

## Chapter 3 COMMUTING IN LOCAL PROVINCES

### 3.1 COMMUTERS IN PROVINCES OF BATTAMBANG AND SIEM REAP

#### 3.1.1 General Aspect on Population Distribution as Source of Commuting

According to the final results of the 2008 Population Census, total population of Province Battambang, locating on northwestern part of this country, recorded 1,025,174 persons occupying 7.7 percent of total population of Cambodia. While, Province Siem Reap adjacent to Battambang counted 896,443 persons accounting 6.7 percent of total population. In total, 14.3 percent of Cambodian population reside in 12.4 percent of total land area of the kingdom. As a result, population density indicated 87 persons per km<sup>2</sup> (88 persons/km<sup>2</sup> for Battambang and 87 persons/km<sup>2</sup> for Siem Reap). It is slightly higher than national average of 75 persons per one km<sup>2</sup>. So that, it can be said that both provinces have a similarity in terms of population distribution.

**Table 3.1 Population, Land Area and Density: Battambang and Siem Reap, 1998 and 2008**

|            | Population |            | % of total |       | Annual growth rate (%) | Land area (km <sup>2</sup> ) | Persons/km <sup>2</sup> |
|------------|------------|------------|------------|-------|------------------------|------------------------------|-------------------------|
|            | 2008       | 1998       | 2008       | 1998  |                        |                              |                         |
| Cambodia   | 13,395,682 | 11,437,656 | 100.0      | 100.0 | 1.6                    | 178,035                      | 75                      |
| Battambang | 1,025,174  | 793,129    | 7.7        | 6.9   | 2.6                    | 11,702                       | 88                      |
| Siem Reap  | 896,443    | 696,164    | 6.7        | 6.1   | 2.6                    | 10,299                       | 87                      |
| (1)+(2)    | 1,921,617  | 1,489,293  | 14.3       | 13.0  | 2.6                    | 22,001                       | 87                      |

On the other hand, the proportion of urban population in terms of new definition to total population is 19.5 percent for Cambodia, while it is 17.6 percent for Province Battambang and 19.4 percent for Province Siem Reap as of 2008. Of the total urban population 6.9 percent were occupied by Province Battambang, and 6.7 percent by Province Siem Reap. Accordingly, 13.6 percent of the nation's urban population are occupied by this two provinces constituting a part of Tonle Sap region . In 1998, this proportion was 13.4 percent. It can be said that population concentration or urbanization was not so much promoted in this region during the decade, comparing with Kandal and Phnom Penh.

### 3.1.2 Commuting Flows in Province Battambang

Annex Table 2.A.a. presents the number of in-commuters aged 10 and over, classified into the employed persons and the persons attending school by sex, to each of thirteen districts within Province Battambang from each districts of neighboring province, or Pailin and Siem Reap. Also, Annex Table 2.B.a. presents the number of out-commuters aged 10 and over, classified into the employed persons and the persons attending school by sex, from each of thirteen districts within Province Battambang and to the neighboring provinces, or Pailin and Siem Reap. Based on the both tables, commuting flows between the each districts, focusing on those locating within Province Battambang can be observed.

In Province Battambang, it is found for the each districts that not only in-commuters but also out-commuters are more for males than for females. Also, it is observed that numbers of in-commuters and out-commuters are remarkably larger to and from the each districts of Battambang than to and from those of other provinces. Furthermore, numbers of not only in-commuters but also out-commuters are considerably larger than for employed persons than for the persons attending school in each districts.

Observing Table 3.2 or Annex Table 5 which shows number of commuters between districts in Province Battambang, it is found that number of in-commuters is larger than that of out-commuters for 9 districts, whereas number of out-commuters is larger than that of in-commuters for 4 districts. Among the latter districts 0203 Bat Dambang indicates distinctly large number of the in-commuters (6,118 persons). On the other hand, among the former districts, 0208 Sangkae, 0205 Aek Phnum and 0203 Bat Dambang present relatively great number of the out-commuters (3,385 persons, 2,453 persons and 2030 persons respectively).

