Cambodia
Socio-Economic Survey
2010

National Institute of Statistics
Ministry of Planning

Phnom Penh, January 2012

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Foreword

It is my pleasure to introduce one of a series of reports on the Cambodia Survey (CSES) 2010. The CSES 2010 is the ninth Cambodia Socio-Economic Survey conducted by the National Institute of Statistics (NIS) at the Ministry of Planning. From 2007 and onwards the CSES is conducted annually and will contribute to the development of the living standards of people in Cambodia.

The CSES provides a comprehensive set of indicators on the living conditions in Cambodia, covering the main Socio Economic areas such as health, education, housing conditions, economic activities, victimization, etc. The Royal Government of Cambodia (RGC) will benefit from the results by using the data to monitor the National Strategic Development Plan (NSDP) and to develop effective policies for reducing poverty in Cambodia. Users such as researchers, analysts and NGO's can also benefit from the results to better understand the Cambodian Socio Economic situation.

The survey was planned, designed and conducted by the staff of NIS with overall technical and management assistance provided by Statistics Sweden. The content of the CSES has been developed in cooperation with main stakeholders and users and is designed to meet the data needs of many users.

The CSES is part of a capacity building project financed by the Swedish International Development Cooperation Agency (Sida). On behalf of the Royal Government of Cambodia, I would like to take the opportunity to thank Sida for the financial support. I would also like to express my gratitude to Statistics Sweden for the technical assistance in planning, designing and conducting the CSES and for assisting NIS in the preparation of this report.

Ministry of Planning
Phnom Penh, Cambodia
January, 2012

CHHAY THAN
Senior Minister
Minister of Planning

Preface

The report presents the results of the Cambodia Socio-Economic Survey (CSES) 2010 which is produced by the National Institute of Statistics (NIS) of the Ministry of Planning. Since 2007, NIS conducts the Socio Economic survey annually. Previous surveys were undertaken in 1993/94, 1996, 1997, 1999, 2004, 2007, 2008 and 2009. The main objective of the CSES is to collect statistical information about living conditions of the Cambodian population and the extent of poverty. The survey can be used for identifying problems and making decisions based on statistical data.

The CSES is a comprehensive survey which provides statistical data to be used for various purposes. The main user is the Royal Government of Cambodia (RGC) as the survey supports monitoring the National Strategic Development Plan (NSDP) by different Socio Economic indicators. Other users are university researchers, analysts, international organizations e.g. the World Bank and NGO's. The primary data files are made available for research and analysis according to the procedures specified in the 2005 Statistics Law.

The Swedish International Development Cooperation Agency (Sida) sponsors the NIS for conducting the CSES while Statistics Sweden provides technical assistance. I am much obliged to both Sida and Statistics Sweden for their support. Furthermore, I wish to express my deep appreciation of the work carried out by the NIS staff, staff of provincial planning offices, the staff of the Ministry of Planning, and all who work with dedication and enthusiasm to sustain the survey quality. I also extend my thanks to all the participating households and individuals.

National Institute of Statistics,
Ministry of Planning
January, 2012

SAN SY THAN
Director General

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1. Introduction

In this report results from the Cambodia Socio-Economic Survey (CSES) 2010 are presented. The CSES is a household survey with questions to households and their household members about housing conditions, education, economic activities, household production and income, household level and structure of consumption, health, victimization, etc.

Eight rounds of the CSES have been conducted since 1993. CSES was conducted intermittently in the period 1993 to 2004 but since 2007 the survey is annual. It has been funded by The Swedish International Development Agency (Sida) since 2007. (The 2004 survey was funded by UNDP and Statistics Sweden was contracted to provide the technical assistance).

The data from the eight rounds of CSES provide important information about living conditions in Cambodia and have a wide range of uses. Results from CSES are used for monitoring the National Strategic Development Plan (NSDP) and progress towards the Millennium Development Goals. Furthermore, the data are used for developing poverty lines and calculating poverty rates. Data have also been used for food security analyses. The CSES data base at NIS is open for research and analysis by external researchers. The interesting research questions that could be put to the data are many, NIS welcomes new research based on CSES data.

Apart from the Cambodia Socio-Economic Survey several other household surveys/censuses have been conducted by the NIS in the last 15 years, i.e. the General Population Census 1998 and 2008, the Cambodia Demographic and Health Survey (CDHS) 2000, 2005 and 2010.

The CSES for 2010 was conducted from January 2010 till December 2010. The survey was done on a sample of 3600 households, 300 households per month.

The analysis, including comments to the results, has been done by the subject matter staff at National Institute of Statistics (NIS) in cooperation with consultants from Statistics Sweden.

In section 2 some basic facts about the demographic characteristics including population and migration studied in the survey are presented. Results from the survey (for each subject matter area) are presented in sections 3 – 9.

1.1. Information to the reader

All statistical surveys contain errors and the results – the estimates - from surveys are in most cases not equal to the target values (the true values). If there was a perfectly designed and executed survey, conducted over the whole population not just a sample, the estimate would be equal to the true value. But perfect design and execution can never be reached and the whole population cannot be covered (except in a census) so there will always be inaccuracy in the survey estimates. There are many types of errors in a survey, e.g. measurement errors, coverage errors, non-response, data processing errors and in sample surveys there are also sampling errors. When designing and conducting a survey it is important to control the total error so that accurate estimates can be produced. NIS has put a large effort in the work of minimizing the errors but recommends the reader to be aware of the uncertainty in the estimates. The standard error of an estimate is a measure of the uncertainty. Standard errors and confidence intervals for selected estimates are presented in appendix 1. A discussion of the quality of the estimates from CSES can be found in section 10.5.

