilities. At present, NR 3 is not functioning even as a transport corridor beyond Kampot (up to Kampong Bay) partly due to bad condition in its coastal portion (this portion of NR3 is now under construction for upgrading). It is also true that economic links between the agriculture in the plains and the port

activities of Sihanoukville are very weak. At present, economic activities along NR3 is more closely linked with Vietnam.

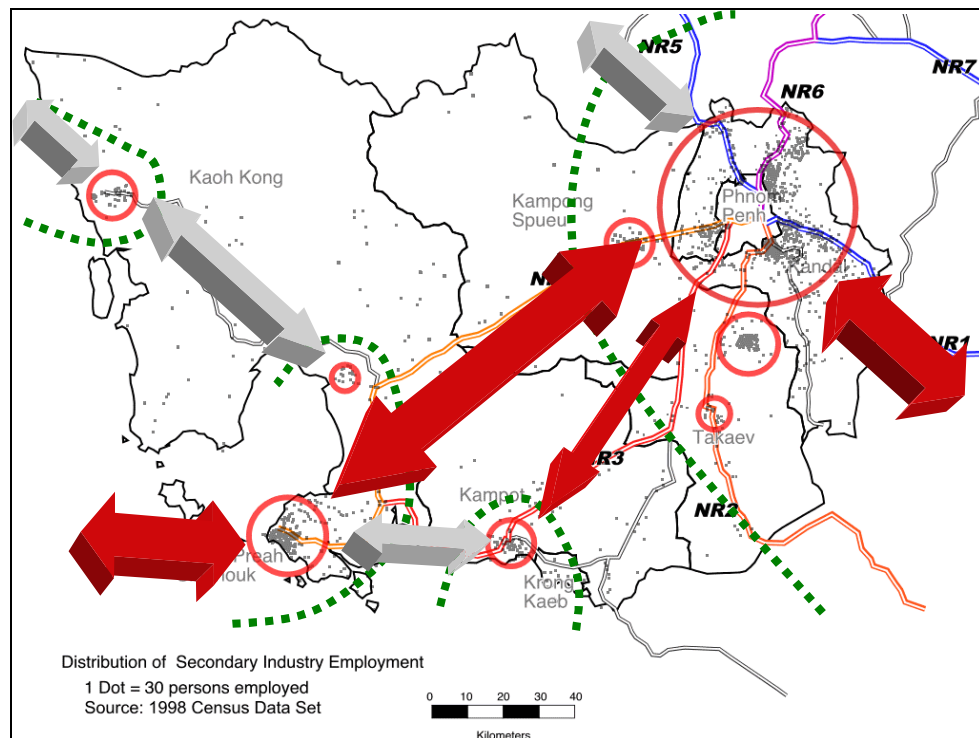


Figure 4-9 Centers of Secondary Industry Employment and Major Roads

Given this present structure in the Study Area, it is quite unreasonable to expect immediate forward and backward links between economies in the plains and Sihanoukville. In the medium to long-term perspective, the local resource-based industries such as wood processing, wood products, or fishery-based processing could be options to establish local links between export processing activities and the local economy. It is, however, first necessary to establish a sustainable resource management system and dispute resolution mechanisms.

### 4.3 SOCIO-ECONOMY

#### 4.3.1 Demographic Features

Table 4-12 indicates that most of the population in Kampong Speue, Kampong Chhnang, Kandal, Kaoh Kong, and Takaev Provinces live in rural areas. Only in Krong Preah Sihanouk, less than half, 43 per cent was rural population. The total of the rural population in these areas were approximately 300,000. The ratios of rural population in the other provinces were between 78 to 95 per cent.

**Table 4-11 Population and Land by Different Geographic Types in the Study Area**

Area Name	Total Population (000)				Land Area (km2)				Population Density (Persons/ km2)				Urban Population (000)				Urban Pop Ratio (%)
	Total	Coastal Strip	Plateau and Mountain	Plain	Total	Coastal Strip	Plateau and Mountain	Plain	Total	Coastal Strip	Plateau and Mountain	Plain	Total	Coastal Strip	Plateau and Mountain	Plain	
<b>Whole Country</b>	11,438	--	--	--	178,035	--	--	--	64	--	--	--	1,795	--	--	--	16
Phnom Penh	1,000	none	none	1,000	290	none	none	290	3,448	none	none		570	none	none	570	57
%	100	--	--	100	100	--	--	100	--	--	--	--	100	--	--	100	
<b>Study Area</b>	3,280	282	306	2,702	31,049	2,763	17,127	11,207	106	102	18	241	357	157	54	139	20
%	100	9	9	82	100	9	55	36					100	44	15	39	
Kandal	1,075	none	none	1,075	3,568	none	none	3,568	301	--	--	301	58	none	none	58	5
%	100	--	--	100	100	--	--	100	--	--	--	--	100	--	--	100	
Takaev	790	none	none	790	3,563	none	none	3,563	222	--	--	222	40	none	none	40	5
%	100	--	--	100	100	--	--	100					100	--	--	100	
Kampong Spueu	599	none	134	465	7,017	none	4,775	2,242	85	--	28	207	41	0	0	41	7
%	100	--	22	78	100	--	68	32	--	--	--	--	100	0	0	100	
Kampot	528	107	60	371	4,873	577	2,510	1,834	108	185	24	203	33	33	0	0	6
%	100	20	11	70	100	12	52	38				100	100	0	0		
Kaoh Kong	132	65	67	none	11,160	1,938	9,222	none	12	33	7	--	29	14	8	none	22
%	100	49	51	--	100	17	83	--	--	--	--	--	100	47	29	--	
Krong Preah Sihanouk	156	110	45	none	868	248	620	none	179	445	73	--	156	110	45	none	100
%	100	71	29	--	100	29	71	--					100	71	29	--	

Source: Census 1998

**Table 4-12 Rural Population in the Study Area**

	Area(Km2)	Population (000)	Rural Population (000)	% of Rural Population
Kandal	3,568	1,075	1,017	95
Takaev	3,563	790	750	95
Kampong Spueu	7,017	599 (620/2001)	558	93
Kampot	5,209	528	495	94
Kaoh Kong	11,160	132 (118/2001)	103	78
Krong Preah Sihanouk	868	156	66*	43*

Note: 66\* and 43\* = Administration of Krong Preah Sihanoukville regards parts of their territory as rural areas. But the population census in 1998 regarded all areas were urban.

Source: Population Census 1988, Provincial Government Offices of Kampong Speue, Kaoh Kong and Takev, Annual Review Rep of 2001, Department of Territorial Organization, Urbanization, Construction and Land Title of Sihanoukville, Fundamental Data of Sihanoukville.

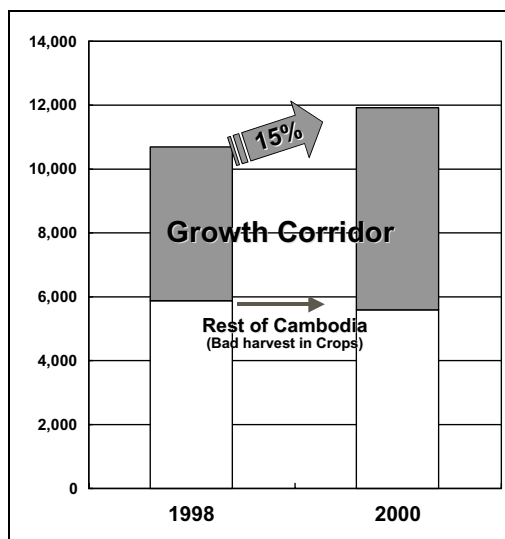
### 4.3.2 Economy

#### (1) Leading Role of the Growth Corridor in National Economic Growth

The Growth Corridor Area leads the recent growth of the Cambodian economy. Between 1998 and 2000, most of the economic growth came from the Growth Corridor as shown in **Figure 4-10**. In summary, this has happened for the following reasons.

- In 2000, the agricultural sector was hard hit by the devastating floods and bad harvests.
- On the other hand, garment manufacturing continued to dominate the improvement in economic growth.

- Growing garment manufacturing is concentrated within the Growth Corridor, more specifically in the Greater Capital Area of Phnom Penh-Kandal.



Source: MOP National Account Data. Provincial Figures were estimated by the Study Team

Figure 4-10 GDP in Billions of Riels 1998-2000 at Constant 2001 Prices

**(2) Present Growth Base in the Corridor**

Between 1998 and 2000, the Corridor showed stronger growth in every sector as shown in Figure 4-11. The secondary sector recorded the highest growth with expanding garment manufacturing in the Capital Area and Sihanoukville. The primary sector in the Corridor showed higher growth rates than the rest of Cambodia, which suffered very much from floods. This is due to its higher concentration of fisheries both along the Mekong River and the seashore of Kaoh Kong, Sihanoukville, and Kampot. Tertiary sector growth was mainly based upon trading sector activities induced by the expanding economy in the Corridor.

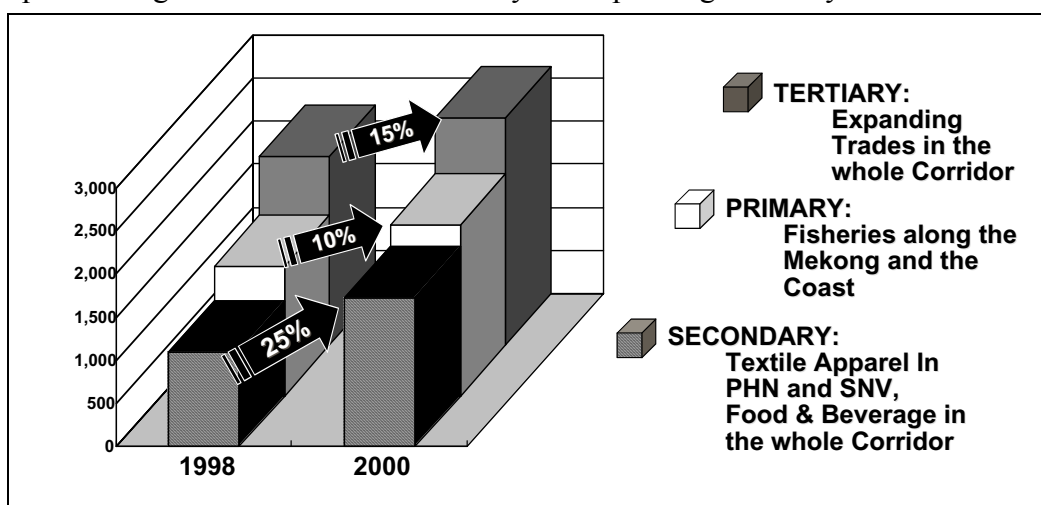


Figure 4-11 GDP of The Corridor by Sectors in Billions of Riels at Constant 2001 Prices

**Table 4-13 GDP 1998 (at factor cost in billions of Riels)**

1998 GDP in Constant 2001 Prices in Billion Riels						
	Whole Country	Other than Study Area	Study Area	Greater Capital	Intermediate Area	Sihanouk Ville
AGRICULTURE, FISHERIES & FORESTRY	4,784	3,286	1,499	533	840	126
INDUSTRY	1,854	752	1,103	893	143	66
Of which Manufacturing	1,136	372	763	610	109	44
SERVICES	4,040	1,857	2,183	1,712	365	106
GDP TOTAL at Factor Cost	10,679	5,895	4,784	3,138	1,348	298
Per Capita GDP in 000 Riels	880	774	1,060	1,441	622	1,809
Per Capita GDP in US\$ (\$1=3774 Riels)	233	205	281	382	165	479

Source: MOP National Account Data. Provincial Figures are estimated by the Study Team

**Table 4-14 GDP 2000 (at factor cost in billions of Riels)**

2000 GDP in Constant 2001 Prices in Billion Riels						
	Whole Country	Other than Study Area	Study Area	Greater Capital	Intermediate Area	Sihanouk Ville
AGRICULTURE, FISHERIES & FORESTRY	4,768	2,793	1,975	754	1,025	196
INDUSTRY	2,589	860	1,729	1,362	304	63
Of which Manufacturing	1,833	444	1,390	1,166	169	54
SERVICES	4,580	1,950	2,630	1,906	577	147
GDP TOTAL at Factor Cost	11,938	5,604	6,334	4,022	1,906	406
Per Capita GDP in 000 Riels	935	816	1,330	1,736	842	2,260
Per Capita GDP in US\$ (\$1=3859 Riels)	242	212	345	450	218	586

Source: MOP National Account Data. Provincial Figures are estimated by the Study Team