Comparing intensities of commuting flows between the districts of Battambang in Table 3.3 and Figure 4, the commuting rate of in-flows aged 10 and over indicates the highest (5.0 %) for 0203 Bat Danbang and the second highest (1.3 %) for 0207 Rotonak Mondol, 0208 Sangkae and 0212 Kamrieng. It presents the lowest (0.2 %) for 0206 MOUNG RUESSEI. On the other hand, the commuting rate of out-flows aged 10 and over indicates the highest (4.5 %) for 0205 Aek Phnum and the second highest (3.8 %) for 0208 Sangkae, while the lowest (0.2%) for 0213 Kosa Krala.

Comparing with Kandal and Phnom Penh, the commuting rate is distinguishably low for inflow as well for outflow in Province Battambang. However, From the above findings it can be known that the district of 0203 Bat Dambang is the central place of commuting in Province Battambang.

**Table 3.2 Number of Commuters: Battambang and Siem Reap**

| Sex and District    | Total commuters |         |          |
|---------------------|-----------------|---------|----------|
|                     | Inflow          | Outflow | Net flow |
| 0201.Banan          | 539             | 425     | 114      |
| 0202.Thma Koul      | 305             | 1,426   | -1,121   |
| 0203.Bat Dambang    | 6,118           | 2,030   | 4,088    |
| 0204.Bavel          | 262             | 222     | 40       |
| 0205.Aek Phnum      | 281             | 2,453   | -2,172   |
| 0206.Moung Ruessei  | 254             | 329     | -75      |
| 0207.Rotonak Mondol | 394             | 263     | 131      |
| 0208.Sangkae        | 1,124           | 3,385   | -2,261   |
| 0209.Samlout        | 293             | 95      | 198      |
| 0210.Sampov Lun     | 185             | 79      | 106      |
| 0211.Phnom Proek    | 230             | 111     | 119      |
| 0212.Kamrieng       | 517             | 108     | 409      |
| 0213.Koas Krala     | 199             | 39      | 160      |
| 1701.Angkor Chum    | 127             | 85      | 42       |
| 1702.Angkor Thum    | 61              | 396     | -335     |
| 1703.Banteay Srei   | 106             | 369     | -263     |
| 1704.Chi Kraeng     | 83              | 250     | -167     |
| 1706.Kralanh        | 99              | 165     | -66      |
| 1707.Puok           | 287             | 2,690   | -2,403   |
| 1709.Prasat Bakong  | 75              | 1,348   | -1,273   |
| 1710.Siem Reab      | 5,077           | 399     | 4,678    |
| 1711.Soutr Nikom    | 190             | 242     | -52      |
| 1712.Srei Snam      | 29              | 64      | -35      |
| 1713.Svay Leu       | 52              | 113     | -61      |
| 1714.Varin          | 76              | 18      | 58       |

(Note) The data of 0214 Rukhak Kiri established by sub-decree are included in the data of. 0206