As the results in this report are estimated values, all percentages and numbers are rounded off. Numbers are rounded to nearest hundreds/thousands and percent to nearest one decimal. It's worth noting that computed percentages are always based original data. A '0' (zero) means that there is a value but too small to be published. Therefore some tables with percentage do not sum up to 100 percent. In the tables the symbol (-) is used and means few or no observations in the cell.

In CSES 2010 some changes have been introduced in the household questionnaire compared to CSES 2009, see section 10.9 (Comparability).

1.2. Confidentiality

The Statistics Law Article 22 specifies matters of confidentiality. It explicitly says that all staff working with statistics within the Government of Cambodia "shall ensure confidentiality of all individual information obtained from respondents, except under special circumstances with the consent of the Minister of Planning. The information collected under this Law is to be used only for statistical purposes."

1.3. Data dissemination

Most tables from this report are presented on the NIS website (http://www.nis.gov.kh). The website have results from various censuses and surveys, periodical publications (such as CPI, National Accounts), and other documents which are released by NIS. However, most information available on NIS website for downloading is in static format.

The documentation of the survey is stored in NADA (National Data Archive). NADA is available on-line and can be used together with micro data release on CD after a formal request to Ministry of Planning. This procedure is the preferred way of disseminating data to the NIS website and to make the final CSES results and metadata available.

Some CSES indicators are also presented in CamInfo, which is Cambodia's socio-economic database system where CamInfo is used to monitor progress towards the Millennium Development Goals (MDG).

1.4. Contact persons

The report of CSES 2010 is divided into eight areas. The statistics in each area have been analysed by subject matter staff from NIS. The NIS analysts who have contributed to the Subject Matter Report are:

- *Housing statistics:* by Mr. Po Mao, Mr. Seng Chenda and Ms. Limpho Roatmealir
- *Agriculture statistics*: by Mr. Kong Seng and Mr. So Tonere
- *Education Statistics:* by Mr. Ouk Eam Mr. Lenh Heang and Mr. Ouk Tith Sopheak
- *Labour statistics*: by Mr. Nhem Solyvann, Mr. Noun Nisey Kosal and Mr. Cheav Vathna
- *Health and nutrition statistics:* by Mr. Phan Chinda and Mr. Hour Long Pheng
- *Victimization statistics:* by Mr. Khieu Khemarin, Ms. Ky Boreth and Ms. Chan Lakhen
- *Migration statistics:* by Mr. Pen Socheat and Ms. Som Somalyn
- *Income and consumption statistics*: by Mr. Nor Vanndy, Mr. Oeur Sophal and Mr. Veun Thy

The NIS analysts who have contributed to the technical section are:

- *Background and introduction*: by Mr. Tith Vong and Mr. Mich Kanthul
- *Survey Planning and organisation*: by Mr. Mich Kanthul
- *Questionnaire design*: by Mr. Tith Vong
- *Field operations and training*: by Mr. Tith Vong and Mr. Mich Kanthul
- *Data processing*: by Mr. Yib Thavrin and Ms. Tong Chhay Rine
- *Data dissemination*: by Mr. Tith Vong and Mr. Ouk Chay Panhara
- *Sampling design and implementation*: by Mr. Mich Kanthul

2. Demographic characteristics

2.1. Population studied in the survey

The table 1 shows the measured and estimated population and estimated number of households in different censuses and surveys. The population measured in the two population censuses are not directly comparable with the population estimated in the three CSES surveys. The census numbers include the total population while the CSES estimates concern only the population living in normal households (excluding people living in institutional households, homeless households, boat population households or households of transient population. (Institutional households are boarding houses, military barracks, prisons, student dormitories, etc.).

There is a slow but steady trend of urbanization. The urban population is growing at an annual rate of 2.1 % while the rural population grows at a rate of 1.5%. This finding is true both for the period between the censuses (1998-2008) and the period between the first and the last CSES (2004-2010).

Table 1: Measured or estimated population by urban and rural.
In thousands and urban as percent by rural.

Domain	Census 1998	CSES 2004	Census 2008	CSES 2009	**CSES 2010**
Cambodia	11,437	12,657	13,395	13,729**	**13,958**
Urban	2,095*	2,387	2,614	2,644**	**2,704**
Rural	9,342*	10,269	10,781	11,085**	**11,254**
Urban/Rural	22.4*	23.2	24.2	23.9**	**24.0**

* The numbers for 1998 for urban and rural presented here differ from those presented in the CSES 2009 report. The numbers presented in the 2009 report did not take into account changes in the definition of urban area between 1998 and 2008 and also did not adjust for areas uncovered in the 1998 census (see Analysis of the Census Results Report 11, Family and Households. NIS June 2010).

** The estimates of totals for 2009 are lower than the totals presented in the CSES 2009 report.

A review of the estimation procedure for 2009 revealed that the procedure gave a slight upward bias. The procedure has consequently been adjusted and the 2009 estimates have been updated.

The population of Cambodia distributed by sex and the overall sex ratio is shown in Table 2. The sex ratio (men in relation to women) has increased significantly between the two censuses but in recent years there seems to be no change, but it might be described as “a normal” at the national level that still denotes an excess of women than men varying over a rather narrow range from about 93 to 95.

Table 2: Estimated population by sex. In thousands.

Sex	Census 1998	CSES 2004	Census 2008	CSES 2009	**CSES 2010**
Women	5,926	6,530	6,879	7,033	**7,170**
Men	5,511	6,126	6,516	6,696	**6,787**
Both sexes	11,437	12,657	13,395	13,729	**13,958**
Sex ratio	93.0	94.8	94.7	95.2	**94.7**

Table 3 presents the numbers of normal households distributed by urban and rural residences in Cambodia. The number of urban households is growing at an annual rate of over 3% while the rate for rural households is around 2%.