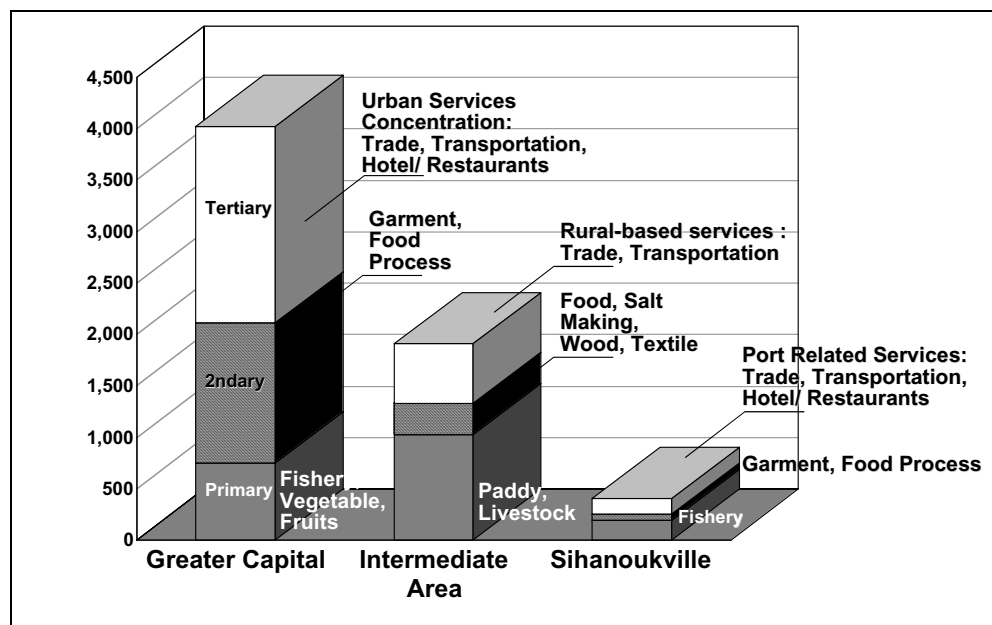
**Table 4-15 GDP Growth Rates**

GDP Annual Growth Rates 1998-2000						
	Whole Country	Other than Study Area	Study Area	Greater Capital	Intermediate Area	Sihanouk Ville
AGRICULTURE, FISHERIES & FORESTRY	-0.2%	-7.8%	14.8%	18.9%	10.5%	24.8%
INDUSTRY	18.2%	7.0%	25.2%	23.5%	45.7%	-2.3%
Of which Manufacturing	27.1%	9.2%	34.9%	38.2%	24.4%	11.4%
SERVICES	6.5%	2.5%	9.8%	5.5%	25.7%	17.9%
GDP TOTAL at Factor Cost	5.7%	-2.5%	15.1%	13.2%	18.9%	16.8%
Per Capita GDP	3.1%	2.7%	12.0%	9.8%	16.3%	11.8%

Source: MOP National Account Data. Provincial Figures are estimated by the Study Team

**(3) Production Structure of the Corridor:**

The Corridor is a composite of three distinctive areas, namely the "Greater Capital Area of Phnom Penh and Kandal", the "Agro-based Intermediate area", and "The port city of Sihanoukville". As clearly shown in **Figure 4-12**, production structures are quite different from each other.



Source: MOP National Account Data. Regional Figures are estimated by the Study Team

**Figure 4-12 GDP of The Corridor by Sectors in Billions of Riel**

The "Greater Capital Area of Phnom Penh and Kandal" is the largest economic center in Cambodia where non-agriculture dominates its economy. In terms of absolute volume of GDP, the Capital Area has a sizable primary sector that supplies commodities to meet urban consumption of commercial crops such as fish, vegetables and fruits.

The "Agro-based Intermediate area" holds a large agricultural portion that is based upon rice paddies and livestock. Along the coast, fisheries are very important sources of incomes.

"The port city of Sihanoukville" is literally dependent upon the port in every sector. The primary sector depends upon fisheries. Both secondary and services are port related.

### 4.3.3 Employment

Employment in the Study Area by sectors is shown in **Tables 4-16** and **4-17**. The primary sector is dominant in Cambodia, with a share of 74%. The tertiary sector's share in Cambodia is 18%.

In the Study area, Phnom Penh dominates employment in the tertiary sector, which accounted for 57% of the total employment. Kaoh Kong Province and Sihanoukville have a similar characteristic of employment structure, with 34% and 46% respectively. On the other hand, in these coastal provinces employment in the primary sector is relatively small reflecting the fact that the cropping activities take a smaller share in comparison with the other areas.

**Table 4-16 Employed Population by Sector**

(Unit: 000 persons)

Employment 2000 in Thousand Persons (Estimates based onLFS2000 and Busines Directory Data)												
	Whole Country	Other than Study Area	Study Area				Intermediate Area	Takaev	Kampong Spueu	Kaoh Kong	Kampot	Sihanouk Ville
				Greater Capital	Phnom Penh	Kandal						
AGRICULTURE, FISHERIES & FORESTRY	3,889.0	2,654.7	1,234.3	437.5	33.5	404.0	778.0	322.5	235.7	36.4	183.4	18.8
Crops+Livestock & Poultry	3,697.2	2,560.0	1,137.1	388.6	30.6	358.1	735.7	314.9	226.1	23.3	171.3	12.8
Fisheries	147.3	76.0	71.2	46.3	3.0	43.4	19.8	5.2	0.4	10.7	3.6	5.2
Forestry & Logging	44.6	18.6	26.0	2.6	-	2.6	22.5	2.4	9.2	2.4	8.5	0.9
INDUSTRY	448.3	160.1	288.2	216.7	165.2	51.5	61.0	19.7	20.6	2.6	18.1	10.5
Mining	4.5	0.1	4.6	0.0	-	0.0	4.4	-	0.1	0.1	4.2	0.1
Manufacturing	370.3	117.9	252.4	197.6	157.1	40.5	45.1	14.9	17.9	2.3	10.1	9.6
Electricity, Gas & Water	3.8	0.8	3.0	2.2	1.5	0.7	0.6	0.5	0.0	0.0	0.1	0.2
Construction	69.8	41.5	28.2	16.9	6.6	10.3	10.8	4.3	2.5	0.2	3.7	0.6
SERVICES	941.9	419.2	522.7	361.3	264.0	97.3	136.0	41.9	32.3	20.5	41.3	25.4
Trade	436.3	196.2	240.1	172.3	122.0	50.4	55.1	10.7	11.3	9.9	23.2	12.7
Hotel & Restaurants	18.8	5.8	13.0	10.3	4.6	5.8	2.0	0.5	0.5	0.9	0.1	0.6
Transport & Communications	119.6	45.5	74.0	46.9	32.5	14.4	21.3	7.7	6.0	4.5	3.2	5.8
Finance	8.2	2.2	6.0	5.7	5.0	0.7	0.1	0.0	0.1	0.0	0.0	0.2
Public Administration	147.0	64.0	83.0	54.7	46.7	8.0	25.7	11.6	5.2	2.8	6.0	2.6
Real Estate & Business	15.6	7.6	8.1	6.5	5.5	1.0	1.0	0.1	0.4	0.4	0.1	0.6
Other services	196.4	97.9	98.5	64.8	47.7	17.1	30.8	11.2	8.9	1.9	8.7	2.9
<b>Total Employment (at work place)</b>	<b>5,279.3</b>	<b>3,234.1</b>	<b>2,045.2</b>	<b>1,015.5</b>	<b>462.7</b>	<b>552.8</b>	<b>975.0</b>	<b>384.2</b>	<b>288.6</b>	<b>59.5</b>	<b>242.8</b>	<b>54.7</b>
<b>Total Population (in 000 persons)</b>	<b>12,769</b>	<b>8,007.4</b>	<b>4,761.4</b>	<b>2,316.9</b>	<b>1,136.1</b>	<b>1,180.8</b>	<b>2,264.9</b>	<b>865.1</b>	<b>665.2</b>	<b>156.0</b>	<b>578.5</b>	<b>179.6</b>

**Table 4-17 Employed Population Share by Sector**

Employment Structure 2000 (Estimates based onLFS2000 and Busines Directory Data)												
	Whole Country	Other than Study Area	Study Area				Intermediate Area	Takaev	Kampong Spueu	Kaoh Kong	Kampot	Sihanouk Ville
				Greater Capital	Phnom Penh	Kandal						
AGRICULTURE, FISHERIES & FORESTRY	74%	82%	60%	43%	7%	73%	80%	84%	82%	61%	76%	34%
Crops+Livestock & Poultry	70%	79%	56%	38%	7%	65%	75%	82%	78%	39%	71%	23%
Fisheries	3%	2%	3%	5%	1%	8%	2%	1%	0%	18%	1%	9%
Forestry & Logging	1%	1%	1%	0%	0%	0%	2%	1%	3%	4%	4%	2%
INDUSTRY	8%	5%	14%	21%	36%	9%	6%	5%	7%	4%	7%	19%
Mining	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
Manufacturing	7%	4%	12%	19%	34%	7%	5%	4%	6%	4%	4%	18%
Electricity, Gas & Water	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Construction	1%	1%	1%	2%	1%	2%	1%	1%	1%	0%	2%	1%
SERVICES	18%	13%	26%	36%	57%	18%	14%	11%	11%	34%	17%	46%
Trade	8%	6%	12%	17%	26%	9%	6%	3%	4%	17%	10%	23%
Hotel & Restaurants	0%	0%	1%	1%	1%	1%	0%	0%	0%	2%	0%	1%
Transport & Communications	2%	1%	4%	5%	7%	3%	2%	2%	2%	8%	1%	11%
Finance	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%
Public Administration	3%	2%	4%	5%	10%	1%	3%	3%	2%	5%	2%	5%
Real Estate & Business	0%	0%	0%	1%	1%	0%	0%	0%	0%	1%	0%	1%
Other services	4%	3%	5%	6%	10%	3%	3%	3%	3%	3%	4%	5%
<b>Total Employment (at work place)</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Total Population (in 000 persons)</b>	<b>12,769</b>	<b>8,007.4</b>	<b>4,761.4</b>	<b>2,316.9</b>	<b>1,136.1</b>	<b>1,180.8</b>	<b>2,264.9</b>	<b>865.1</b>	<b>665.2</b>	<b>156.0</b>	<b>578.5</b>	<b>179.6</b>

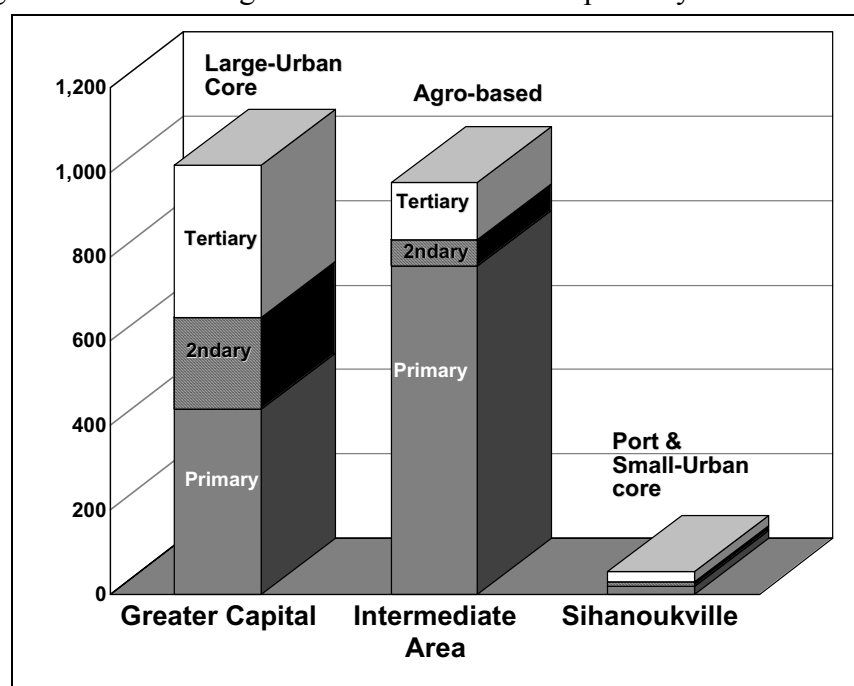
**Table 4-18** shows the distribution of employment among different areas by sector. It is clearly seen that the secondary sector is very much concentrated in the Capital Area.



**Table 4-18 Distribution of Employed Population by Area by Sector**

Distribution of Employment 2000						
	Whole Country	Other than Study Area	Study Area	Greater Capital	Intermediate Area	Sihanouk Ville
AGRICULTURE, FISHERIES & FORESTRY	100%	68%	32%	11%	20%	0%
INDUSTRY	100%	36%	64%	48%	14%	2%
Of which Manufacturing	100%	32%	68%	53%	12%	3%
SERVICES	100%	45%	55%	38%	14%	3%
Total Employment (at work place)	100%	61%	39%	19%	18%	1%
Total Population	12,768.8	8,007.4	4,761.4	2,316.9	2,264.9	179.6

**Figure 4-13**, shows employment structures within the Study Area. In the “Greater Capital Area” non-agricultural employment takes a largest portion. In contrast, the vast majority of people are engaged in the primary sector in “Intermediate Area”. In “Sihanoukville” 65% of employment is non-agricultural reflecting the characteristics of the port city.

