

Chapter 2

Major Findings

General Information

The Northern Region area is 169,644.3 square kilometers. It has common boundary with The Republic of the Union of Myanmar and Laos People's Democracy Republic in the North, Laos People's Democracy Republic, Loei, Khon Kaen and Chaiyaphum in the East, Kanchana Buri, Suphan Buri, Chai Nat, Sing Buri and Lop Buri in the South and The Republic of the Union of Myanmar in the West.

In the year 2010, the Northern Region had 17 provinces (Changwat), 196 districts (Amphoe), 1,562 sub-districts (Tambon), 13,040 villages (Moo baan), 480 municipalities and 1,196 non-municipalities (Tambon Administration Organization: TAO).

1. Demographic characteristics

1.1 Number of population and distribution of population

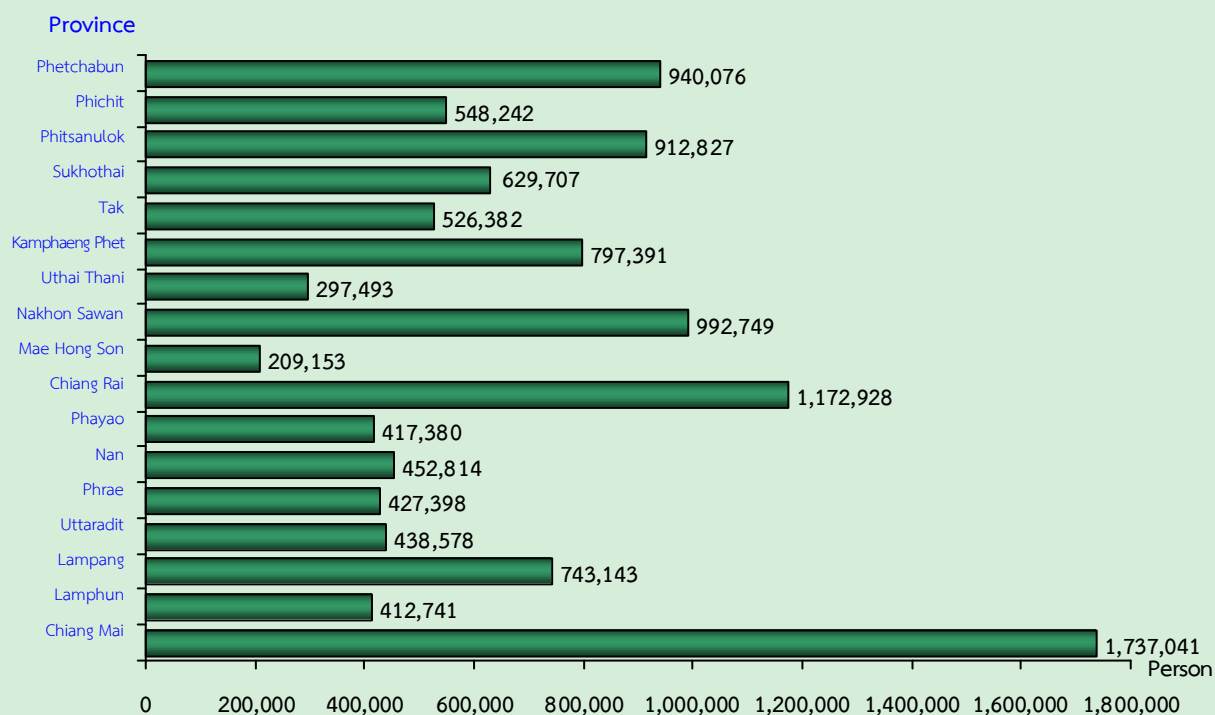
On September 1, 2010, the number of population in the Northern Region was 11,656,040 out of these, 5,716,158 were males and 5,939,882 were females. The sex ratio was 96.2, which is defined as the number of males for every 100 females. This indicated that the number of females were slightly more than males. This appeared in most of the provinces of the North, except Mae Hong Son. The annual population growth rate from 2000 to 2010 was 0.19 percent per year.

Most of the population in this region or about 65.4 percent lived in non-municipal area while only about 34.6 percent lived in municipal area (Table 1). In comparison of population at provincial level, it reveals that Chiang Mai was the most populous, of 1,737,041 people or 14.9 percent, followed by Chiang Rai (10.1%) and Nakhon Sawan (8.5%) respectively. Mae Hong Son was the least populous, of 209,153 people or 1.8 percent (Figure 1).