Table 3: Estimated number of households by urban and rural. In thousands

Domain	Census 1998	CSES 2004	Census 2008	CSES 2009	**CSES 2010**
Cambodia	2,162	2,570	2,817	2,876*	**2,917**
Urban	364	457	506	530*	**550**
Rural	1,797	2,113	2,311	2,346*	**2,367**

* The estimates of totals for 2009 are lower than the totals presented in the CSES 2009 report. A review of the estimation procedure for 2009 revealed that the procedure gave a slight upward bias. The procedure has consequently been adjusted and the 2009 estimates have been updated.

Table 4 shows the proportion of women-headed households (in %) according to the five CSES surveys from 2004 to 2010. Every fifth household on average was headed by women. Households headed by women are somewhat more common in Phnom Penh and other urban areas as compared to rural areas. This pattern seems to be stable over the whole period.

Table 4: Households headed by women as percent of all households.

Domain	CSES 2004	CSES 2007	CSES 2008	CSES 2009	**CSES 2010**
Cambodia	21.8	22.2	22.4	21.6	**22.3**
Phnom Penh	26.3	26.5	26.9	25.2	**25.1**
Other urban	23.0	24.3	24.2	23.8	**26.8**
Other rural	21.1	21.4	21.7	20.9	**21.4**

Table 5 presents marital status by geographical domain. Well above 50 % of persons above 14 years of age are married or living with a partner in a consensual union. This proportion is slightly less in urban areas, especially Phnom Penh, than in the rural areas. About one third of the persons above 14 years of age have never been married or lived with a partner. This proportion is higher in Phnom Penh than in other areas. The differences between Phnom Penh and other areas may to a large extent be due differences in age distributions between the areas.

Table 5: Marital status by geographical domain, 2010. Age 15 years and over. Percent.

Marital status	CSES 2010			
	Cambodia	Phnom Penh	Other urban	Other rural
Married/Living together	56.6	50.1	53.3	58.0
Divorced/Separated	2.3	2.0	3.8	2.1
Widowed	8.7	8.0	8.1	8.8
Never married/ Never lived with a partner	32.4	40.0	34.7	31.0
Total	100	100	100	100

Table 6 shows marital status by sex. The proportion of men who are married/living together is higher than the proportion of women in the same status. There is a large difference between women and men in the proportion divorced/separated, a possible explanation may be that men remarry to a larger extent than women after a divorce/separation. There is also a large difference in the proportion of widowed, reflecting the fact that men on average die earlier than women. Compared to CSES 2004 and 2009 there were no significant changes in this structure of marital status.

Table 6: Marital status by sex, 2010. Age 15 years and over. Percent.

Marital status	CSES 2010		
	Women	Men	Both sexes
Married/Living together	53.5	60.1	56.6
Divorced/Separated	3.6	0.8	2.3
Widowed	14.2	2.5	8.7
Never married/ Never lived with a partner	28.7	36.5	32.4
Total	100	100	100

The largest ethnic group, apart from Khmer, is Cham. Compared to CSES 2004 and 2009 there were no significant changes in this ethnic structure. See Table 7.

Table 7: Ethnicity by geographical domain, 2010. Age 15 years and over. Percent.

Ethnicity	CSES 2010			
	Cambodia	Phnom Penh	Other urban	Other rural
Khmer	96.2	97.6	97.9	95.8
Cham	1.6	1.6	1.6	1.7
Chinese	0.1	0.1	0.1	0.1
Vietnamese	0.4	0.5	0.3	0.4
Thai	0.0	-	-	0.0
Lao	0.1	0.1	0.1	0.1
Other	1.5	0.1	0.1	1.9
Not stated	0.2	0.1	-	0.2
Total	100	100	100	100

2.2. Migration

The term migration refers in this report to persons who move between province/country. Strictly speaking, two types of migrants could be identified in the CSES survey; one related to the place of birth and the other related to previous residence. Most of the tables and analysis in this report will focus on migrants based on previous residence because (i) the number of migrant based on previous residence is a more complete measure of migration as the number of lifetime migrants exclude return migrants to place of birth, (ii) migration based on previous residence has a time dimension and (iii) the reason for migration is available for migrants based on previous residence.

Tables 8 and 9 show the extent of migration. More than five million people (age 5 years and over) have at one time lived in a village other than the one they are living in at the time of the interview. This constitutes 42% of the population (see Table 9). A majority, about 3.4 million (roughly a quarter of the population) moved within the same province. About 85 thousand persons had their previous residence abroad.

There is no difference in the proportion of migrants between women and men.

Table 8: Migration by type of migration and sex. Last migration episode. Age 5 years and over. In thousands.

Type of migration	Women	Men	Both sexes
Moved within same province	1 785	1 602	3 387
Moved from other province	872	881	1 754
Moved from abroad	41	44	85
Total migrants	2 699	2 527	5 226

Table 9: Migration by type of migration and sex. Last migration episode. Age 5 years and over. In percent of total population age 5 years and over.

Type of migration	Women	Men	Both sexes
Moved within same province	28	26	27
Moved from other province	14	15	14
Moved from abroad	1	1	1
Total migrants	42	42	42

Tables 10 and 11 show migration by geographical domain of current residence. It is not possible to analyze migration between urban and rural areas from the available data. The data only allow analysis of migration into urban areas (the predominantly urban province of Phnom Penh and the geographical domain other urban). Migration out of urban areas is not possible to compile from the data. As can be seen in Table 11 the proportion of persons who have migrated is significantly higher in Phnom Penh and other urban than what it is in other rural areas.