**Figure 4-13 Employed Population in the Corridor by Sector**

#### 4.3.4 Primary Industry

##### (1) Agricultural Products

According to a socio-economic household survey conducted in the Study, the average landholding size of an owner farmer is 0.96 ha, which consists of upland area of 0.22 ha and paddy area of 0.74 ha. There is a substantial number of landless farmers in the villages, i.e., about 10% of the total households. There is a noticeable difference in land tenure and landholding among the provinces.

Kampot has a large percent of land leasers, i.e.24% of the total. Kampong Spueu has the smallest average landholding of 0.59 ha and Sihanoukville has the largest of 2.41 ha among the related provinces as shown in **Table 4-19**.

**Table 4-19 Landholding and Land Tenure**

Province	Ratio of landowners, %	Total Landholding size of an owner, ha	of which upland, ha
Kandal	88	0.65	0.04
Takaev	100	0.63	0.05
Kampot	76	0.87	0.22
Kampong Spueu	94	0.59	0.16
Kaoh Kong	94	1.02	0.37
Sihanoukville	87	2.41	0.58
Average	<b>90</b>	<b>0.94</b>	<b>0.22</b>

Source: Socio-economic household survey, JICA Study Team

Paddy rice is the main crop in the study area and its production was 1.16 million ton in 2001/02. The trend in the production was on a decline in recent years, as shown in the next **Table 4-20**. There is substantial production of fruits such as coconut and palm nuts. Their outputs were 116,000 ton in 2000/01. Vegetables, sugar cane, cassava, and maize are the subsidiary crops.

There were a fairly large number of cattle and poultry, namely 1.2 million and 5.5 million respectively in 2000/01. The number of draught cattle has been stable, but draught buffaloes are decreasing in number. The number of pigs is also decreasing. Capture fishery is active in the area, with a production of 25.9 thousand-ton in 2000/01. Aquaculture is not popular in the Study Area, producing only 5,550 ton in 2000/01.

In terms of area harvested, paddy rice is predominant covering 93 % of the total, followed by maize and vegetables, 2.2 % and 2.2 % respectively.

**Table 4-20 Harvested Area in the Study Area, ha**

	1996/97	1997/98	1998/99	1999/00	2000/01
Paddy	529,770	550,369	531,832	563,083	492,049
Maize	18,644	14,257	15,637	17,678	11,604
Cassava	2,891	2,402	-	2,287	3,260
Sweet potatoes	3,839	3,649	2,719	3,507	2,101
Vegetables	19,595	16,099	15,536	12,134	11,682
Mung beans	4,869	5,942	3,057	3,681	2,993
Peanuts	2,949	4,340	2,554	1,563	2,003
Soya beans	-	-	216	215	-
Sugar cane	2,522	3,219	2,659	3,301	3,312
Sasame	2,328	279	80	257	668
Jute	103	80	0	25	58
Caster beans	0	0	0	0	19
Tabacco	310	856	369	102	130

Source:MAFF

Yields of crops are low. Paddy yield was 2.42 ton/ha in 2000/01, details of which are shown in the next **Table 4-21**. There is much room for improvement

in yields by intensive use of fertilizer, introduction of quality seeds and seedlings and introduction of irrigation.

**Table 4-21 Crop Yields in the Study Area, ton/ha**

	1996/97	1997/98	1998/99	1999/00	2000/01
Paddy	2.07	2.20	1.93	2.32	2.42
Maize	1.37	1.42	1.15	1.72	1.47
Cassava	6.31	5.61	-	14.27	8.46
Sweet potatoes	4.02	2.94	3.05	2.91	3.46
Vegetables	7.11	4.71	5.20	5.49	7.21
Mung beans	0.49	0.48	0.55	0.61	0.64
Peanuts	0.54	0.64	0.95	0.69	0.71
Soya beans	-	-	0.88	1.00	-
Sugar cane	27.39	18.37	21.26	18.88	24.24
Sasame	0.43	0.42	0.30	0.45	0.50
Jute	1.94	1.00	-	1.00	0.43
Caster beans	-	-	-	-	1.00
Tabacco	0.85	0.70	0.70	0.72	0.75

As shown in **Table 4-22**, vegetables, fruit and livestock are predominantly produced in Kandal, Takaev and Kampot for provision to the urban consumer in the capital. Sihanoukville, Kaoh Kong, and Kampong Spueu produce limited crops such as cassava, sugar cane, and sweet potato.

**Table 4-22 Share of Agricultural Products by Province**

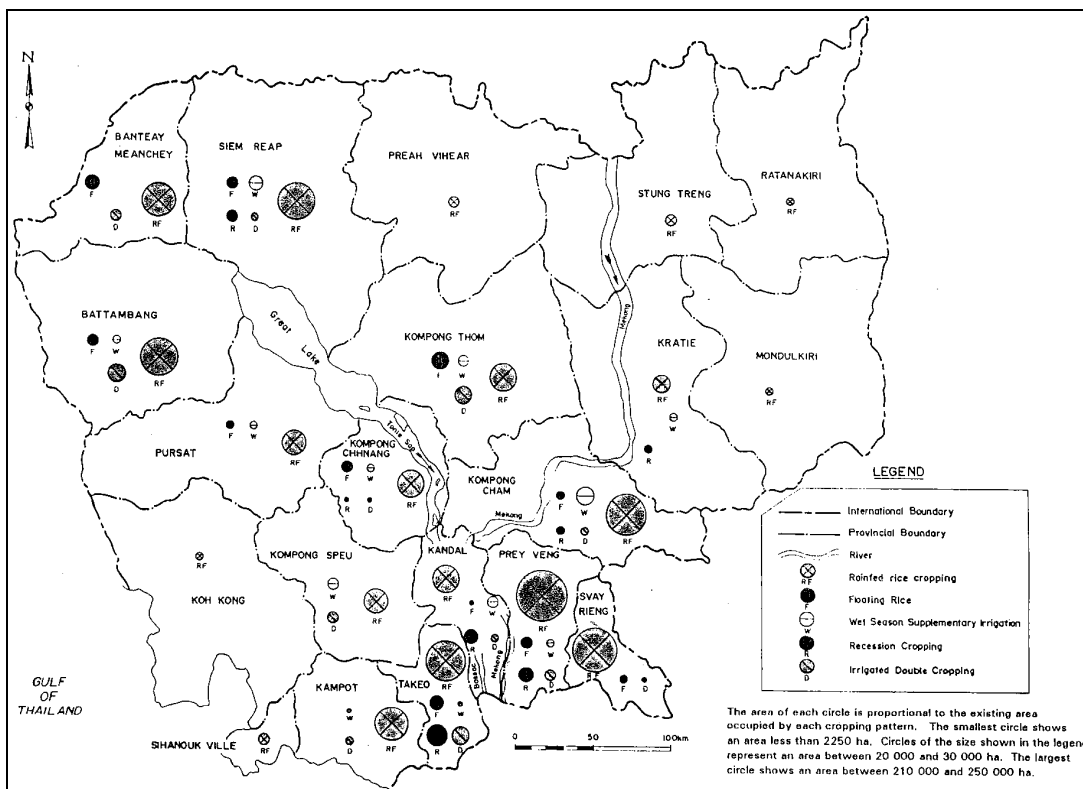
Items	Products in Corridor ton	National total in 2001/01, ton	Share of Corridor %							
				Corridor total	Share of PP	Share of Kandal	Share of Takaev	Share of Kampong Spoeu	Share of Kampot	Share of Kaoh Kong
Paddy	1,190,777	4,026,092	29.6%	0.3%	6.0%	11.6%	3.9%	7.1%	0.2%	0.4%
Maize	17,004	156,972	10.8%	0.3%	8.2%	0.2%	0.4%	1.6%	0.2%	0.0%
Cassava	27,587	147,763	18.7%	0.0%	1.3%	4.2%	5.5%	6.3%	0.1%	1.2%
Sweet potatoes	7,270	28,178	25.8%	0.0%	4.0%	5.1%	0.6%	14.5%	1.0%	0.6%
Vegetables	84,231	195,894	43.0%	2.8%	13.6%	11.6%	4.9%	9.2%	0.4%	0.4%
Mung beans	1,912	15,100	12.7%	0.0%	7.1%	1.9%	2.2%	1.5%	0.0%	0.0%
Peanuts	1,427	7,490	19.1%	0.0%	11.5%	1.3%	2.7%	3.4%	0.0%	0.0%
Soya beans	0	28,111	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sugar cane	80,273	164,176	48.9%	0.0%	23.1%	3.3%	2.1%	18.1%	2.3%	0.0%
Sesame	335	9,855	3.4%	0.1%	3.1%	0.1%	0.0%	0.1%	0.0%	0.0%
Jute	25	180	13.9%	0.0%	13.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Caster beans	19	204	9.3%	0.0%	9.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Tobacco	98	7,665	1.3%	0.0%	1.3	0.0%	0.0%	0.0%	0.0%	0.0%
Fruit and permanent crops	115,588	164,159	70.4%	0.2%	62.7%	1.8%	0.2%	4.1%	1.3%	0.0%
Total cattle	1,208,287	2,992,640	40.4%	0.7%	6.1%	10.4%	10.6%	12.3%	0.2%	0.2%
Draught cattle	481,555	1,327,976	36.3%	0.5%	4.3%	9.6%	10.6%	10.9%	0.2%	0.1%
Total buffaloes	31,044	693,631	4.5%	0.0%	0.9%	0.6%	0.1%	1.1%	1.0%	0.8%
Draught buffaloes	15,488	412,628	3.8%	0.0%	0.4%	0.5%	0.0%	1.0%	1.0%	0.8%
Pigs	630,999	1,933,930	32.6%	1.0%	7.1%	10.7%	4.6%	7.9%	0.6%	0.8%
Poultry	5,565,403	15,249,201	36.5%	2.3%	8.0%	8.6%	7.3%	7.8%	0.5%	2.1%
Fresh water fish caught	25,905	85,600	30.3%	8.1%	18.8%	3.4%	0.0%	0.0%	0.0%	0.0%
Aquaculture production	5,552	14,431	38.5%	17.2%	13.5%	4.7%	0.1%	0.1%	2.7%	1.2%
Population ratio		100.0%	37.5%	8.7%	9.4%	7.0%	5.2%	4.6%	1.2%	1.4%
Area ratio		100.0%	17.6%	0.2%	2.0%	2.0%	3.9%	2.7%	6.3%	0.5%

Source: MAFF

Agricultural marketing is formally liberalized except some items requiring export and import licensing, namely processed wood products, chemical fertilizers, pesticides and insecticides. Green Trade Company (GTC), a state company, monopolizes purchasing and storing rice on behalf of the state with reported higher transport and operating costs than the private sector. Fish resources are in the hands of the Department of Fisheries (DoF) including allotting fishing lots to fishermen, permitting an exclusive distribution right in a province to a company, and granting an exclusive export right to the state owned company of KAMFIMEX (Kampuchea Fish Import and Export Company).

## **(2) Irrigation and Drainage**

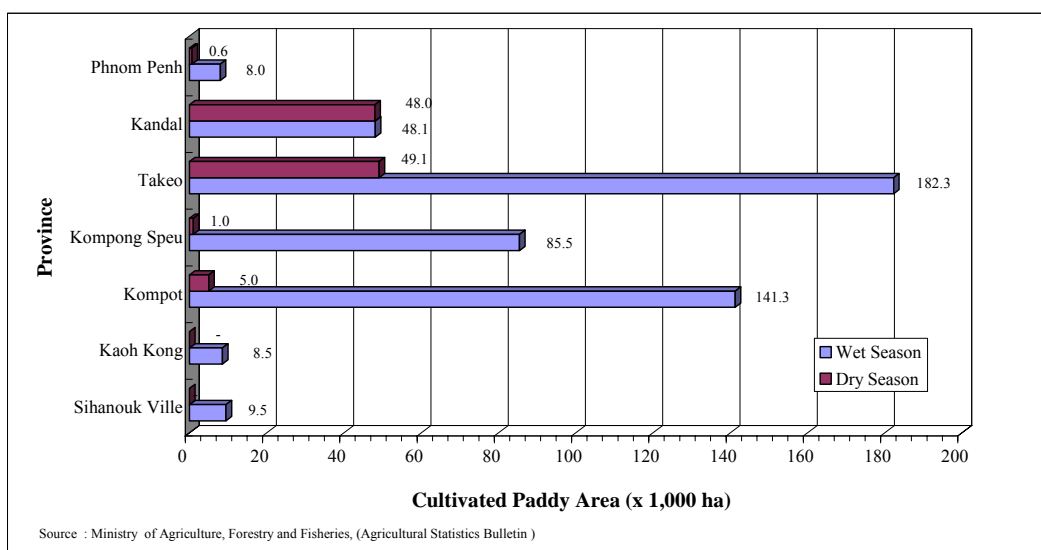
In Cambodia, only about 17% (473,000 ha in 1998) of the total rice-growing area (1.93 million ha) presently receives supplementary irrigation water. About 83% of the total cultivated area is fully dependent on rain (rain-fed); a “flood-recession” system of production is used on 7% of the area, and deep-water floating rice on 6% (source: MOWRAM). However, given the temporal variability of rainfall patterns, crop production is often threatened by drought, so that the production of supplementary crops is not possible. Almost all the rice area is single-cropped, resulting in low production. Distribution of the rice cropping area by water source type in Cambodia is illustrated as shown in **Figure 4-14**.