Table 1 Number of population by sex and area

Area	Population			Percent
	Total	Male	Female	
Total	11,656,040	5,716,158	5,939,882	100.0
Municipal area	4,038,090	1,939,139	2,098,951	34.6
Non-municipal area	7,617,950	3,777,019	3,840,931	65.4

Figure 1 Number of population by province in 2010



1.2 Population density

The population density of Northern Region was 68.7 persons per 1 square kilometer (km^2). The province, with highest density was Phichit with 121.0 persons per 1 km^2 , followed by Nakhon Sawan and Chiang Rai with a population density of 103.4 and 100.4 persons per 1 km^2 , respectively. Mae Hong Son was the lowest density of 16.5 persons per 1 km^2 (Table 2).

Table 2 Average population density by province

Province	Area (Square kilometer)	Number of population (Person)	Population density (Person per 1 Km^2)
Total	169,644.3	11,656,040	68.7
Chiang Mai	20,107.0	1,737,041	86.4
Lamphun	4,505.9	412,741	91.6
Lampang	12,534.0	743,143	59.3
Uttaradit	7,838.6	438,578	56.0
Phrae	6,538.6	427,398	65.4
Nan	11,472.1	452,814	39.5
Phayao	6,335.1	417,380	65.9
Chiang Rai	11,678.4	1,172,928	100.4
Mae Hong Son	12,681.3	209,153	16.5
Nakhon Sawan	9,597.7	992,749	103.4
Uthai Thani	6,730.2	297,493	44.2
Kamphaeng Phet	8,607.5	797,391	92.6
Tak	16,406.6	526,382	32.1
Sukhothai	6,596.1	629,707	95.5
Phitsanulok	10,815.8	912,827	84.4
Phichit	4,531.0	548,242	121.0
Phetchabun	12,668.4	940,076	74.2

1.3 Number of households, household size and sex of household head

There were 3,771,529 households in this region, about 3,741,291 private households and 30,238 collective households (such as institutional household, worker's household). The average size of private households was 3.0 persons per 1 household. The average size of private households in municipal area was smaller than in non-municipal area (2.8 and 3.2 persons, respectively) (Table 3).

Considering provincial differentials, Phichit had the biggest average size of private households, of about 3.6 persons, followed by Phetchabun 3.5 persons. Chiang Mai and Lamphun had the smallest average size of private households (2.7 persons per 1 household) (Statistical table 1).

In private households, there were higher percentage of male headed households than female headed households (67.7 percent compared to 32.3 percent). In municipal area, there was higher proportion of female headed household than in non-municipal area (Table 3).

Table 3 Number and average size of private households, percentage of household head by sex and area

Area	Number of private household	Average size of Private household	Percentage of household head		
			Total	Male	Female
Total	3,741,291	3.0	100.0	67.7	32.3
Municipal area	1,397,060	2.8	100.0	64.4	35.6
Non-municipal area	2,344,231	3.2	100.0	69.6	30.4

1.4 Population age-sex structure

Considering population age-sex structure in the Northern Region (Table 4), it was found that young or children population (0 - 14 years) accounted for 19.3 percent, working-age population (15 – 59 years) for 65.4 percent and aging population (60 years and over) for 15.3 percent. The proportion of the young group in non-municipal area was higher than that in municipal area, while the working-age group in the non-municipal area was lower than that in the municipal area. When consideration about sex, it showed that proportion of young group was more male than female, while elderly group was more female than male. About the working-age group, it was similar to both male and female.

Average age of population (Median age) was about 37.9 years. The population in municipal area had a little higher median age than those in non-municipal area (38.0 and 37.8 years, respectively).

The dependency ratio, which defines as population working aged 15-59 years who have to be responsible for population at the other aged-groups, was 52.9, it means that 100 persons of working age population have to be responsible to take care of young and elderly population, approximately 53 persons. Age dependency ratio for young population was 29.5 and was 23.4 for elderly population. The young and elderly dependency ratios in non-municipal area were higher than those in municipal area (Table 4).