Table 10: Migration by type of migration and geographical domain (current residence). Last migration episode. Age 5 years and over. In thousands.

Type of migration	Cambodia	Phnom Penh	Other urban	Other rural
Moved within same province	3387	531	342	2514
Moved in from other province	1754	372	337	1044
Moved in from abroad	85	7	7	71
Total migrants	5226	910	686	3629

Table 11: Migration by type of migration and geographical domain (current residence). Last migration episode. Age 5 years and over. In percent of total population age 5 years and over.

Type of migration	Cambodia	Phnom Penh	Other urban	Other rural
Moved within same province	27	42	27	25
Moved in from other province	14	30	26	11
Moved in from abroad	1	1	0	1
Total migrants	42	73	53	37

Tables 12 and 13 show migration by time since last migration episode (duration). A majority of the persons who have migrated have stayed in their current residence (village) at least ten years. A rather small number of persons have migrated within the last four years. The proportion of persons who have migrated within four years can be interpreted as the recent migration rate. The overall recent migration rate is estimated at 6.9 % (1.1% + 5.8%).

Table 12: Migration by type of migration and duration. Last migration episode. Age 5 years and over. In thousands.

Type of migration	Less than 1 year	1-4 years	5-9 years	More than 9 years	All durations
Moved within same province	89	428	490	2381	3387
Moved from other province	51	294	253	1155	1754
Moved from abroad	1	2	17	65	85
Total migrants	141	724	760	3602	5226

Table 13: Migration by type of migration and duration. Last migration episode. Age 5 years and over. In percent of population age 5 years and over.

Type of migration	Less than 1 year	1-4 years	5-9 years	More than 9 years	All durations
Moved within same province	0.7	3.4	3.9	19.1	27.2
Moved from other province	0.4	2.4	2.0	9.3	14.1
Moved from abroad	0.0	0.0	0.1	0.5	0.7
Total migrants	1.1	5.8	6.1	28.9	41.9

Table 14 shows the reasons for moving. The most common reason for migration is that the family moved. There are significant gender differences. It is more common among men to move because of marriage and it is more common among women to move with the family.

Table 14: Reason for moving by sex. Last migration episode. Percent of all persons that have migrated.

Reason for moving	Women	Men	Total
Family moved	39	28	34
Repatriation or return after displacement	29	21	25
Marriage	11	23	17
In search of employment	8	13	11
Insecurity	6	5	5
Transfer of work place	2	5	3
Lost land/lost home	2	2	2
Education	1	2	1
Other	2	2	2
Total	100	100	100

Table 15 shows reasons for moving by geographical domain. The reason "family moved" is the most common reason in all three domains. Moving because of repatriation is rare in Phnom Penh but the second most common reason in other rural areas. Moving in search of employment is more common in urban areas (Phnom Penh and other urban areas).

Table 15: Reason for moving by geographical domain (current residence). Last migration episode. Percent of all persons who have migrated.

Reason for moving	Cambodia	Phnom Penh	Other urban	Other rural
Family moved	34	55	39	28
Repatriation or return after displacement	25	3	18	32
Marriage	17	8	11	20
In search of employment	11	16	18	8
Insecurity	5	0	3	7
Transfer of work place	3	6	6	2
Lost land/lost home	2	4	1	1
Education	1	4	2	1
Other	2	4	2	2
Total	100	100	100	100

Table 16 shows migration to other countries in the last five years. Altogether 157,000 persons have migrated abroad one or several times during the last five years. Thailand is by far the most common country of migration. The propensity to migrate abroad is higher among men; there are four times more men who migrates compared to women.

Table 16: International migration by sex and country of last migration episode. In thousands.

Sex	Thailand	Malaysia	Vietnam	Other	Total
Women	27	8	1	2	39
Men	106	2	4	7	118
Total	133	10	5	9	157

About half of the migrants have been abroad on more than one occasion, see Table 17. There is no significant difference between men and women in the number of migration episodes.

Table 17: International migration by sex and number of migrations.

Migrated how many times in last five years?	Women thousand	Women Percent	Men thousand	Men Percent
Once	20	51	58	49
Twice	11	28	29	25
More than two times	8	21	31	26
Total	39	100	118	100

Table 18 shows the reasons for return from the last migration episode abroad. The most common reason is that the job ended.

Table 18: International migration by reason for return and sex.

Reason for return	Women thousand	Women percent	Men thousand	Men percent
Job ended	14	36	38	32
Family reasons	7	18	18	15
Better employment at home	5	13	22	19
Homesick	5	13	17	14
Other	8	21	23	19
Total	39	100	118	100

3. Housing

In 2010 there were more than 2.9 million households in Cambodia. Since each household occupies at least one dwelling, the number of occupied dwellings is at least 2.9 million. There may also be vacant dwellings, which would add to the housing stock. The purpose of this section is to present statistics of dwellings occupied by households in 2010.

The data collected on housing conditions includes e.g. floor area, rooms used by the household, materials used in the wall, floor and roof, source of lighting and drinking water, distance to drinking water source, treatment of drinking water, toilet facilities, fuel for cooking, charges on water, light, fuel, sewage and garbage collection, rent paid by tenants, maintenance and minor repairs, and legal status of the dwelling occupied by the households. In addition, rent value of owner occupied housing was estimated.

The housing module contains 26 questions (see Appendix 4) that were answered mostly by the household head in the first week of the interview month. In this report statistics on conditions by geographical domains are presented, i.e. the results distinguishes between Phnom Penh, other urban areas and other rural areas. Other disaggregations are available, e.g. age, sex, and level of education of the household head.