Source : Irrigation Rehabilitation Study in Cambodia, Mekong Secretariat, Halcrow, June 1994.

**Figure 4-14 Rice Cropping Areas by Province**

**Figure 4-15** and **Table 4-23** shows the cultivated area of rice paddy during wet and dry seasons in the Study Area by Province. As shown the **Figure** below, almost all the rice paddy area is single-cropped except Kandal and Takeo Provinces at present.



**Figure 4-15 Cultivated Paddy Area in the Study Area (Year 2000)**

**Table 4-23 Paddy (Rice) Area Cultivated by Province in the Study Area 1980 -2000**

PROVINCE	Season	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ALL CAMBODIA	Wet	1,346	658	854	896	832	1,702	1,754	928	945	1,827	888	1,916	2,061
	Dry	99	132	158	164	155	155	170	216	214	228	211	242	262
Phnom Penh	Wet	2.1	2.0	12.0	12.0	8.9	8.0	8.6	8.6	7.7	7.8	8.0	8.0	8.0
	Dry	0.3	1.0	1.0	1.0	0.8	0.6	1.3	1.3	1.3	1.2	1.1	1.2	0.6
Kandal	Wet	55.0	48.0	57.0	57.0	47.0	45.2	45.0	48.5	46.8	42.9	44.2	45.1	48.1
	Dry	25.0	30.0	36.0	38.0	34.0	39.0	38.8	44.1	45.0	46.0	44.2	46.4	48.0
Sub Total (Metropolitan)	Wet	57.1	50.0	69.0	69.0	55.9	53.2	53.6	57.1	54.6	50.7	52.1	53.1	56.1
	Dry	25.3	31.0	37.0	39.0	34.8	39.6	40.1	45.4	46.3	47.2	45.3	47.6	48.6
Takeo	Wet	144.5	110.0	172.0	181.0	176.3	174.2	185.2	184.9	188.1	170.6	170.6	176.1	182.3
	Dry	23.5	32.0	39.0	40.0	40.0	42.0	42.6	52.7	57.0	61.0	58.3	59.0	49.1
Kompong Speu	Wet	63.0	65.0	79.0	80.0	67.9	65.4	77.8	84.7	86.4	81.9	83.6	86.6	85.5
	Dry	-	1.0	1.0	2.0	1.4	1.0	1.0	1.0	1.3	1.0	1.0	1.1	1.0
Kompot	Wet	78.5	98.0	102.0	112.0	110.6	102.3	123.7	132.2	136.1	136.5	130.5	136.0	141.3
	Dry	0.5	2.0	2.0	1.0	1.3	1.0	1.0	2.0	2.6	4.7	1.0	2.5	5.0
Kaoh Kong	Wet	8.0	6.0	5.0	6.0	5.3	4.7	3.5	5.2	7.4	7.3	7.1	7.5	8.5
	Dry	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total (Mid Area)	Wet	294.0	279.0	358.0	379.0	360.1	346.6	390.2	407.0	417.9	396.4	391.9	406.2	417.6
	Dry	24.0	35.0	42.0	43.0	42.7	44.0	44.6	55.7	60.9	66.7	60.3	62.6	55.1
Sihanouk Ville	Wet	9.0	9.0	10.0	12.0	9.9	8.4	9.3	8.8	9.1	9.5	9.6	9.6	9.5
	Dry	-	-	-	-	-	-	-	-	-	-	-	-	na

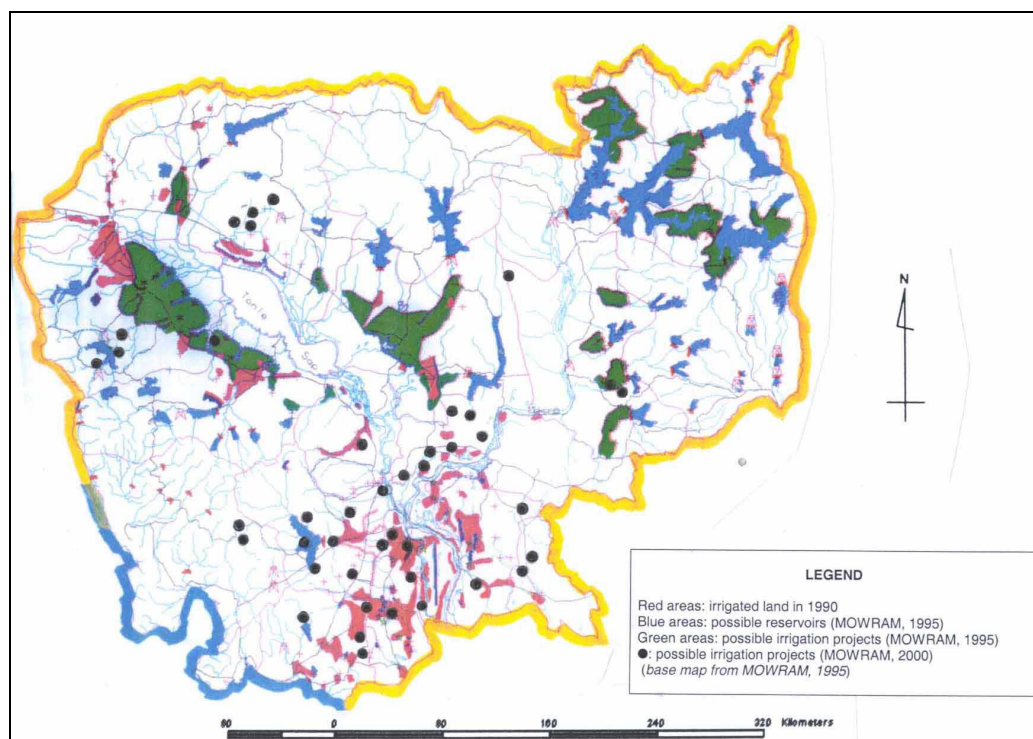
Note: Details may not add up to totals due to rounding.

The total irrigation potential of the Cambodia has been estimated to amount to 1,667,300 ha as shown in Table 4-24 and Figure 4-16.

**Table 4-24 Irrigation Potential Area in the Cambodia**

Water Source	Irrigation Potential (in ha)
Mekong Main Stream	734,000
Mekong Tributaries	253,000
Mekong Flooded Area	179,000
Tonle Sap Tributaries	358,900
Outside Mekong Basin	142,400
<b>Total</b>	<b>1,667,300</b>

Sources: Inventory of Promising Water Resources Projects Outside the Mekong Basin in the Khmer Republic, November 1973; Summary of Project Possibilities of Lower Mekong Water Resources Inventory, September 1994; The Agricultural Development Study of the Mekong Flooded Area in Cambodia, March 1998 (all reported in Veng Sakhon, 2000).



Source : MOWRAM, 2001.

**Figure 4-16 Irrigated Land in 1990 and Possible Reservoir and Irrigation Projects**

Due to a lack of infrastructure - diversion structures, dams, etc. - to reserve wet season water for dry season irrigation, a remarkable volume of water pours into to the sea. Irrigation plays a key role in the efforts to achieve food security, which is part of the overall national goal of poverty reduction through socio-economic development.

Given the high irrigation potential, there is ample scope for irrigation rehabilitation and for the development of irrigation in the short, medium and long term. As a starting point, the Government plans to increase the total irrigated area from 16.62% to 20% by the end of 2003, in addition to the existing irrigated area (source: MOWRAM).

Most of the present irrigation schemes were formulated in the Khmer Rouge regime, and were not designed according to standards at the outset, this being the cause of increased flooding and uncontrolled drainage. These schemes now require rehabilitation to provide improved drainage, flood protection and access to water for supplementary irrigation. Irrigation has to harness all water resources, whether surface water or groundwater. Inventory of existing irrigation systems in the Study Area is shown in the **Table** below.

**Table 4-25 Existing and Potential Irrigation Systems in the Study Area**

Province	Number of Systems Reported <sup>*1)</sup>	Total Area of System Reported (ha) <sup>*1)</sup>			
		Existing		Potential	
		Wet Season	Dry Season	Wet Season	Dry Season
Phnom Penh	N/A.	N/A.	N/A.	N/A.	N/A.
Kandal <sup>*2)</sup>	114	11,582	21,200	14,224	35,956
Takeo	43	12,445	41,640	13,319	45,895
Kompong Speu	95	18,558	743	32,388	3,247
Kampot	23	4,980	1,370	14,940	10,415
Koh Kong	N/A.	N/A.	N/A.	N/A.	N/A.
Sihanouk Ville	N/A.	N/A.	N/A.	N/A.	N/A.

Source: Irrigation Rehabilitation Study in Cambodia, Inventory & Analyses of Existing System, Vol.1 Main Report, Mekong Secretariat, Halcrow, April 1994.

Notes \*1) : Excluding systems less than 10 ha in area.

\*2) : Includes 2 systems in Phnom Penh Municipality

N/A. : data not available

The distribution of cropping patterns in each Province is shown in **Table 4-26**. Yields vary considerable from Province to Province as shown in **Table 4-27**. Based on the inventory statistics the highest yielding Province in the Study Area is Kandal.

**Table 4-26 Cropping Pattern and Yields in the Study Area**

Province	Number of Operational Irrigation Systems				Average Yield (t/ha)	
	Cropping Pattern			Total	Wet Season	Dry Season
	Wet Season	Double	Reces-sion			
Phnom Penh	N/A.	N/A.	N/A.	N/A.	N/A.	N/A.
Kandal <sup>*2)</sup>	11	8	94	113	1.9	3.3
Takeo	7	15	27	49	1.2	2.0
Kompong Speu	73	21	0	94	1.3	2.0
Kampot	9	10	0	19	1.7	2.2
Koh Kong	N/A.	N/A.	N/A.	N/A.	N/A.	N/A.
Sihanouk Ville	N/A.	N/A.	N/A.	N/A.	N/A.	N/A.

Source: Irrigation Rehabilitation Study in Cambodia, Mekong Secretariat, Halcrow, June 1994.

Notes) N/A. : data not available

**Table 4-27 Average Yield of Paddy Rice by Province 1980, 1985, 1990 -2000**

PROVINCE	(Tons/hectare)												
	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ALL CAMBODIA	1.19	1.25	1.34	1.39	1.31	1.31	1.49	1.79	1.84	1.78	1.79	1.94	1.97
Phnom Penh	1.10	1.33	1.58	2.11	1.43	1.18	1.68	1.89	2.30	1.80	2.07	1.84	2.00
Kandal	1.21	1.86	1.38	1.92	2.32	2.06	3.18	2.66	2.83	2.58	2.69	2.61	3.14
Average (Metropolitan)	1.21	1.84	1.40	1.94	2.23	1.97	3.04	2.76	2.76	2.50	2.63	2.73	3.06
Takeo	0.99	1.32	1.50	1.58	1.46	1.49	1.28	1.90	2.04	2.64	2.01	2.40	2.63
Kompong Speu	1.50	1.20	1.20	1.28	1.25	1.29	1.36	2.17	1.95	1.49	1.42	1.82	1.87
Kompot	1.18	1.41	1.90	1.31	1.20	1.12	1.34	1.66	1.61	1.80	1.64	2.26	2.19
Kaoh Kong	1.25	1.33	1.80	1.33	1.23	1.27	1.43	1.59	1.30	1.53	1.26	1.30	1.23
Average (Mid Area)	1.14	1.32	1.55	1.44	1.35	1.35	1.31	1.87	1.88	2.15	1.77	2.24	2.29
Sihanouk Ville	1.44	1.12	1.70	1.67	1.21	1.29	1.18	1.71	1.85	1.70	1.60	1.78	1.75

Source : Ministry of Agriculture, Forestry and Fisheries, (Agricultural Statistics Bulletin )

Existing irrigation systems which have good economic potential and a record of success or potential for low cost rehabilitation were evaluated by the "Irrigation Rehabilitation Study in Cambodia" (Mekong Secretariat, Halcrow, 1994). The results of the evaluation of existing irrigation systems in the Study Area are shown in the **Table** below.