Table 4 Population characteristics by area

Population characteristics	Total	Area	
		Municipal area	Non-municipal area
Population by aged-group (%)			
Children aged 0-14 years			
Total	19.3	16.1	21.0
Male	20.2	17.1	21.8
Female	18.4	15.2	20.1
Working aged 15-59 years			
Total	65.4	68.5	63.7
Male	65.3	68.4	63.7
Female	65.5	68.6	63.8
Old aged 60 years and over			
Total	15.3	15.4	15.3
Male	14.5	14.5	14.5
Female	16.1	16.2	16.1
Median age (year)	37.9	38.0	37.8
Sex ratio (%)			
Total	96.2	92.4	98.3
Children aged 0-14 years	105.7	104.0	106.4
Working aged 15-59 years	96.0	92.1	98.2
Old aged 60 years and over	86.4	82.5	88.5
Dependency ratio (%)			
Total	52.9	46.0	56.9
Children aged 0-14 years	29.5	23.6	32.9
Old aged 60 years and over	23.4	22.5	24.0

1.5 Religion and nationality

Most of the population in the Northern Region were Buddhist (96.5 percent), followed by Christian (3.1 percent) and Islamic (0.3 percent). Considering population in municipal area and non-municipal area, most of them were Buddhist (97.0 and 96.3 percent, respectively).

The Majority of population were Thais (96.6 percent), followed by Burmese (1.4 percent) and the rest were other nationalities, such as, Chinese and Laotian etc. (Table 5).

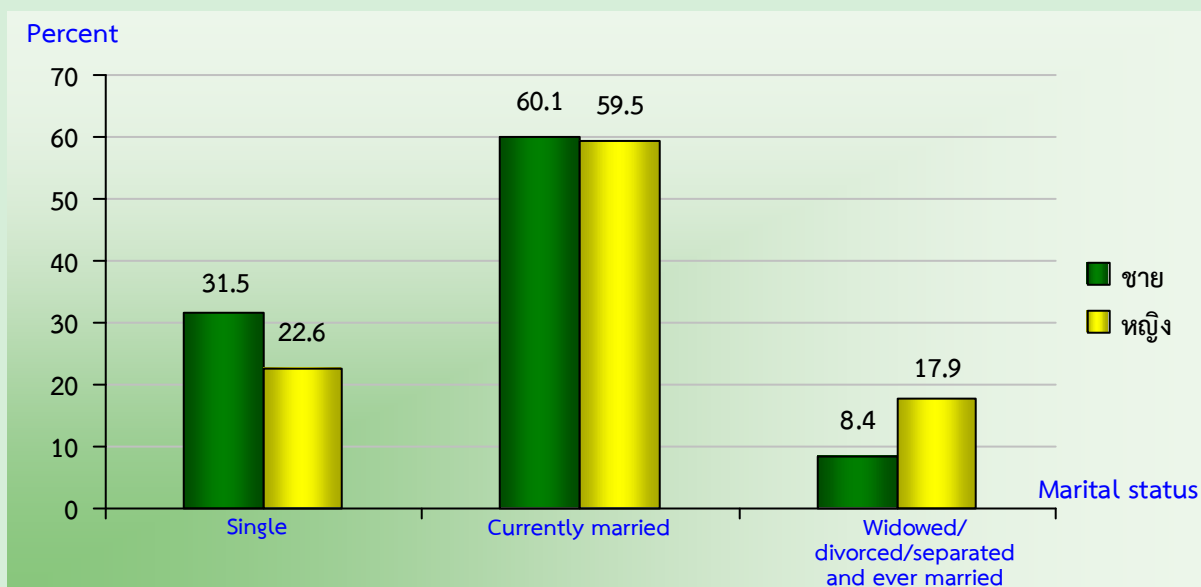
Table 5 Percentage of population by religion, nationality and area

Religion and nationality	Total	Area	
		Municipal area	Non-municipal area
Religion	100.0	100.0	100.0
Buddhism	96.5	97.0	96.3
Islam	0.3	0.5	0.2
Christianity	3.1	2.3	3.4
Others	0.1	0.2	0.1
Nationality	100.0	100.0	100.0
Thai	96.6	96.3	96.8
Burmese	1.4	1.8	1.1
Chinese, Laotian	0.3	0.4	0.3
Others	1.7	1.5	1.8

1.6 Marital status

Figure 2 shows marital status of population aged 13 years and over, it was found that more than 50 percent of population was currently married. The proportions of male and female with currently married status were about the same. The single male was higher than female (31.5 and 22.6 percent, respectively) but ratio of female population who were widowed, divorced, separated and ever married were more than double compared to those of male (17.9 and 8.4 percent, respectively).