In the annex, the tables are also disaggregated by degree of urbanization, urban and rural. This is for use in the National Strategy Development Plan (NSDP) and Cambodia Millennium Development Goals (CMDG) documents. This is very crucial for monitoring and evaluation of the implementation of development policies issue by the Royal Government of Cambodia (RGC).

3.1. Building materials of dwellings (roof, wall, floor)

The materials used in roofs, walls and floors are important quality characteristics of a dwelling. The materials used are grouped as hard/permanent or soft/temporary after their capacity to withstand wind and rain. For example, the materials considered as hard/permanent are tiles, fibrous cement/asbestos, galvanized iron, aluminum, concrete, brick, stone, wood/plywood for the walls, and polished stone and vinyl/asphalt strip for the floors. Bamboo for the walls and wood planks or bamboo strips for the floors are considered soft/temporary materials.

Roof materials

In Cambodia, about 86 percent of dwellings had hard permanent roof materials, and about 14 percent had soft/temporary roof materials. The most common roof material in the country as a whole was galvanized iron/aluminum, which constituted more than 48 percent of the total occupied dwellings, followed by tiles, about 26 percent. The third most common roof material used was the soft/temporary thatch, which accounted for about 14 percent. For details, see Table 1.

Table 1: Occupied dwellings by kind of roof materials and geographical domain, 2010. Percent

Roof materials	Cambodia	Phnom Penh	Other urban	Other rural
Hard/permanent materials	86.0	99.7	96.4	83.1
Tiles	26.4	11.2	17.7	29.3
Fibrous cement	7.4	6.5	8.1	7.5
Galvanized iron or aluminum	48.2	47.0	67.6	45.9
Mixed but predominantly made of galvanized	0.1	0.4	0.2	0.0
Concrete	3.9	34.7	2.9	0.4
Soft/temporary materials	14.0	0.3	3.6	16.9
Thatch	13.7	-	3.1	16.7
Salvaged materials	0.1	0.1	0.2	0.1
Mixed but predominantly made of thatch	0.1	-	-	0.1
Plastic sheet	0.1	0.1	0.3	0.1
Other	-	-	-	-
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663

The differences between the geographical domains on this quality dimension of dwellings were considerable. In Phnom Penh, as well as in other urban areas almost 100 percent of dwellings were protected by roofs of hard/permanent materials. This compared to about 83 percent in other rural areas.

In Phnom Penh, about 47 percent had roofs of galvanized iron/aluminum (GIA), followed by concrete for about 40 percent of the dwellings. Tiles were used as roof materials for about 11 percent of the dwellings. GIA was the most common material for roofs also in other urban areas where the share of GIA-roofs was about 20 percentage points higher than in Phnom Penh, or 67 percent. Also the share of tile roofs is higher in other urban areas than in Phnom Penh.

In other rural areas tiles and GIA roofs constitute for about 46 and 29 percent respectively, followed by thatch at about 16 percent. Roofs of thatch were not as rare phenomenon in other urban areas as in Phnom Penh. In other rural areas, about 17 percent of the roofs were of soft/temporary materials, but GIA and tiles were the most common roof materials also in other rural areas of Cambodia.

Figure 1: Roof of dwellings made of hard/permanent materials 2004-2010. Percent.

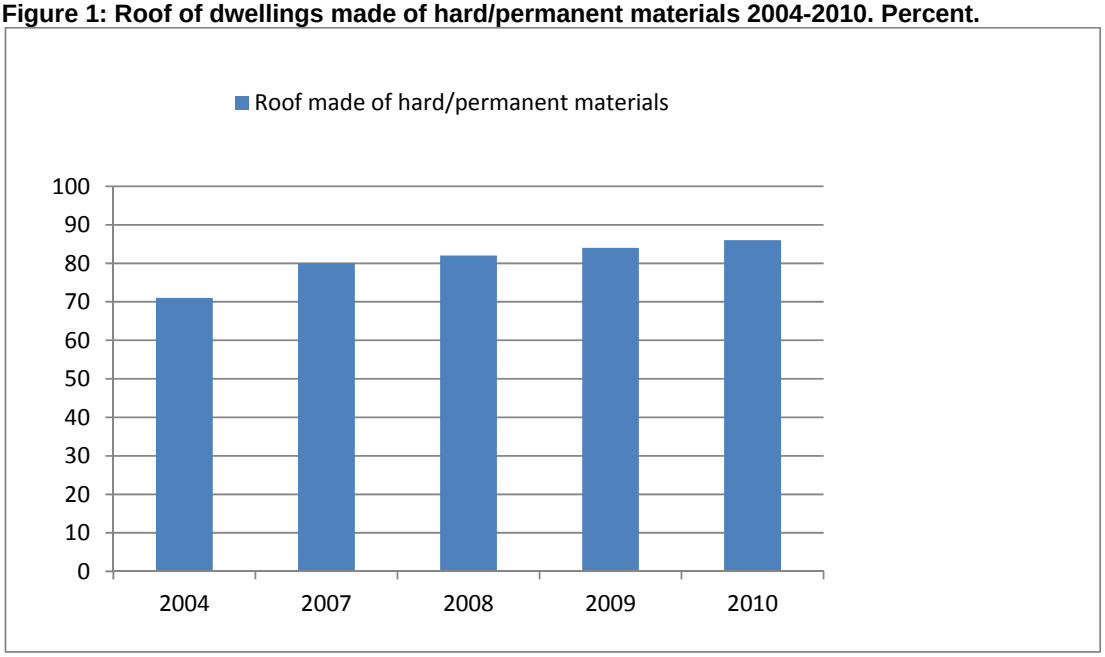


Figure 1 shows that the percentage of roof of the dwellings made of hard/permanent materials increased from 71 percent to 86 percent over the last seven years. The improvement seems to have been rapid between 2004 and 2007. However, this improvement has been slowed between 2008 and 2010. The difference between 2009 and 2010 is not statistically significant but the difference between 2004 and 2010 is significant.