**Table 4-28 Existing Irrigation Systems in the Study Area**

Province	Catchment	Irrigation System Name	System No.	Economic Potential		Successful Systems	Low Cost (Recession)	Status	EIRR %
				Soil	Water				
Phnom Penh	Prek Thnot	Prateaslang	DK1			F		M	
Kandal	Prek Thnot	System No.63, Canal	KST1, KST2, PP4			F		M	
Kandal	Lake Side 1b	Ta Mouk Reservoir	PL1			F	R	S	23
Kandal	Mekong Riverine	O Andoung Gate	SA3			Ex	R	S	22
Kandal	Mekong Riverine	Maleach Krobeaykon	KT1			F	R	-	
Kandal	Mekong Riverine	Sras Bram Beay	KT2			F	R	-	
Kandal	Mekong Riverine	Toul Khtom	KT3			F	R	-	
Kandal	Prek Thnot	Kompong Tram	PP4			F		M	
Kandal	Mekong Riverine	Boeng Thom Reservoir	KSV1			Ex		S	
Kandal	Mekong Riverine	Boeng Chomno	KSV2			F	R	-	
Kandal	Mekong Riverine	Kvenh Dach Reservoir	KSV3			F	R	-	
Kandal	Mekong Riverine	Tasen	MP1				R	-	
Kandal	Mekong Riverine	Chhey Thom	KD12			F		-	
Takeo	South Catchments	Koh Chhoeung Damrey Res	KV5			F	R	-	
Takeo	South Catchments	Dang Kgnorm Reservoir	TK2				R	-	
Takeo	Mekong Riverine	Canal 15	TK1				R	-	
Takeo	Mekong Riverine	Takeo River	T4			F	R	S	-
Takeo	Mekong Riverine	Thnot Konchhrung	KA1				R	-	
Takeo	Mekong Riverine	Ang Kok Reservoir	KA2				R	-	
Takeo	Mekong Riverine	Canal 92	KA4			F	R	-	
Takeo	Stung Slakou	Takeo Reservoir	TK3	O	O			M	
Takeo	Stung Slakou	Thnot Te Reservoir	SR1			F		ADB	
Takeo	Stung Slakou	Doeumm Krolanch Reservoir	SR2			F	R	-	
Takeo	Prek Toul Lokok	Ang Bot Rokar Reservoir	SR4			F	R	-	
Takeo	Prek Toul Lokok	Sen Pe Ream Reservoir	SR6				R	-	
Takeo	Mekong Riverine	Thorn Viney	SR9				R	-	
Takeo	Mekong Riverine	Kompong Chak Reservoir	PK3				R	-	
Takeo	Mekong Riverine	Canal 03	BCH1			F	R	S	21
Takeo	Mekong Riverine	Canal 87	AB1				R	-	
Takeo	Mekong Riverine	Komnop Reservoir	AB2			F	R	-	
Takeo	Mekong Riverine	Ton Leap Reservoir	KV1			F	R	-	
Takeo	Prek Thnot	Kompong Damrei Reservoir	BT2	O	O			M	
Takeo	Prek Thnot	Kompong Dan Ko	BT3				R	-	
Kampong Speu	Prek Thnot	Chan Thnal, Relang Chrey & Chen Ke	OD1, St1, Pt2			F		M	
Kampong Speu	St. Karang Ponley	Krope Trom	OD2			F		M	
Kampot	South Catchments	Trapeang Boeng Dam	CH1			F		S	12
Kampot	South Catchments	Pasla Dam	DT1			F		-	

Source: Irrigation Rehabilitation Study in Cambodia, Mekong Secretariat, Halcrow, June 1994.

Notes) O: Good Condition of Soil / Water

Ex: existing yield > 2 ton/ha in wet season and/or 3 ton/ha in the dry season.

F: future yield > 2 ton/ha in wet season and/or 3 ton/ha in the dry season.

L: Recession Cropping

M: Catchment master plan required, S : Shortlisted for pre-feasibility study,

-: Not shortlisted for pre-feasibility study or master plan.

(Recession cropped schemes can be treated independently of master plans for the purpose of rehabilitation)

### 4.3.5 Secondary Industry

#### (1) Production of Manufacturing Industry

As shown in the **Table 4-29**, gross output value of the Growth Corridor reached US\$1,410 million in 2001, accounting for 80.0% of the national total. Category-wise, textile and wearing apparel was dominant, accounting for 91.3 % of the total of the Growth Corridor, being followed by food and beverages with a share of 4.9 % and fabricated metal with 3.3 %. These 3 categories account for

virtually all the manufacturing activities in the Growth Corridor. Market-wise, exports were dominant, accounting for 91.3 % and only 8.7 % for domestic market. From the viewpoint of the scale of the enterprises, medium and large scale enterprises were dominant, generating almost all the manufacturing output value, accounting for 99.98 % of the total for the Growth Corridor. Micro and small enterprises generated only US\$207 thousand.

Area-wise, the Capital Area comprising Phnom Penh and Kandal province was dominant with 97.7 % of the total gross output value for the Growth Corridor while that of Sihanoukville was 1.4 % and that of the Intermediate Area was only 0.9 %.

**Table 4-29 Profile of All the Manufacturing Enterprises in the Growth Corridor, 2001**

ISIC Code	Category of Industry	Number	Capital (1000US\$)	Employment	Gross Output Value (1000US\$)		
					Domestic	Export	Total
31	Manufacture of food, beverages and tobacco	7,657	137,309	19,346	101,572	37	101,609
32	Textile and wearing apparel	470	682,194	205,477	950	1,231,481	1,232,432
33	Wood and wood products	12	216,111	4,342	1	-	1
34	Paper and paper products	26	2,536	412	436	-	436
35	Chemicals, rubber and plastic products	107	13,899	2,631	8,247	-	8,247
36	Non-metallic mineral products	396	14,282	3,780	2,630	-	2,630
37	Manufacture basic metals	0	-	0	-	-	-
38	Fabricated metal products	650	26,133	3,804	52,830	-	52,830
39	Other manufacturing industries	691	9,122	2,720	2,763	-	2,763
Total		10,009	1,101,587	242,512	169,430	1,231,518	1,400,948

Note 1: Data are based on the factory report submitted to MIME with certain adjustment. Except for Textile and Wearing Apparel factories, 100% of which submitted a report, a sizable number of factories under other categories did not submit the report. For these categories, adjustment was made by multiplying the total Figures of the reporting factories by the ratio of the total number of factories to the total number of reporting factories.

Note 2: Revision 2 of ISIC code is used.

Note 3: ISIC Code includes rice milling.

## (2) Number of Enterprises

As shown in **Table 4-30**, three quarters of the manufacturing industry of Cambodia are operating in the Study Area. The textile, apparel, and footwear industries are very concentrated in the capital and its suburban area, while the food, beverage, tobacco industries, wood products, and non-metallic mineral industries are relatively dispersed outside the Study Area. The number of manufacturing enterprises is tabulated in **Table 4-30** by detailed category of industry.

**Table 4-30 Number and Category of Industrial Enterprises by Province/City**

ISIC Category of Industry	Greater Capital	Intermediate	Sihanoukville	Total
31 Manufacturing of Food, Beverage and Tobacco	2,447	5,179	31	7,657
32 Textile, Wearing Apparel and Leather	411	49	10	470
33 Wood and Wood Products	7	2	3	12
34 Paper and Paper Products, Printing	26	0	0	26
35 Chemical and Petroleum, Coal, Rubber Products	107	0	0	107
36 Non-metallic Mineral Products	315	70	11	396
37 Basic Metal Industries	0	0	0	0
38 Fabricated Metal Products and Machinery	311	304	35	650
39 Other Manufacturing Industries	520	171	0	691
Total	4,144	5,775	90	10,009

Source: MOIME

**(3) Characteristics of the Target Area**

Characteristics of the provinces and the cities excluding Phnom Penh are given hereunder, and summarized in **Table 4-31**.

**Table 4-31 Industrial Characteristics by Province**

Province	Characteristics
(a) Sihanoukville	With the only international seaport of the country, Sihanoukville city is quickly growing in industrial sector. Until 2001, mainly garment and footwear were in operation. In early 2002, 2 large-scale weaving factories started operation near the port.
(b) Kandal	Kandal province is located to the southeast of Phnom Penh. Utilizing this locational advantage and the Phnom Penh city's policy for limiting new industrial location within the city, industry in Kandal is on a growing trend.
(c) Kampot	With the mineral resource endowment of limestone, investment has been made for cement factories. However, these are not yet in successful operation to date.
(d) Takaev	Industrial activities in Takaev province are very limited. Only rice milling, several repair workshops and limited silk industry activity with assistance from a NGO is in operation.
(e) Kaoh Kong	Though no entries are listed among large-scale enterprises in 2001, large-scale industrial development is currently in progress. At present, a few companies are mainly producing construction materials of sand and gravel. Large-scale development for industry and tourism is on going in the southern part of the province by a Thai investor, including the establishment of an EPZ. In connection with the above, Route No.48 is under rehabilitation with macadam pavement together with 4 new bridges, which will reduce transport time from Phnom Penh and Sihanoukville significantly.
(f) Kampong Spueu	Tapioka plantation of 5,000 ha by a Korean investor is in operation, produce of which is used as raw materials for industrial use including pharmaceutical products.

From industrial development viewpoint, the Growth Corridor can be classified into 3 areas with distinctive features as follows.

### 1) *Greater Capital Area*

The Capital Area has the biggest industrial accumulation and relatively well developed industrial infrastructures in the country. National Highways, No.2, No.3 and No.4 connect Phnom Penh with the other parts of the country. It is also at the mid point of the east-west international corridor between Bangkok, Thailand and Ho Chi Minh City in Vietnam. The international airport is also located in the capital city. The Capital Area is the biggest single domestic market in the country with 2 million population, the density of which is relatively high.

### 2) *Intermediate Area*

The Intermediate Area is characterized by agriculture. Industrial activities as well as the industrial infrastructure development to date are minimal. Though National Highways, No.3 and No.4 are passing this area, a feeder road system is yet to be developed. Population is sparsely distributed and local market for industrial products is very small. Besides agricultural and livestock production, mineral resources are presumed to be available in this area.

### 3) *Sihanoukville*

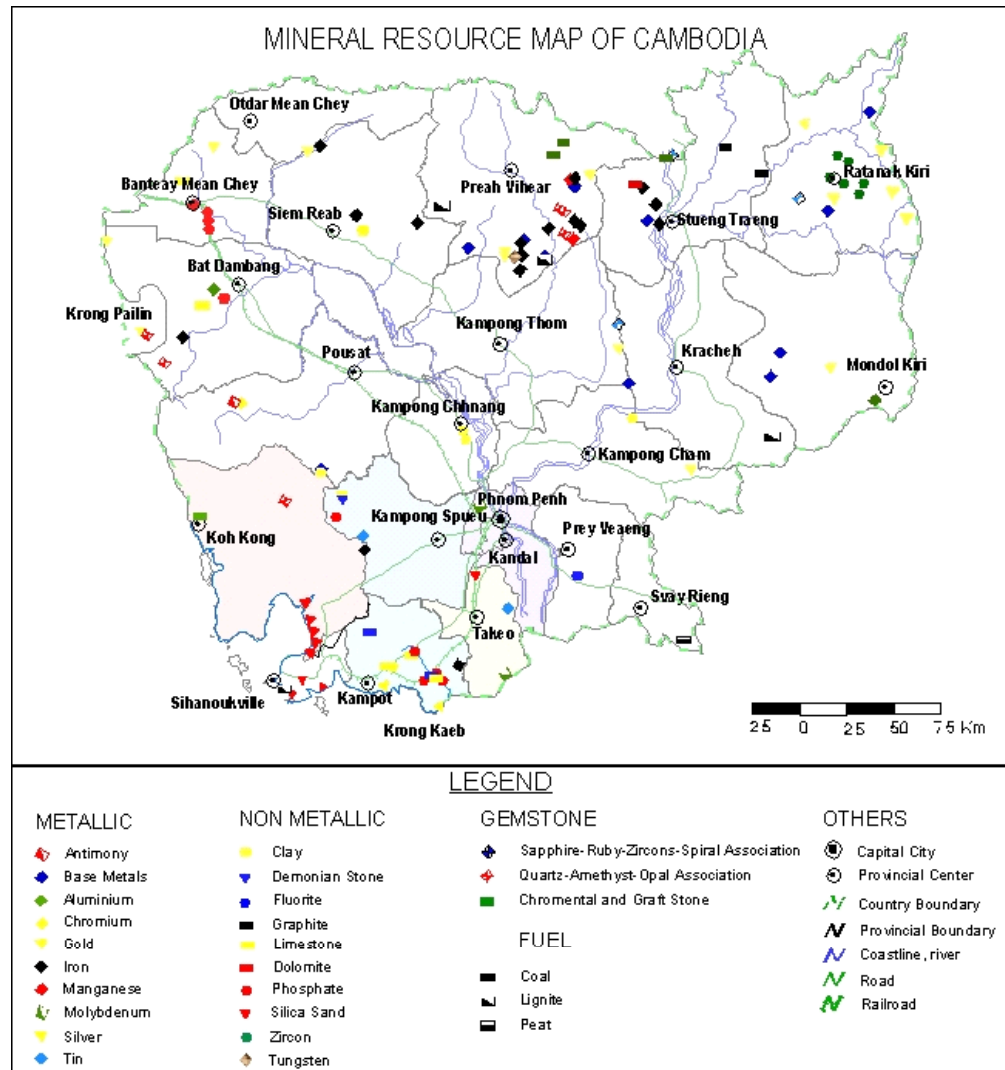
Sihanoukville has been characterized by rapid industrial development in recent years, centering on the garment industry with some other industries including fabric and beverages. This area is equipped with the only international trading port in the country. A bigger scale port is under construction, which is scheduled to be completed in 2004. Marine fishing is active with the biggest fish catch in the country. Besides marine transport access, Sihanoukville could be a key location on the southern east-west land corridor connecting Bangkok, Koh Kong and Ho Chi Minh City.