Figure 2 Percentage of population aged 13 years and over by marital status and sex



1.7 House registration

Regarding, having the names listed in the official house registration according to actual place of residence, it was found that there were 86.9 percent of population had their names registered in the house actual living in such province, about 8.5 percent of them had their names registered in other house in the provinces, while 2.9 percent had been in other provinces, the rest of 1.7 percent had their names registered in other house in other countries and no where, most of them were non-Thais who have been living in Thailand. Population in municipal area had their names registered in the house registration at the actual place of residence was lower than those in non-municipal area (80.2 and 90.4 percent, respectively).

Table 6 Percentage of population by house registration, sex and area

Name listing in house registration	Total	Sex		Area	
		Male	Female	Municipal area	Non-municipal area
Total	100.0	100.0	100.0	100.0	100.0
Listed in the house actual living	86.9	86.3	87.4	80.2	90.4
Listed in other house					
In this province	8.5	8.9	8.2	12.8	6.2
In other province	2.9	3.0	2.8	4.9	1.9
In other country	1.2	1.3	1.1	1.6	0.9
No where	0.5	0.5	0.5	0.5	0.6

1.8 Disability

Regarding the questions on disability which refers to visible disability or can be obviously seen based the definition of Ministry of Social Development and Human Security, asked every person whether they have disability or not, It was found that for 11,656,040 population in the Northern Region, 98.9 percent of them, were not disable, only 1.1 percent were disable (Table 7).

Table 7 Percentage of population by disability condition, sex and area

Disability condition	Total	Sex		Area	
		Male	Female	Municipal area	Non-municipal area
Total	100.0	100.0	100.0	100.0	100.0
No disability	98.9	98.7	99.0	98.9	98.8
Disability	1.1	1.3	1.0	1.1	1.2

2. Social and economic characteristics

2.1 Education

Normally, the population aged 6-24 years should be enrolled in school at any educational levels. However, table 8 indicates that approximately 25.8 percent of population aged 6-24 years were not attending school. Male, not attending school, was higher proportion than female (27.6 and 24.0 percent, respectively). Population, in municipal area was not attending school, more than that non-municipal area (26.8 and 24.0 percent, respectively).

Considering education attainment, 37.4 percent of population, aged 15 years and over, were attained higher than elementary levels. Comparing between sex, male completed higher than elementary levels with higher proportion than female (40.0 and 35.0 percent, respectively). Population in municipal area completed higher than elementary levels more than those in non-municipal area (48.2 and 31.4 percent, respectively). For an average years of education attainment, the results of the 2010 census showed that the population aged 15 years and over which attained any educational level, had an average 7.1 years of schooling, which was similar to both male and female. (7.3 and 6.9 years, respectively).

Table 8 Education of population by sex and area

Education	Total	Sex		Area	
		Male	Female	Municipal area	Non-municipal area
Population aged 6-24 years, with not attending school (%)	25.8	27.6	24.0	24.0	26.8
Population aged 15 yrs. and over, with higher than elementary level (%)	37.4	40.0	35.0	48.2	31.4
Average year of schooling, population aged 15 yrs. and over (year)	7.1	7.3	6.9	8.2	6.5

2.2 Literacy

Regarding the ability to read and write both Thai and other languages, it was found that more than 90 percent of population aged 15 years and over, in the Northern Region can read and write Thai. Moreover, the Thai literacy rate was not significantly different in terms of area and sex (Table 9).

For Literacy rate of other languages, it was found that there is 13.3 percent of population in the North can read and write other languages. The population in municipal area literate in other language was more than twice as much higher than non-municipal area (19.7 and 9.6 percent, respectively).