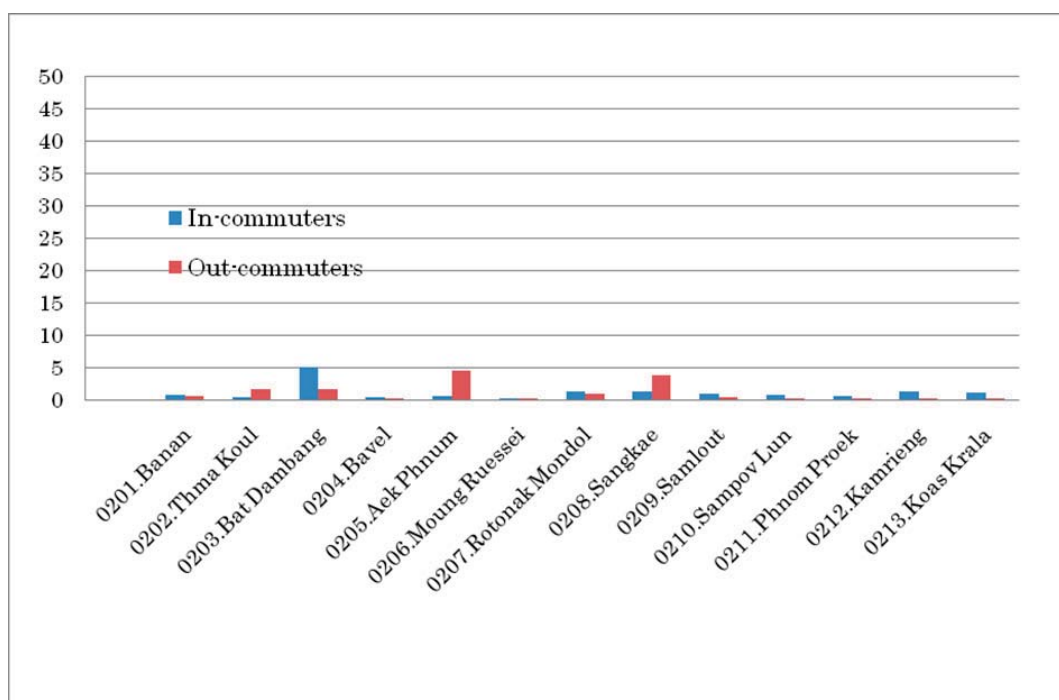
Moung Ruessei

**Table 3.3 Commuting Rates: Districts of Battambang and Siem Reap**

| Districts            | Population aged<br>10 & over | per 100 persons aged 10 and over |               |               |
|----------------------|------------------------------|----------------------------------|---------------|---------------|
|                      |                              | In-commuters                     | Out-commuters | Net commuters |
| <b>02 Battambang</b> | 805,828                      | 1.3                              | 1.4           | 0.0           |
| 0201.Banan           | 72,140                       | 0.7                              | 0.6           | 0.2           |
| 0202.Thma Koul       | 89,930                       | 0.3                              | 1.6           | -1.2          |
| 0203.Bat Dambang     | 120,331                      | 5.1                              | 1.7           | 3.4           |
| 0204.Bavel           | 77,637                       | 0.3                              | 0.3           | 0.1           |
| 0205.Aek Phnum       | 54,135                       | 0.5                              | 4.5           | -4.0          |
| 0206.Moung Ruessei   | 115,878                      | 0.2                              | 0.3           | -0.1          |
| 0207.Rotonak Mondol  | 31,467                       | 1.3                              | 0.8           | 0.4           |
| 0208.Sangkae         | 88,830                       | 1.3                              | 3.8           | -2.5          |
| 0209.Samlout         | 30,706                       | 1.0                              | 0.3           | 0.6           |
| 0210.Sampov Lun      | 27,263                       | 0.7                              | 0.3           | 0.4           |
| 0211.Phnom Proek     | 38,371                       | 0.6                              | 0.3           | 0.3           |
| 0212.Kamrieng        | 39,656                       | 1.3                              | 0.3           | 1.0           |
| 0213.Koas Krala      | 19,484                       | 1.0                              | 0.2           | 0.8           |
| <b>17 Siem Reap</b>  | 686,986                      | 0.9                              | 0.9           | 0.0           |
| 1701.Angkor Chum     | 40,299                       | 0.3                              | 0.2           | 0.1           |
| 1702.Angkor Thum     | 17,527                       | 0.3                              | 2.3           | -1.9          |
| 1703.Banteay Srei    | 32,017                       | 0.3                              | 1.2           | -0.8          |
| 1704.Chi Kraeng      | 95,572                       | 0.1                              | 0.3           | -0.2          |
| 1706.Kralanh         | 44,520                       | 0.2                              | 0.4           | -0.1          |
| 1707.Puok            | 86,708                       | 0.3                              | 3.1           | -2.8          |
| 1709.Prasat Bakong   | 47,189                       | 0.2                              | 2.9           | -2.7          |
| 1710.Siem Reab       | 183,572                      | 2.8                              | 0.2           | 2.5           |
| 1711.Soutr Nikom     | 75,876                       | 0.3                              | 0.3           | -0.1          |
| 1712.Srei Snam       | 22,787                       | 0.1                              | 0.3           | -0.2          |
| 1713.Svay Leu        | 18,062                       | 0.3                              | 0.6           | -0.3          |
| 1714.Varin           | 22,857                       | 0.3                              | 0.1           | 0.3           |

(Note) The data of 0214 Rukhak Kiri established by sub-decree are included in the data of. 0206 Moung Ruessei