## **(4) Local Resources**

As explained **section 4.3.4**, the Growth Corridor is basically an agriculture dominated area except for Phnom Penh municipality.

To date, only a few mineral surveys have been carried out by the private sector and no detailed information is available regarding the extent of mineral resources. According to the information available and current mining activities, various kinds of mineral resources are presumed to exist in the Growth Corridor as shown in **Figure 4-17**.

If properly utilized and exploited, these locally available resources might be utilized as raw materials for the processing and manufacturing industries in the Growth Corridor.



Source: Department of Geology and Mines

Figure 4-17 Mineral Resource Map

### 4.3.6 Tertiary Industry

#### (1) Employment

In the Study area, Phnom Penh dominates employment in the tertiary sector. Kaoh Kong and Sihanoukville provinces have similar employment structure characteristics with about 40% in the tertiary sector. As seen from the employment share in the Study area, provinces situated in the coastal area show a tendency to have more employment share compared to inland provinces

More than a half of the employment in the Study Area belongs to the following three categories.

- 1) Wholesale, retail trade, repair of motor vehicles and sale of personal and household goods
- 2) Transport, storage and communication

### 3) Public administration and defense

Between 30 and 40 % of employment in the tertiary industry is wholesale, retail trade, repair of motor vehicles, and sale of personal and household goods. According to the Census data of Phnom Pen Municipality in 1998, 72.2% of employment in this category work in businesses not in stores. Various types of retail business activities are seen in Phnom Penh and other provinces in the Study Area. In fact, a large number of retail business activities are operated without setting up store at streets and market places. Due to a recent boom in the number of mobile phones, the number retail stores dealing in mobile phones has increased. Internet users are increasing, especially in urban areas in Cambodia, which leads to an increase in the number of Internet cafes.

The motorbike taxis are a major transport means for local people and backpacker tourists because of lack of public transportation in Cambodia. The motorbike taxi drivers will have a large share in the category of transport.

## (2) Tourism Sector

### 1) Tourist Arrivals to the Growth Corridor

In the Study Area, Phnom Penh is a main gateway to Cambodia for foreign tourist by air, which accounted for 45% of the total foreign tourist arrivals in 2001. Some airlines fly directly to Siem Reap carrying visitors to visit Angkor Wat and other temples in the area. Most foreign tourists visit Siem Reap by using the direct flight and they do not visit Phnom Penh.

Besides Phnom Penh and its surrounding areas, Sihanoukville is a major tourist destination for mainly local people, foreign residents in and around Phnom Penh and back packer tourists. The number of tourist arrivals to Sihanoukville increased from 43,332 in 1996 to 103,568 in 2001, as shown in **Table 4-32** and **Figure 4.18**. In the last five years, 80 to 90% of tourist arrivals to Sihanoukville are domestic visitors. Those were mostly weekend visitors coming from Koh Kong, Kampot provinces and Phnom Penh.

Major sources of foreign tourists to Sihanoukville by nationality are French, English, China, U.S.A and Japan. These accounted for 48% of the total foreign tourists. Most foreign tourists visiting Sihanoukville from Phnom Penh use either regularly scheduled buses, a tour operator's mini-bus or a taxi using National Road No.4, while most domestic tourists come by bus or their own cars. There is a daily ferry service connecting between Sihanoukville and Kaoh Kong. Foreign backpackers, domestic and Thai tourists will come to Sihanoukville by ferry from Koh Kong.

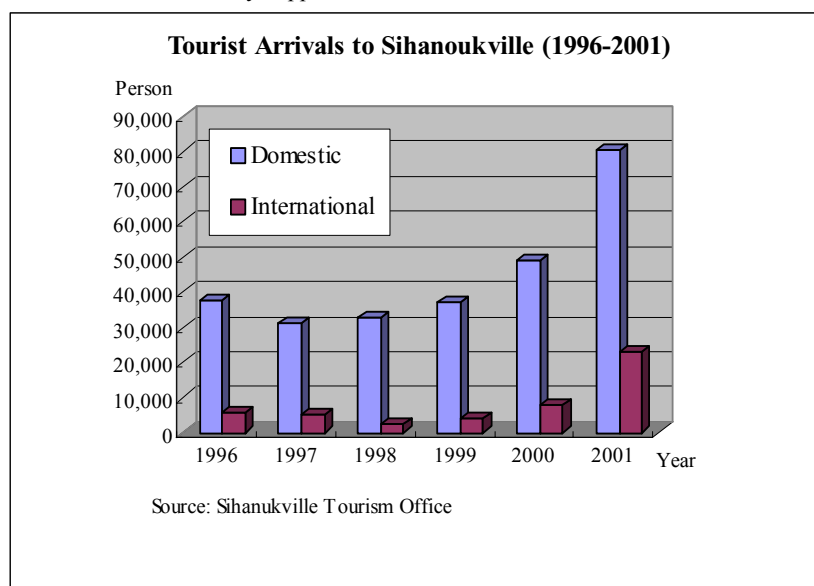
Tourist arrivals to other tourist destinations in the Study Area are significantly fewer than the three major destinations; Phnom Penh, Siem Reap and Sihanoukville.

**Table 4-32 Tourist Arrivals to Sihanoukville**

	1996	1997	1998	1999	2000	2001
Domestic	37,816	31,030	32,911	37,123	49,274	80,718
(%)	(80.3)	(83.4)	(87.7)	(88.8)	(87.8)	(82.9)
International	5,515	5,284	2,467	4,139	7,676	22,850
(%)	(19.7)	(16.6)	(12.3)	(11.2)	(12.2)	(17.1)
Total	43,331	36,314	35,378	41,262	56,950	103,568

Source: Sihanoukville Tourism Office

Remark: The number of tourist arrivals implies only an accommodated tourist reported from hotels and guesthouses and does not include day-trippers.

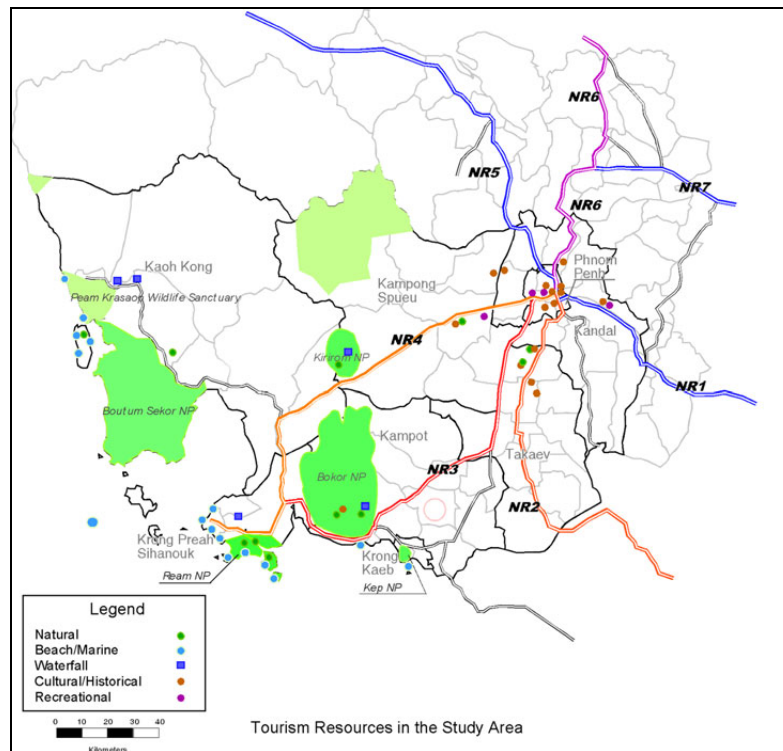
**Figure 4-18 Tourist Arrivals to Sihanoukville (1996-2001)**

### 2) Tourist Arrivals from International Border Checkpoints

Except for foreign visitor arrivals to the Study Area by air, foreign visitors come through two international border checkpoints, Cham Yeam in Kok Kong Province and Phnom Den in Takaev Province. The number of visitor arrivals from these two border check points in 2001 were 13,569 (6.9%) and 846 (0.4%), respectively. Cham Yeam is famous for its casino and beach resort. Most foreign visitors to Cham Yeam are Thai that come to play at a casino. Foreign backpackers come through the Cham Yeam border checkpoint. When the rehabilitation work on National Road No.48 from Kaoh Kong to NR No. 4 is completed, the NR No.48 will be a strategically important access route for tourism and the number of commercial visitors and tourists to Kaoh Kong and Sihanoukville will increase substantially.

### 3) Tourism Resources and Products

Existing tourism resources in the Study Area are classified by type of resource such as natural, beach/marine, waterfall, cultural/historical and recreational as illustrated in **Figure 4.19**.



**Figure 4-19 Tourism Resources in the Study Area**

Existing and potential tourism resources and products in the Study Area are summarized as follows.

#### Greater Capital Area (Phnom Penh and Kandal Province)

Phnom Penh offers several cultural and historical attractions including the Royal Palace, Silver Pagoda, National Museum, Wat Phnom, Toul Sleng Genocide Museum and Choeung Ek Memorial (the Killing Fields). There are also a variety of services including five-star hotels and budget guesthouses, fine international dining, shopping at the Central Market and traditional handicraft shops, and pubs and discos.

#### Intermediate Area

The Intermediate Area has Kirirom National Park, where ample natural resources such as forests and rivers exist. Takaev Province is the oldest province and rich in historical resources with six cultural and historical sites and four natural sites.

#### Sihanoukville

Sihanoukville, formerly known as Kampong Som, is located along the Gulf of Thailand., It is a beach town as well as a port town. Sihanoukville offers beautiful sandy beaches and marine areas for beach resort development and marine activities. At present, Sihanoukville is considered as a weekend resort for local people and foreign tourist from Phnom Penh. It has good access from Phnom Penh, which takes three hours using National Road No.4. It is also accessed from Kaoh Kong by ferry and by NR No.48.