Table 9 Percentage of population aged 15 years and over by literacy, sex and area

Literacy	Total	Sex		Area	
		Male	Female	Municipal area	Non-municipal area
Thai language	100.0	100.0	100.0	100.0	100.0
Literate	94.4	95.2	93.7	95.3	93.9
Illiterate	5.6	4.8	6.3	4.7	6.1
Other languages	100.0	100.0	100.0	100.0	100.0
Literate	13.3	13.2	13.4	19.7	9.6
Illiterate	86.7	86.8	86.6	80.3	90.4

2.3 Last year employment

2.3.1 Industry

Out of the total number of 9,361,167 population aged 15 years and over, there were 6,718,932 persons (71.8 percent of population aged 15 years and over) employed as of 1 September 2009 to 31 August 2010, of these, 3,445,681 were males (51.3 percent) and 3,273,251 were females (48.7 percent). There was about 28.2 percent of population of this aged-group were unemployed or not working. Considering types of industry or business of the employed population, it was found that there was 57.5 percent of people working in agricultural sector, and 42.5 percent working in non-agricultural sector, which 11.3 percent work in wholesale and retail business, vehicle and motorcycle repair, followed by 7.3 percent of Manufacturing.

For those employed in municipal area, mostly worked in non-agricultural sector, (65.3 percent), mostly in wholesale and retail business, vehicle and motorcycle repair (17.9 percent). Employed population in non-municipal area, mostly (69.0 percent) worked in agricultural sector (Table 10).

Table 10 Number and percentage of population aged 15 years and over by employment, industry, sex and area

Employment and industry	Total	Sex		Area	
		Male	Female	Municipal area	Non-municipal area
Total ^{1/}	9,361,167	4,537,518	4,823,649	3,363,602	5,997,565
Number of employed persons	6,718,932	3,445,681	3,273,251	2,258,930	4,460,002
Percentage of employed persons	71.8	75.9	67.9	67.2	74.4
Industry	100.0	100.0	100.0	100.0	100.0
Agricultural sector (%)	57.5	58.5	56.5	34.7	69.0
1. Agriculture, forestry and fishing	57.5	58.5	56.5	34.7	69.0
Non- agricultural sector (%)	42.5	41.5	43.5	65.3	31.0
1. wholesale and retail business, vehicle and motorcycle repair	11.3	10.1	12.5	17.9	7.9
2. Manufacturing	7.3	5.9	8.7	11.1	5.4
3. Construction	4.6	6.7	2.3	5.4	4.1
4. Public administration and defence; compulsory social security	4.2	5.9	2.3	5.9	3.3
5. Accommodation and food service activities	3.8	2.5	5.3	6.8	2.3
6. Others ^{2/}	11.3	10.4	12.4	18.2	8.0
Number of unemployed persons	2,642,235	1,091,837	1,550,398	1,104,672	1,537,563
Percentage of unemployed persons	28.2	24.1	32.1	32.8	25.6

1/ Excluding persons don't know whether they worked or not

2/ Other industries: see detail in statistical table 16

2.3.2 Work status

Employed persons, mainly worked as an own account worker without employee (38.5 percent), followed by 32.4 percent of employee (employee of government, state enterprise and private organizations). Comparing between sex, male mainly worked as own account worker without employee (48.2 percent), while female mainly worked as unpaid family workers (39.2 percent).

Comparing the work status pattern of employed persons in municipal area, and non-municipal area, most employed persons in both area worked as own account worker (35.3 percent and 40.1 percent, respectively), In contrast, the proportion of population being unpaid family workers in non-municipal area was higher than municipal area (31.0 and 18.5 percent, respectively) and the proportion of employees in municipal area was higher than in non-municipal area (43.0 and 27.1 percent, respectively).

Table 11 Percentage of employed persons by work status, sex and area

Work status ^{1/}	Total	Sex		Area	
		Male	Female	Municipal area	Non-municipal area
Total	100.0	100.0	100.0	100.0	100.0
Employer	1.6	2.0	1.1	2.4	1.2
Own account worker	38.5	48.2	28.3	35.3	40.1
Unpaid family worker	26.8	15.1	39.2	18.5	31.0
Government employee	8.1	8.8	7.3	11.8	6.2
Government enterprise	0.6	0.9	0.4	1.2	0.4
Private employee	23.7	24.7	22.6	30.0	20.5
Member of producer's cooperatives	0.7	0.3	1.1	0.8	0.6

1/ Excluding unknown

3. Fertility

3.1 Children ever born and children still living

The average of own children ever born of female aged 13 years and over was 1.65. Females in municipal area had average number of children ever born lower than those in non-municipal, which was 1.40 and 1.79 children, respectively. Considering only ever married females, with reproductive aged 15-49 years, it was found that the average of children ever born was 1.55 children, which was lower than last 10 years (1.78 children) and the average of children still living was 1.53 children.