Wall materials

Slightly more than 68 percent of occupied housing units were made of hard/permanent wall materials (see Table 2). The most common materials in the walls were wood or logs (about 48 percent) considered as hard/permanent wall material. Bamboo and thatch were the most common soft/temporary wall material, used by about 30 percent of all occupied dwellings. In addition about nearly 14 percent had walls made of concrete, brick or stone considered as hard/permanent material. Dwellings with other materials were rare.

Table 2: Occupied dwellings by kind of wall materials and geographical domain, 2010. Percent.

Wall materials	Cambodia	Phnom Penh	Other urban	Other rural
Hard/permanent materials	68.3	98.5	87.0	62.4
Wood or logs	47.9	21.0	46.7	51.2
Plywood	0.4	0.1	1.2	0.3
Concrete, brick, stone	13.7	74.5	26.2	4.9
Galvanized iron or aluminum or other metal sheets	6.2	2.6	12.1	5.9
Fibrous cement / Asbestos	0.1	0.1	0.8	0.1
Soft/temporary materials	31.7	1.5	13.0	37.6
Bamboo, Thatch/leaves, grass	30.1	1.1	9.8	36.1
Makeshift, mixed materials	1.2	0.1	1.9	1.3
Clay/dung with straw	0.1	0.3	0.2	0.1
Other	0.2	0.1	1.2	0.1
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663

As shown in detail in table 2, almost all occupied housing units in Phnom Penh (about 98 percent) had walls made of hard/permanent materials. The most common were concrete, bricks and stone amounting for about 74 percent, followed by wood or logs (about 21 percent).

In other urban areas, nine out of ten occupied dwellings used hard/permanent wall materials, of which wood or logs were the most common followed by concrete, brick or stone. Soft/temporary materials in walls that hardly exist in Phnom Penh constituted for a share of about 13 percent in other urban areas, of which bamboo and thatch constitute the highest percent.

In other rural areas, more than 62 percent of occupied housing units used hard/permanent wall materials (62 percent). Wood or logs were the most commonly materials (51 percent) followed by bamboo, thatch/leaves and grass (36 percent).

Figure 2: Wall of dwellings made of hard/permanent materials 2004-2010. Percent.

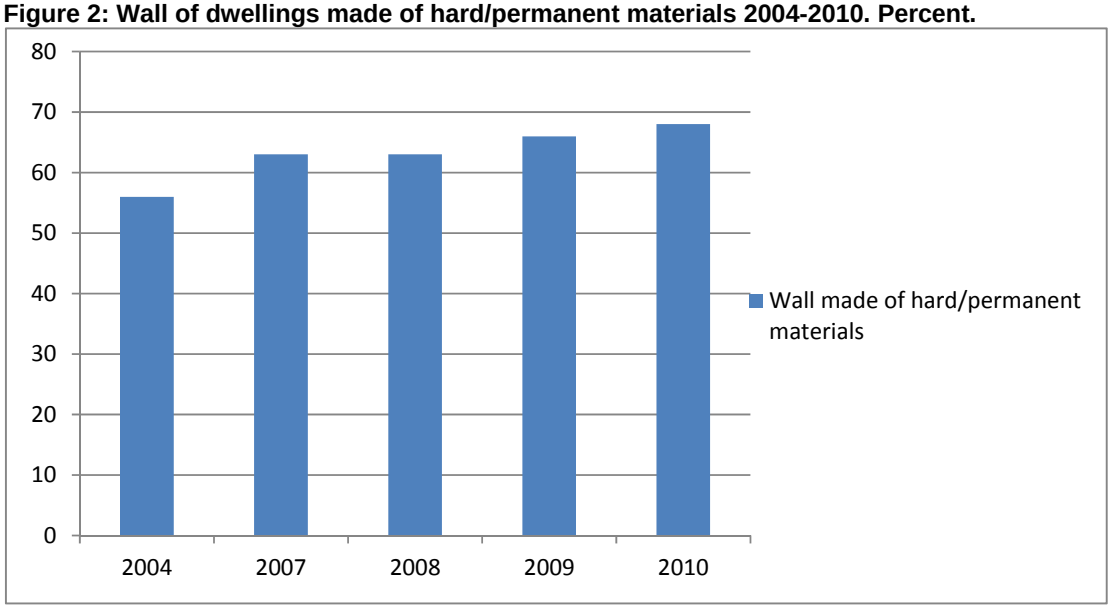


Figure 2 shows that the percentage of wall of the dwellings made of hard/permanent materials increased from 56 percent to 68 percent over the last seven years from 2004 to 2010.