**Table 4-33 Tourism Resources in the Study Area**

Area	Tourism Resource
1) Greater Capital Area (Phnom Penh and Kandal Province)	There are some tourism resources and products in the surrounding areas of Phnom Penh along National Roads no. 1 and 6 in Kandal Province. Kean Svay is a famous weekend resort for local people with many floating platforms built on the edge of Koki Beach, which is located 19 km from Phnom Penh along National Road No. 1. Koh Dach is known for a handicraft village located at Muk Kampool District, in the middle of the Mekong River, which is accessed by boat across the River from National Road No. 6. Most people at Koh Dach are engaged in weaving and producing various types and designs of silk Kroma (Scarf in Khmer language). Many foreign and local tourists enjoy visiting Koh Dach to see actual silk weaving. In addition to the silk weaving, there are many resting cottages along the Mekong River during the dry season. Many local visitors come to Koh Dach for a picnic and playing in the river.
2) Intermediate are - Takaev	Tonle Bati area is 33km south of Phnom Penh along National Road No.2, has two Ankor era temples, Ta Prohm Temple and Yeay Peau Temple built under Jayavarman VII in the late 12 <sup>th</sup> century. About 300m north-west of Ta Prohm, there is a lake connected to the Bati River. The lakefront is a picnic place for local weekend visitors. Other destinations are Ta Prohm Temple (laterite Khmer temple), Yeay Peau Temple, Phnom Tamao has 2,500hectar of forest protected area, consisting of temples (11 <sup>th</sup> century) and Cambodia's leading zoo, located about 44km from Phnom Penh by National Road no. 2. Phnom Tamao temple is very popular for local visitors in the weekend. Temples at Phnom Tamao have been severely damaged. Phnom Chisou is a mountain (380M) located 62km from Phnom Penh along National Road no. 2. Nicely preserved early 11 <sup>th</sup> century Khmer style temple sits on the top of Phnom Chosou. There are 503 steps to the top of Phnom Chisou. Wonderful view of the countryside form the top of Phnom Chisou makes the climb worth it.
- Kampong Spueu	Kirirom National Park is the main tourism resource in Kampong Spueu Province, and abuts Kaoh Kong Province, located 112km south-west of Phnom Penh in the Chhor Phnom Damrei (Elephant Mountains) along the west of the National Road no. 4. It covers a total area of 35,000ha. The Park is centered on 700m Kirirom Plateau, which was a holiday destination in the 1960s and contained large recreational facilities, although roads and other infrastructure were mostly destroyed during the Khmer Rouge era. Some buildings have recently been rehabilitated. In the Park, there are a visitor information center, trekking route, toilet and information boards and signs, which were implemented by support of donors and NGOs. Since 1997, tourists have begun to visit the Park. The Park is popular with local people at weekend due to its enchanting pine tree forests with orchid flowers and waterfall. Kirirom is an ideal eco-tourism destination for local and foreign tourists.
- Kampot	Kampot is located at the side of Kampot River. Kampot town has French style architecture. It is accessible through National Road No. 4 and 3 from Phnom Penh and Sihanoukville. Kampot town is a good base for visiting Kaeb Beach and Bokor National Park, Teuk Chhou Waterfall and Teuk Chhou Zoo. Preak Anpil Beach is located along the coastal area of Kampot in parallel with the NR. 3. The Bokor National Park situated just north of Kampot town, is one of Cambodia's largest national parks. The park has the Old French hill station of Bokor on the top of Bokor Mountain (1,075m) is known for its cool climate with abundant natural forest. At the hill station, there still remains an old hotel, Bokor Palace, a Catholic Church and other buildings. Those are attractive cultural resources for tourists. The existing access road to the hill station is seriously damaged and in poor condition and needs to be rehabilitated. Teuk Chhou Waterfall and Teuk Chhou Zoo are also famous tourism sites for local visitors in the weekend.
- Kaeb	Kaeb was developed as a French seaside resort in the early 1900's. It is accessed from Kampot by the NR. 33 via NR. 3. The beach along the coastline is rather rustic and often crowded with local visitors at the weekend. There is Koh Tonsay (Rabbit Island) near the cost of Kaeb with a nice beach, accessed by boat. There are a number of unexplored caves in and around the limestone hills near Kaeb. Phnom Sia is one of the major caves that tourists can visit, located northeast of Kaeb, 2km from NR33. There is no tourist information center in Kaeb. Kaeb is famous for seafood, especially crab. Tourist facilities and infrastructure are very poor and require improvement to serve both local and foreign tourists.
- Kaoh Kong	Kaoh Kong has 20 islands, a 237km long coastline with Phnum Samkos Wildlife Sanctuary, Boutum Sakor National Park and a part of Kirirom National Park. Kaoh Kong has not been developed for tourism purpose yet apart from the Casino resort located in the Thai border area. Currently, Sea Park (Seaworld) and recreational facilities have been under construction by a private sector near the Casino in the border area. Mangrove forests and a fisherman's village in the Wildlife Sanctuary are suitable for eco-tourism sites. Tuol Kokir and Ta Tai waterfalls are major nature tourism resources situated along National Road no. 48. At present, some tourism attractions and recreational facilities have been developed in the border area to mainly serve Thai tourists. The transportation system needs to be improved in order to attract more tourists by connecting to major tourist destination in Cambodia.
3) Sihanoukville	There are five major beaches, Victory Beach, Independence Beach, Sokha Beach, Hawaii Beach and Ochhteual Beach along the coastline. There are offshore islands, Koh Pos, Koh Koang and Koh Rong Samlen with unspoiled beaches. Some guesthouses and private travel agents arrange for cruise trips to these islands by boat. Koh Pos, called Snake Island, is the closest island from the beach, which has not been developed yet by a private foreign developer. This island will be attractive for foreign tourists. Ream National Park is known as "Ream". It encompasses 21,000ha of coastal area including sandy beaches, mangrove forests, offshore coral reefs and two islands. Guesthouses at Sihanoukville arrange transportation and eco-tourism tours of the park for individual and group visitors. For tourist, the Park Headquarters also provides eco-tour information and boat trips to various destinations with park rangers. In recent years, many hotels, guesthouses and casinos were constructed in Sihanoukville. Although, most hotels lack quality service meeting international standards. At Sokha Beach, a large-scale hotel and resort facility development has been underway by the Cambodian oil company. Besides beaches, Kabal Chhay waterfall is one of natural tourism resources accessed from Sihanoukville by NR. 4, located about 16km east of Sihanoukville. It has been become a popular tourist site for local visitors on the weekends by improvement of access road and development of tourist service facilities.

4) *Accommodation*

As of January 2002, there are 150 hotels with 6,828 rooms and 146 guesthouses with 1,531 rooms in the Study Area, which accounts for 63.2% and 39.1% of the total in Cambodia. In the Study Area, most hotels and guesthouses are concentrated in Phnom Penh with a total of 105 hotels and 47 Guesthouses with various levels from budget to high standard. Sihanoukville has 38 hotels (18.2%) and 42 guesthouses (23.5%), situated downtown and near the beach areas. In high standard hotels such as Hotel Cambodiana and Sunway Hotel in Phnom Penh, average hotel occupancy rates were 60% and 90-95% respectively during the high season period from November 2001 to March 2002. The hotel occupancy rate in Phnom Penn, especially in high standard hotels, is significantly higher because of the limited number of hotels of such standard. On the other hand, hotels in Sihanoukville are generally substandard, not of an international level. Outside Phnom Penh and Sihanoukville, hotels and guesthouses are few in number and limited. In Phnom Penh and Sihanoukville, some hotel development has been planned and is underway by local and foreign investors.

5) *Existing Tourism Transport Network*Air route

Phnom Penh is the core tourism destination and a gateway city for domestic and international tourists in the Study Area. Most foreign tourists come to Phnom Penh by air from Bangkok, Singapore, Ho Chi Minh and other cities (See **Table 2-6** and **Figure 2-7** in **Chapter 2**). Phnom Penh is connected to major cities in the neighboring countries by air as follows.

**Table 4-34 Air Routes in and out of Phnom Penh**

Name of city (Departing from)	Frequency of flight	Airline company
Bangkok	10/week 2/day 2/day	Royal Phnom Penh Airways Bangkok Airways Thai Airways International
Singapore	10/day	Silk Air
Hong Kong	2/week	Dragon Air
Kuala Lumpur	5/Week	Malaysia Airlines
Taipei	3/week	Eva Air
Ho Chi Minh	2/day + 5/week	Vietnam Airlines
Kaohsiung	4/week	Mandarin Airlines
Guangzhou	3/week	China Southern Airlines
Vientiane	2/week	Lao Aviation Vietnam Airlines
Shanghai	2/week	Shanghai Airlines
Utapaoo	Daily	Royal Phnom Penh Airways

Source: Phnom Penh International and Siem Reap-Angkor International Airport Booklet, 5<sup>th</sup> edition, May-October 2002

As of July 2002, Phnom Penh (Pochentong International Airport) has only four scheduled flight routes connecting to Battambang, Stung Treng, Rattanakiri and Siem Reap. Currently, Kaoh Kong airport has no scheduled flights. Kompon Som (Sihanoukville) airport stopped operation of flights since 1998. Redevelopment of Kompon Som airport has been underway by the private sector, including construction of a new terminal building and expansion of existing runways.

#### Road routes

A foreign visitor can access the Study Area by road through Vietnam and Thailand border crossing points as follows.

- Moc Bai (Vietnam border crossing point): An access route from Ho Chi Minh City to Phnom Penh is via Bavet in Svay Rieng using NR. No.1 by either bus or taxi. Distance from Moc Bai to Phnom Penh is 165km.
- Cham Yeam, Kaoh Kong (Thai border crossing point): An access route from Hat Lek, Trat Province on the Thai border to Kaoh Kong is via Cham Yeam. NR.48 has been under rehabilitation and is connected from Kaoh Kong to NR.4. Any vehicle has to pass four rivers by barge along NR.48.

In the Study Area, most tourist sites are accessible by land using NRs.1, 2, 3, 4, 5, 31, 33 or 48. Except for NR.4, other national roads are still not in good condition. Several bus companies operate scheduled bus services between Phnom Penh and Sihanoukville along NR.4. These buses are relatively comfortable with air conditioning and suitable for foreign tourists. It takes about two and a half or three hours from Phnom Penh to Sihanoukville.

Traveling around/to coastal areas, Bokor National Park and Kaoh Kong it is desirable to use a four-wheeled vehicle for safety.

#### Waterway routes

There is a boat service between Kaoh Kong and Sihanoukville offering about four hours' travel along the coastline. It is very popular transportation for local business people and foreign tourists. Speedboats serve between Phnom Penh and Siem Reap through Tonle Sap Lake so that local tourists and backpackers from Siem Reap to Phnom Penh often go one way by speedboat and the other way by bus.

#### Railway routes

One of two railway lines, the southwestern line (263km) serves a route between Phnom Penh and Sihanoukville via Takaev, Kampot and Kaeb. The railway is mainly for freight trains and travel at an average 20km/h. The train from Phnom Penh to Kampot and to Sihanoukville takes six hours and twelve hours, respectively. Due to the long travel hours and lack of safety, the railway

urgently needs to be rehabilitated. The southwestern line connects major tourist destinations in the Study Area and could be an alternative to road transport for tourists.

#### 6) *Typical Tour Patterns in the Study Area*

##### Phnom Penh City Tours:

Visiting major cultural/historical sites and museums in Phnom Penh including the Royal Palace, Silver Pagoda, National Museum, Central Market, Wat Phnom, Toul Sleng Museum and the Killing Fields. Most private tour operators in Phnom Penh arrange same type of city tour visiting those tourist sites and museums. Individual local and foreign tourists can hire motor cycles or taxis to visit tourist sites in Phnom Penh and its surroundings.

##### One day tour to surrounding areas of Phnom Penh along Road Nos.2, 3 and 4

It is possible to visit the following tourist areas from Phnom Penh by motorcycle, taxi or bus in a day. In case of visiting more than two tourist areas, except Kirirom National Park and Sihanoukville, the tour requires more than two days.

- Kien Svay and Koh Dach (Silk Island) in Kandal Province
- Tole Le Bati, Phnom Ta Mau and Phnom Chisou in Takaev Province
- Kirirom National Park in Kampong Spueu Province
- Sihanoukville

##### Tour to Sihanoukville and Kaoh Kong

Sihanoukville has a popular beach resort for weekend visits among local people and foreign residents in and around Phnom Penh. Several bus companies operate scheduled express buses between Phnom Penh and Sihanoukville. It is very popular transportation for backpackers traveling to Sihanoukville. In recent years, some travel agents have started promoting tours to Sihanoukville and various package tours combined with Sihanoukville. Capitol Tours in Phnom Penh arranges a bus tour to Sihanoukville. Tour courses and duration vary depending on local and foreign tourist markets. First Travel in Phnom Penh has a 3-days package tour to Sihanoukville by bus including visiting beaches, Ream National Park, a boat trip to two islands (Koh Sampoach and Koh Chhang) and a fishing village. There are some optional tours to Ream National Park, Kbal Chhay Waterfalls, and offshore islands by local guesthouses.

### **(3) Commercial and Other Service Sectors**

#### *1) Type of Businesses in the Commercial and Service Sector by Area*

##### Greater Capital Area

Phnom Penh is the capital of Cambodia and the largest urban center, which attracts various types of commercial businesses due to the growing demands of economic and social activities in Cambodia. Wholesale, retail, bank, educational and public institutions are concentrated in Phnom Penh and the surrounding areas. In Phnom Penh, the following commercial business including mobile phone shop, private language schools, printing shops, music and computer software shops and Internet cafés increased in number.

According to data received from the Department of Commerce, Phnom Penh Municipality, the number of registered commercial establishments was 2,416 in 2001. Major commercial business include food and beverage 246, construction material 241, mobile phone 128, car spare parts 116, furniture 108, canned food 107, restaurant 103, motor bike and bicycle repair 82.

##### Intermediate Area

Each provincial center in the Intermediate Area has a concentration of various types of commercial and service business activities. The provincial town hall, market, retailers and vendors are seen in each provincial center. In general, Commercial activities are relatively small scale, very primitive and undeveloped. Agricultural products and household commodities are distributed and sold in each provincial center. The total number of registered retailers and business establishments in the Intermediate is unknown.

##### Sihanoukville

In Sihanoukville, various kinds of commercial and service business establishments are seen in the downtown area including a central market, retail shops, restaurants, hotels, guesthouses, banks, gas stations, etc. In recent years, mobile phone shops have been increasing in number similar to Phnom Penh. As of December 2000, the number of commercial and service business was 317. 243 of which applied for business licenses from the Department of Commerce, Sihanoukville Municipality.

#### *2) Registration System for Commercial Business Licenses*

According to Commercial Law, the establishment and operation of any type of commercial business requires a business license either from the Ministry of Commerce (MOC) or the Department of Commerce of the local government. Any commercial business with a capital of more than 20 million riel has to apply for a business license directly to MOC, while commercial businesses with capital

of less than 20 million riel apply to the Department of Commerce of the local government. According to the Department of Commerce, Phnom Penh Municipality, only about 50% of the total business operators or companies in Phnom Penh actually have licenses. The registration fee is between 600 and 700 Riels. Currently, it will take about seven days to issue the business license after applying for the license.