Considering single mean age at first marriage (SMAM), it was found that female got married earlier than male, of which the single mean age at first marriage was 24.1 years old, while single mean age at first marriage of male was 28.1 years old. Both male and female in municipal area got married later than those in non-municipal area (Table 12).

Table 12 Fertility and single mean age at first marriage by area

Fertility	Total	Area	
		Municipal area	Non-municipal area
Average number of children ever born^{1/} (person)			
Per women aged 13 years and over	1.65	1.40	1.79
Per women aged 15-49 years	1.11	0.89	1.24
Per ever married women aged 15-49 years	1.55	1.40	1.63
Average number of children still living^{1/} (person)			
Per women aged 13 years and over	1.56	1.33	1.70
Per women aged 15-49 years	1.09	0.88	1.22
Per ever married women aged 15-49 years	1.53	1.38	1.61
Single mean age at first marriage (year)			
Total	26.1	27.4	25.2
Male	28.1	29.1	27.5
Female	24.1	25.8	22.9

1/ Excluding females with no answer regarding children ever born.

4. Migration

4.1 Place of birth and period of living at the current place

From the 2010 Population and Housing Census, it was found that there are 85.3 percent of population who were born in the Northern Region and presently live in their hometown, which was similar to both male and female (85.5 and 85.0 percent, respectively). There was 14.7 percent of population born in other province or population not living in their hometown, mostly lived in municipal area (17.5 percent) and 13.3 percent live in non-municipal area.

Population in the North migrated during the year 2005-2010, accounted for 7.7 percent of total population in the region (excluding people with no answer of the period of staying at the current place). Migration proportion in municipal area was higher than of which in non-municipal area (12.4 and 5.3 percent, respectively).

Table 13 Percentage of population migration by reasons for moving, sex and area

Migration and reasons for moving	Total	Sex		Area	
		Male	Female	Municipal area	Non-municipal area
Migrated population^{1/} (%)	100.0	100.0	100.0	100.0	100.0
Living in province of birth	85.3	85.0	85.5	82.5	86.7
Not living in province of birth	14.7	15.0	14.5	17.5	13.3
Population migrating during 5 yrs. (2005-2010)					
Number of migration	901,501	460,324	441,177	500,801	400,700
Percentage of migration	7.7	8.1	7.4	12.4	5.3
Reasons for moving^{2/} (%)	100.0	100.0	100.0	100.0	100.0
Looking for a job	14.9	15.4	14.5	15.6	14.1
Job assignment	12.4	13.6	11.1	14.1	10.2
Studying	19.4	15.5	23.4	25.1	12.1
Following persons in the household	19.4	16.2	22.6	14.6	25.4
Returning back home	2.8	2.6	3.0	1.8	4.0
Changing of residence	19.5	18.5	20.6	18.2	21.2
Moving into institution household	9.8	15.3	4.0	8.1	11.9
Others	1.8	2.9	0.8	2.5	1.1

1/ Excluding number of population with unknown period of present stay

2/ Excluding unknown reasons for moving

4.2 Reasons of migration

During the year 2005-2010, the major reasons of population migration were to change the residence (19.5 percent), following people in the household and for studying (19.4 percent). Male's reasons in migrating were mostly looking for a job and for job assignment, while female's reasons in migrating were to study and to follow the people in the household.

Population migration in municipal area were mostly for studying (25.1 percent), followed by changing of residence (18.2 percent), while population migration in non-municipal area were mostly to follow people in the household (25.4 percent), followed by changing of residence (21.2 percent),

Housing Characteristics

1. Type and characteristics of living quarters

Studying types of living quarters of private households in the Northern Region in 2010, it was found that 88.8 percent of households were detached houses, followed by 4.9 percent of row house, shop house and 4.2 percent of flat, apartment and hostel. In considering type of living quarters according to area, it is similar, that is most of them were detached houses. However, residences which were row house, shop house, flat and apartment mainly located in municipal area.