Floor materials

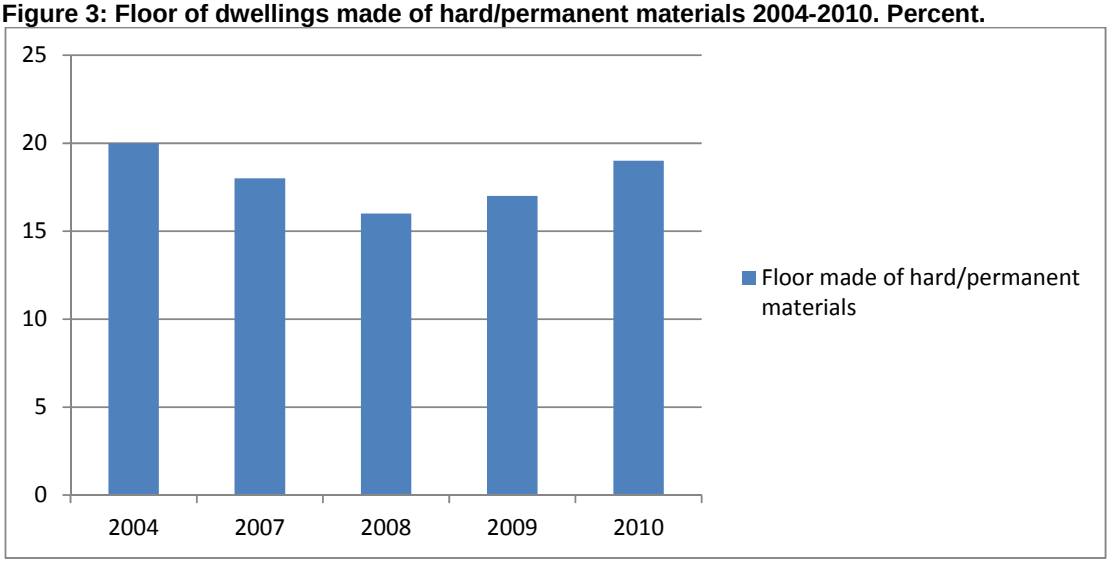
In Cambodia about 81 percent of the occupied housing units were made of soft/temporary floor materials. Wooden planks or bamboo strips (about 48 percent and 26 percent respectively) were by far the most commonly used floor material. About 19 percent of all the dwellings used hard/permanent floor materials such as cement, ceramic tiles, parquet or polished wood, see Table 3.

Table 3: Occupied dwellings by kind of floor materials and geographical domain, 2010. Percent.

Floor materials	Cambodia	Phnom Penh	Other urban	Other rural
Hard/permanent materials	18.9	81.1	38.3	9.1
Cement	8.9	17.5	22.5	6.2
Parquet, polished wood	1.1	1.9	0.9	1.0
Polished stone, marble	0.0	-	0.2	0.0
Vinyl	0.0	0.3	-	-
Ceramic tiles	8.8	61.3	14.8	1.9
Soft/temporary materials	81.1	18.9	61.7	90.9
Earth, clay	7.1	2.5	10.5	7.2
Wooden planks	47.7	15.8	41.4	52.2
Bamboo strips	26.2	0.6	9.7	31.3
Other	0.1	-	-	0.1
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663

There are large differences between the geographical domains. In Phnom Penh more than 81 percent of occupied dwellings were made of hard permanent floors, in other urban about 38 percent and in other rural areas only about 9 percent. In Phnom Penh ceramic tiles was the most common floor material (about 61 percent), followed by cement (about 17 percent). In other urban and other rural areas, wooden planks were commonly used for floor materials of dwellings (41 percent and 52 percent respectively).

Figure 3: Floor of dwellings made of hard/permanent materials 2004-2010. Percent.



The figure 3 shows that the percentage of floor of the dwellings made of hard/permanent materials decreased from about 20 percent in 2004 to 16 percent in 2008. However, it had increased from 17 in 2009 to 19 percent in 2010.

A general conclusion regarding the quality of dwellings is that Phnom Penh differentiated itself from other urban areas and even more from other rural areas in all three quality dimensions (roof, wall and floor). The dwellings in Phnom Penh are to a larger extent built of hard/permanent materials.

3.2. Legal status of dwellings

Nearly 94 percent of all households in Cambodia owned their dwelling, and less than 3 percent rented their dwelling, see Table 4. About 3 percent had other arrangements, e.g. did not own the dwelling but did not have to pay rent.

Table 4: Occupied dwellings by legal status and geographical domain, 2010. Percent.

Legal status	Cambodia	Phnom Penh	Other urban	Other rural
Owned by the household	93.8	79.2	82.5	97.0
Not owned but no rent is paid	3.5	6.0	7.7	2.7
Rented	2.6	14.8	9.8	0.3
Other	-	-	-	-
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663

The households in Phnom Penh and other urban owned their dwellings to a lesser extent than households in other rural. In other rural almost all households own their dwelling while in Phnom Penh and other urban about 80 percent own their dwelling.

3.3. Dwelling space by household

Floor area of occupied dwellings

In all Cambodia, the average dwelling space per household was 45 square meters, see Table 5. The average floor area of dwellings ranged from about 41 square meters in other rural areas to 55 square meters in other urban areas and to 64 square meters in Phnom Penh. The share of households in access of 100 square meters or more was about 17 percent in Phnom Penh, about 7 percent in other urban areas, and only about 2 percent in other rural areas.

Table 5: Floor area by geographical domain, 2010. Percent Average square meters per household

Floor area	Cambodia	Phnom Penh	Other urban	Other rural
00-19	8.8	10.0	9.3	8.6
20-39	41.6	22.4	32.1	45.0
40-59	29.4	20.5	26.4	30.9
60-79	11.6	22.5	13.2	10.1
80-99	4.6	7.9	12.0	3.2
100^{+}	4.0	16.7	7.0	2.2
Total	100	100	100	100
Average square meters per household	45.0	64.4	55.4	41.4

Table 5 also indicates that more than half of the households in other rural areas occupied a dwelling with a floor area less than 40 square meters, compared to one out of three households in Phnom Penh.