Existing Commercial Law does not distinguish between types of commercial business in applying for commercial business licenses. Registered commercial businesses at MOC are not classified by type of business. In fact, many local and foreign companies apply for commercial business licenses including more than two different business activities. After receiving a business license from MOC, the company has to apply to the relevant ministry for a business license for a specific business activity. In case of hotels and tour operator businesses, it is required to apply for a business license from the Tourism Industry Department, Ministry of Tourism. A registered company has to renew the business license every year.

### 3) *Financial Sector*

#### Overview

The financial sector in Cambodia is at a rudimentary stage with limited financial intermediation and low public confidence. Cambodia still has one of the lowest rates of banking intermediation in the world: bank loans and deposits account for approximately 8% and 12% of gross domestic products (GDP), respectively. Cambodia had a monobanking system when the National Bank of Cambodia (NBC) operated through its provincial branches. In 1991, the first private commercial bank was established as a joint venture between National Bank of Cambodia (NBC) and Siam Commercial Bank of Thailand. In 1996, NBC was established as the central bank by the Central Banking Law.

In November 2000, just before the first phase of NBC's bank relicensing program, the commercial banking system consisted of 31 banks, including two Government-owned banks, 22 locally incorporated banks, and 7 foreign bank branches. In December 2000, NBC revoked the licenses of 12 banks classified as nonviable and placed 16 banks under conditional licenses.

In the rural areas, banking activities are even more scarce; the microfinance operations of non-government organization (NGOs) are the main and de facto providers of credit there.

The five largest commercial banks, including the Government-owned Foreign Trade Bank (FTB), hold more than 50% of total banking assets and deposits. Deposits in foreign currencies are predominantly US dollars, which covers more than 90% of total banking deposits. Loans and deposits in the banking sector as

of December 2000 are shown in **Table 4-35**. The loans increased 31% to US\$249 million, while deposits increased 40% to US\$382million, compared to 1999. Loan growth occurred predominantly in the manufacturing and service sectors. Despite the low level of lending, asset quality in the banking system is poor. According to NBC, the volume of nonperforming loans in the banking system is reported to be substantial and growing.

**Table 4-35 Loans and Deposits in the Banking Sector as of December 2000**

Item	KR million	\$ million	% of GDP
Loans	972,747	249	7.60%
Deposits in KR	103,969	27	0.8%
Deposits in Foreign Currency	1,386,985	355	10.9%
Total Deposits	1,490,954	382	11.7%

Source: National Bank of Cambodia

The high risk and operating costs associated with bank lending cause a high interest rate spread and the prevalence of short-term lending. Typical loan maturity is between three and six months, because banks are reluctant to provide loans with longer terms. Typical lending conditions provided by major banks to private companies are shown in **Table 4-36**.

**Table 4-36 Lending Conditions of Commercial Banks**

	Foreign Trade Bank of Cambodia	Cambodia Public Bank	Canadian Bank
Lending period	Short-term (within a year)	Short-term (within a year)	Short-term (within a year)
Interest rate (per month)	1.5% for dollar 1.4% for riels	0.75-1.5% for dollars	1-1.5% for dollars
Collateral	Up to the max. of 30-40% of the assessed value	Required	required

Source: Cambodia Investment Board

### Greater Capital Area

As explained the above section, Phnom Penh is a financial center of Cambodia. In Phnom Penh, two state-owned banks along with the Foreign Bank of Cambodia, Cambodia Commercial Bank and Rural Development Bank, foreign and local private banks have been established and operated in Phnom Penh. It is necessary to develop an efficient financial system in order to support private sector development and foreign direct investment.

### Intermediate Area

A banking system in rural area has not yet developed. According to the Financial Sector Blueprint for 2001-2010, ADB, the estimated rural finance demand is US\$120-130 million per annum, of which one third is for micro credit ranging from US\$50 to US\$300. Reliable savings facilities are not available in

rural areas such as exist in the Intermediate area. For rural areas, NGOs provide micro finance, supported by international funding agencies such as the UNICEF, the International Fund for Agricultural Development (IFAD) and the USAID. Most of the borrowers are women.

In the Intermediate area, private commercial bank is limited. Only one private bank is established and operated at each Provincial center in Kampot and Koh Kong.

In order to develop a rural financial system in Cambodia, the Rural Credit and Savings Project and Technical Assistance for Capacity Building for Rural Financial Services were carried out by ADB.

#### Sihanoukville

Branch offices of the Cambodian Farmer's Bank, Cambodia Commercial Bank, Canadia Bank, Pacific Commercial Bank, First Overseas Bank and Union Commercial Bank are located in commercial areas of Sihanoukville. To service the increasing demand of commercial, trading and tourism activities in Sihanoukville, improvement of existing banking system and function is indispensable.

### **4.3.7 Urban Planning**

#### *1) Legal Framework*

The Law on Land Use Planning, Urbanization and Construction (NS/RKM/04/94) was put into effect in August 1994. This law established procedures for formulation of development plans and land use plans on the national and local levels.

The objective of the law was stipulated to “promote the organization and embellishment of the urban and rural areas throughout the Kingdom of Cambodia with the purpose of assuring the development of this country” (Article 1), in the spirit of;

- Respecting both common and individual interests, private rights, observing laws and regulations and overseeing construction matters,
- Assuring through a development process, an equilibrium between the cities / towns and rural areas based on their geographical conditions and special characteristics, and
- Assuring the value of natural and cultural wealth, ensuring the development of the economic and tourist sectors and maintaining the quality of the environment.

The law stipulates the establishment of committees for planning, urbanization and construction at the central and local levels. The local level committees are



comprised of the committee for the capital city of Phnom Penh and provincial and municipal subcommittees.

The law requires the Phnom Penh and provincial and municipal subcommittees to formulate development master plans (Article 5), which are subject to approval by the National Committee. In addition, for any special area with importance to the environment or economic development as determined by the Council of Ministers, the Law enables the National Committee to formulate a specific development master-plan.

The Law also stipulates the formulation of land use master plans (Article 6) under the development master plans for Phnom Penh and at the provincial and municipal levels. The land use master plan shall establish a zoning system comprising areas allocated for national defense, agriculture, commerce, industry, handicraft, culture, tourism, religion and administrative and public facilities.

The construction work in theory shall be conducted in obedience with the development plans and land use plans and relevant documents (Article 11, 12 and 13).

## 2) Policy Framework

The urban area is where most of the industrial products are manufactured and goods, both industrial and agricultural, are traded and consumed. Most of the foreign or domestic investments for development thus head for the urban areas and their surrounding areas. Proper management and regulation of the urban areas, in essence, lead to the enhancement and expansion of the economic activities of Cambodia.

A national Land Policy Workshop (17-18 July 2000) identified some key regulatory and administrative problems in land policy<sup>7</sup>. Some of the problems pertaining to urban planning are given below;

- Land use planning and enforcement mechanism remaining weak, and this constrains natural resource management in urban planning
- There is frequent encroachment onto protected areas
- There is ambiguity about the roles of different government agencies in land administration with no appropriate mechanism for coordination

The following current policy directives in connection with urban planning address the issues mentioned above<sup>8</sup>;

- Development of land use plans for priority areas including tourism and investment zones, key urban areas and major road corridors

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<sup>7</sup> World Bank et al., Cambodia; Integrated and Competitiveness Study, Phnom Penh, 2002.

<sup>8</sup> Statement of Royal Government of Land Policy (May 2001)

- Coordination of land use planning with natural resource management of forests, fisheries, coasts, waterways and mineral deposits in a harmonized legal framework
- Decentralization of land management and planning authority to local/provincial authorities, after the establishment of national land use guidelines/supervisory structures

### 3) *Overview of Present Conditions*

In 1993, the Kingdom of Cambodia and the Royal Government of Cambodia came in being as a constitutional monarchy. RGC's top priority was placed on ensuring and promoting the social environment of peace, security and stability, and thus enabling a full-fledged market economy<sup>9</sup>. After 1994, when the Law on Investment was promulgated, establishing in Cambodia liberal investment conditions comparable to that of neighboring nations, investments, mainly in manufacturing and tourism facilities, flourished the cities in Cambodia, particularly Phnom Penh. This put the capital city open to and dependent on foreign investors and its urbanization spontaneously transformed.

The situation was similar, though less intense, in Sihanoukville. During the UNTAC sponsored election in 1992 and 1993, Sihanoukville played host to the Australian, Belgian and French contingents of UNTAC. The Angkor Brewery was reopened in 1991, and the once deserted Independence Hotel was refurbished for UNTAC. Hotels and villas were newly built along the shoreline, and foreign tourists started coming to Sihanoukville for the first time. Foreign investments for tourism and resort development expanded rapidly<sup>10</sup>.

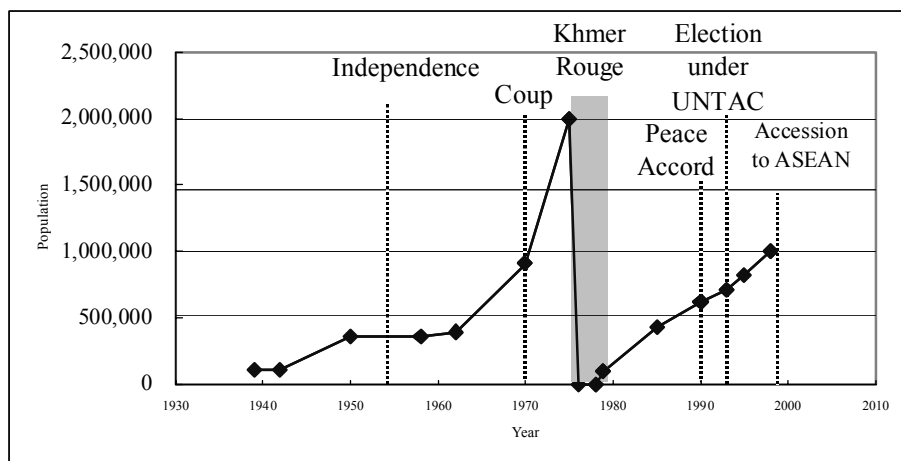
Urbanization in Cambodia concentrates around the capital city, Phnom Penh and its neighboring provincial capitals, chiefly within the central plain area. Medium to minor urban centers chain along the major national roads towards the border with Thailand and Vietnam, and to the seacoast of the Bay of Siam.

The largest urban center in Cambodia is what might be called the Greater Phnom Penh metropolitan area, combining the capital city of Phnom Penh and its outskirts extending to Kandal Province. The areas along the National Roads No.2 towards Takaev and No.3 towards Kampot are urbanized in a conjunctive manner.

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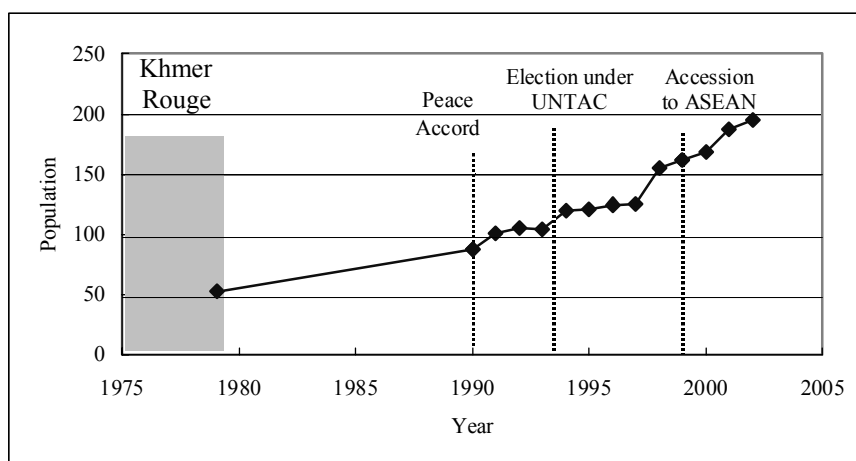
<sup>9</sup> References are made to Mekong Law Group, Cambodia Investment Guide 2002; Ministry of Planning, Review of Progress in the 1990's and Action Programme for 2001 – 2010, Third United Nations Conference on the Least Developed Countries, Brussels, May 2001.

<sup>10</sup> Reference was made to the Sihanoukville Visitors Guide web page; <http://www.canbypublications.com/>



**Figure 4-20 Historical Change in Population of Phnom Penh**

Sihanoukville is the city located on the coastline. As the city houses the only deep seaport in Cambodia that provides direct sea lane access to external ports, Sihanoukville is an attractive location for export industries. In addition, the city has a number of good beaches and is becoming a resort destination. As a result, the city’s population has been and is expected to continue to increase rapidly.



**Figure 4-21 Historical Change in Population of Sihanoukville**

Despite the rapid expansion of urban population in the cities, actual enforcement of urban planning procedure is very limited.

The major issues in urban planning are the lack of substance of planning and mechanism for enforcement. Among the committees stipulated in the Law, only the National Committee has been established, leaving the provincial/municipal committees yet to be established. The substance of planning staples has not been established yet, nor have guidelines for enforcement been made available.