For characteristics of living quarters in terms of construction material used, it was found that mostly, permanent materials, which are brick, wood, and brick and wood (97.8 percent) were used in constructing residences. Households in municipal area had the residence made of permanent materials with higher proportion than the ones in non-municipal area; 98.9 and 97.2 percent, respectively (Table 14).

Table 14 Number and percentage of private households by type and construction materials of dwelling unit and area

Type of living quarters and construction materials of dwelling unit	Total		Area	
	Number	Percent	Municipal area	Non-municipal area
Type of living quarters	3,741,291	100.0	100.0	100.0
Detached house	3,321,090	88.8	76.8	95.9
Town house, duplex, townhome	52,043	1.4	2.5	0.7
Condominium, mansion	16,996	0.5	1.1	0.1
Flat, apartment, hostel	156,858	4.2	9.6	1.0
Row house, shop house	184,689	4.9	9.7	2.1
Others ^{1/}	9,615	0.2	0.3	0.2
Construction materials of dwelling unit	3,731,675	100.0	100.0	100.0
Cement or brick	1,433,224	38.4	51.9	30.4
Wood	1,381,799	37.0	25.3	44.0
Brick and wood	836,619	22.4	21.7	22.8
Non-permanent materials, reused materials	72,479	2.0	0.9	2.6
Others	7,553	0.2	0.2	0.2

1/ Including rooms inside a house or office, boat, raft and car used as living quarter

2. Ownership of living quarters and land

In considering ownership of residence, households in the Northern Region about 88.3 percent got their own residence (include hire purchaser), households in non-municipal area got their own residence with higher proportion than the ones in municipal area (94.5 and 77.9 percent, respectively). About 8.0 percent of households rent the houses. Proportion of residence rented by households in municipal area was higher than the ones non-municipal area (17.7 and 2.3 percent, respectively).

Considering land tenure for residential purposes (only for households that own or hire purchase residence), it was found that more than 90 percent of private households in the Northern Region own the lands of their current residences. The proportion of the land belonged to the households in both area was nearly the same (Table 15).

Table 15 Number and percentage of private households by ownership of living quarters, land and area

Ownership of living quarters and land	Total		Area	
	Number	Percent	Municipal area	Non-municipal area
Ownership of living quarters^{1/}	3,735,646	100.0	100.0	100.0
Owner	3,287,497	88.0	77.4	94.3
Hire purchaser	11,507	0.3	0.5	0.2
Rent	300,124	8.0	17.7	2.3
Rent free	129,033	3.5	4.1	3.1
Others	7,485	0.2	0.3	0.1
Land ownership^{1/}	3,288,322	100.0	100.0	100.0
Owner	3,073,854	93.5	93.6	93.4
Hire purchaser	48,954	1.5	2.0	1.2
Rent	27,335	0.8	1.8	0.4
Rent free	111,300	3.4	2.2	4.0
Others	26,879	0.8	0.4	1.0

1/ Excluding unknown

3. Source of drinking water and water supply

As for source of drinking water of private households in the Northern Region, it was found that 38.7 percent of households drink bottled water or water from vending machine, followed by 20.0 percent of tap water and 18.0 percent of rain water. In considering by area, it was found that households in municipal area had higher proportion of drinking bottled water or water from vending machine higher than the ones in non-municipal area (59.9 and 26.0 percent, respectively). But proportion of households drinking rain water in non-municipal area was higher than the ones in municipal area (24.2 and 7.6 percent, respectively).

For water supply, 77.0 percent of households use tap water, followed by 11.1 percent of well water. Most of households in both municipal area and non-municipal area were using tap water (80.2 and 75.1 percent, respectively).