**Figure 4. Commuting Rates (%) : Battambang**



### 3.1.3 Commuting Flows in Province Siem Reap

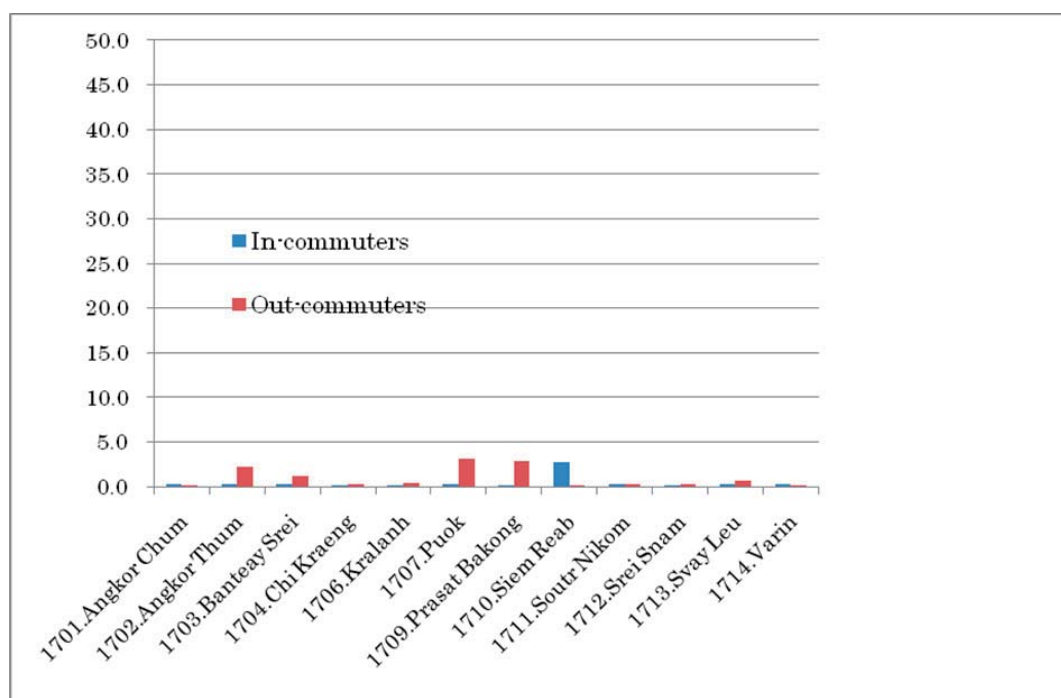
Annex Table 2.A.b. presents the number of in-commuters aged 10 and over, classified into the employed persons and the persons attending school by sex, to each of twelve districts within Province Siem Reap from each districts of neighboring province, or Pailin and Battambang. Also, Annex Table 2.B.b. presents the number of out-commuters aged 10 and over, classified into the employed persons and the persons attending school by sex, from each of thirteen districts within Province Siem Reap. and to the neighboring provinces, or Pailin and Battambang Based on the both tables, commuting flows between the each districts, focusing on those locating within Province Siem Reap can be observed.

In Province Siem Reap, it is found for the each districts that not only in-commuters but also out-commuters are more for males than for females. Also, it is observed that numbers of in-commuters and out-commuters are remarkably larger to and from the each districts of Siem Reap than to and from those of other provinces. Furthermore,

numbers of not only in-commuters but also out-commuters are considerably larger than for employed persons than for the persons attending school in each districts.

Observing Table 3.2 or Annex Table 5 which shows number of commuters between districts in Province Siem Reap, it is found that number of in-commuters is larger than that of out-commuters for 3 districts, whereas number of out-commuters is larger than that of in-commuters for 9 districts. Among the former districts, 1710 Siem Reab presents distinctly large number of the in-commuters (5,077 persons). Among the latter districts 1707 Puok and 1709 Prasat Bakong indicates relatively large number of the out-commuters.

**Figure 5. Commuting Rates (%) : Siem Reap**



Comparing intensities of commuting flows between the districts of Siem Reap in Table 3.3 and Figure 5, the commuting rate of in-flows aged 10 and over indicates the highest (2.8 %) for 1710 Siem Reab. Also, it presents the lowest (0.1 %) for 1704 Chi Kraeng and 1712 Srei Snam. On the other hand, the commuting rate of out-flows aged 10 and over indicates the highest (3.1 %) for 1707 Puok and the second highest (2.8 %) for 1709 Prasat Bakong, while the lowest (0.1%) for 1714 Varin.