Table 16 Percentage of private households by source of drinking water, water supply and area

Source of drinking water and water supply	Total	Area	
		Municipal area	Non-municipal area
Drinking water ^{1/}	100.0	100.0	100.0
Tap water	20.0	11.8	24.8
Treated tap water (boiled/filtered)	14.3	15.2	13.8
Underground water	1.5	1.3	1.6
Well water	5.0	3.4	6.0
River, stream, canal, waterfall	2.4	0.7	3.5
Rain water	18.0	7.6	24.2
Bottled water, water from vending machine	38.7	59.9	26.0
Others	0.1	0.1	0.1
Water supply ^{1/}	100.0	100.0	100.0
Tap water	77.0	80.2	75.1
Treated tap water (boiled/filtered)	1.1	0.9	1.1
Underground water	5.3	7.1	4.2
Well water	11.1	9.8	11.9
River, stream, canal, waterfall	4.6	1.4	6.5
Rain water	0.8	0.5	1.1
Others	0.1	0.1	0.1

1/ Excluding unknown

4. Type of toilet in household

From table 17 which illustrating type of toilet used in private households in the North including hygiene and convenience in using toilet, it was found that almost all households had sanitary toilet (99.3 percent), most of them used squat toilet (72.8 percent). Households residing in municipal area had a high proportion of using a sitting toilet comparing to those in non-municipal area (33.7 and 14.2 percent, respectively). In contrast, the percentage of using a squat toilet was higher in non-municipal area than those in municipal area (80.8 and 59.4 percent, respectively).

Table 17 Percentage of private households by type of toilet used and area

Type of toilet used ^{1/}	Total	Area	
		Municipal area	Non-municipal area
Total	100.0	100.0	100.0
Sitting toilet	21.5	33.7	14.2
Squat toilet	72.8	59.4	80.8
Sitting and squat toilet	5.0	6.8	3.9
Others ^{2/}	0.7	0.1	1.1

1/ Excluding unknown

2/ Including pit toilet, defecate into river or canal and no toilet

5. Use of cooking fuel

Regarding the use of cooking fuel by households in the Northern Region, it was found that 63.3 percent of them used gas (Liquid Petroleum Gas: LPG) for cooking, followed by 30.6 percent used charcoal, firewood, scrap wood. Households in municipal area and non-municipal area had a little different way of using fuel which is the highest proportion of households in both areas used gas (LPG) for cooking, in contrast households in non-municipal area use charcoal, firewood, scrap wood, with higher proportion than those in municipal area (Table 18).

Table 18 Percentage of private households by type of cooking fuel and area

Type of cooking fuel ^{1/}	Total	Area	
		Municipal area	Non-municipal area
Total	100.0	100.0	100.0
Gas	63.3	69.9	59.4
Charcoal, firewood, scrap wood	30.6	18.1	38.1
Electricity	3.4	6.6	1.5
Kerosene and others	0.1	0.1	a
Not cooking	2.6	5.3	1.0

1/ Excluding unknown

a : Less than 0.1 percent

6. Possession of household appliance

As for possession of appliances in the private households, it was found that households in municipal area, with higher proportion of possess of almost all appliances than those in non- municipal area, while households in non-municipal area possess 4-wheels tractor and 2-wheels tractor used in agriculture more than those in municipal area.

Besides, they were interviewed whether they had the following instruments and having or use of technology devices such as cable TV, satellite dish and use of internet in the households. It was found that percentage of households in municipal area had cable TV and used internet was higher than those in non-municipal area, while the use of satellite dish was less than those in non-municipal area (Table 19).

Table 19 Number and percentage of private households by ownership of household appliance, having technology and area

Ownership of household appliance and having technology	Total		Area (percent)	
	Number	Percent	Municipal area	Non-municipal area
Ownership of household appliance	(3,741,291)	(100.0)	(100.0)	(100.0)
Television	3,525,598	94.2	95.5	93.5
VCD/DVD player	2,664,260	71.2	72.6	70.4
Mobile phone	3,263,015	87.2	89.9	85.6
Computer	997,948	26.7	37.7	20.1
Refrigerator, Freezer	3,194,318	85.4	85.9	85.1
Microwave/Oven	554,762	14.8	23.3	9.8
Washing machine	2,386,330	63.8	66.8	62.0
Air condition	528,830	14.1	23.2	8.7
Car/Pick-up truck/Van	1,312,608	35.1	41.7	31.2
Motorcycle	3,160,835	84.5	85.3	84.0
4-wheels tractor	167,790	4.5	2.2	5.9
2-wheels tractor	820,803	21.9	11.3	28.3
Having technology	(3,741,291)	(100.0)	(100.0)	(100.0)
Cable TV	402,915	10.8	18.1	6.4
Satellite dish	1,292,863	34.6	31.0	36.7
Internet	310,159	8.3	12.9	5.5