Square meters per person

Table 6 shows average square meters per person in dwellings occupied in 2010. In Cambodia, the average floor area occupied per person was about 9 square meters. Square meters per person was about 15 in Phnom Penh, followed by about 10 square meters in other urban areas and about 9 in other rural areas.

Table 6: Floor area by geographical domain, 2010. Percent and average.

Floor area	Cambodia	Phnom Penh	Other urban	Other rural
Average per person	9.4	13.0	11.5	8.7

Number of rooms per dwelling

Table 7 shows that in Cambodia more than 71 percent of dwellings had only one room. About 21 percent had two rooms, and about 1 percent had five or more rooms. The rooms counted in the 2010 CSES included only living rooms and bedrooms, not kitchen, toilet, bathroom or garage.

Table 7: Number of rooms by geographical domain, 2010. Percent and average.

Number of rooms	Cambodia	Phnom Penh	Other urban	Other rural
One room	71.4	36.8	57.2	77.3
Two rooms	20.8	30.3	25.0	19.1
Three rooms	5.1	20.2	9.7	2.7
Four rooms	1.7	8.1	4.6	0.6
Five or more rooms	1.0	4.6	3.5	0.3
Total	100	100	100	100
Average number of rooms per average household size	1.4	2.2	1.8	1.3

The share of one-room occupied dwellings was highest in other rural areas (about 77 percent). It was lowest in Phnom Penh (37 percent) with other urban areas in between (57 percent).

Number of persons per room

The results in Table 8 show that the average number of persons per room in Cambodia was on average 3.4 persons per room in the occupied dwellings.

Table 8: Number of persons per room by geographical domain, 2010.

Persons per room	Cambodia	Phnom Penh	Other urban	Other rural
Number of persons per room	3.4	2.3	2.7	3.7

In Phnom Penh there were 2.3 persons per room compared to 2.7 and 3.7 persons per room in other urban and other rural areas respectively. Table 8 shows that the number of persons per room was still far from one person per room, even in Phnom Penh.

3.4. Drinking water

One of the Millennium Development Goals (MDG) adopted by the Royal Government of Cambodia (RGC) is:

- Overall Target 14: Halve by year 2015 the proportion of people without sustainable access to safe drinking water.

Under this Overall Target there are two sub-targets formulated for the urban and rural populations separately:

- Target 7.10: Increasing the proportion of the rural population with access to safe water source from 24 percent in year 1998 to 50 percent in year 2015.
- Target 7.11: Increasing the proportion of urban population with access to safe water source from 60 percent in year 1998 to 80 percent in year 2015.

For Cambodia, access to water supply services is defined as the availability of an improved water source. An improved water source is not necessarily safe, but an improved source is more likely to provide safe water. Types of improved water sources are defined as follows in CSES 2010:

- Piped water in dwelling or on premises is defined as piped water connected with in-house plumbing to one or more taps, e.g. in the kitchen and bathroom. Sometimes called a house connection. Piped water also connected to a tap outside the house in the yard or plot (on premises).
- A public tap/stand pipe is defined as a public water point from which community members may collect water. A stand pipe may also be known as a public fountain or public tap. A public stand pipe can have one or more taps and are typically made of brick work, masonry or concrete.
- A tube well or borehole is defined as a deep hole that has been driven, bored or drilled with the purposes of reaching ground water supplies. Water is delivered from a tube well or borehole through a pump which may be human, animal, wind, electric, diesel or solar-powered.
- A protected dug well is defined as a dug well that is protected from runoff water through a well lining or casting that is raised above ground level and has a platform that diverts spilled water away from the well and is covered so that bird droppings and animals can not fall down the hole.
- Rainwater collection is also considered as improved water if the rainwater catchments tank is completely closed, have a tap to withdraw and have a capacity of at least 3,000 liters.

Main sources of drinking water (wet and dry season)

Table 9 shows the main sources of drinking water used by households in both wet and dry seasons. Definition of improved water source includes piped in dwelling, public tap, tube/piped well or borehole protected dug well and improved rainwater collection.

About 45 percent of the households in Cambodia had a “safe/improved water source” in the wet season and about 52 percent in dry season. One of the differences between wet and dry season is that a higher share of the households have access to unimproved rainwater in wet season. The households can use rainwater through catchments tanks at home. There are almost no costs or efforts in obtaining rainwater.

Table 9: Main sources of drinking water by season and geographical domain, 2010. Percent.

Water sources	Cambodia	Phnom Penh	Other urban	Other rural
Wet season				
Improved	44.7	95.1	63.5	36.3
Piped in dwelling or on premises	13.9	89.3	29.7	3.0
Public tap	0.1	-	0.2	0.0
Tube/piped well or borehole	23.9	1.9	25.3	26.3
Protected dug well	6.4	3.9	6.8	6.7
Improved rainwater collection	0.4	-	1.6	0.3
Unimproved	55.3	4.9	36.5	63.7
Unprotected dug well	12.4	-	5.7	14.7
Pond, river or stream	8.5	1.7	3.0	10.0
Unimproved rainwater collection	29.8	0.2	15.6	35.1
Vendor-provided water/Tanker truck provision of water	4.0	3.0	5.9	3.8
Bottled water	0.6	-	6.3	-
Other	-	-	-	-
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663
Dry season				
Improved	51.8	94.7	67.7	44.7
Piped in dwelling or on premises	14.5	88.9	31.4	3.5
Public tap	0.1	-	0.2	0.2
Tube/piped well or borehole	28.6	1.9	27.6	31.8
Protected dug well	8.4	3.9	7.2	9.1
Improved rainwater collection	0.2	-	1.3	0.1
Unimproved	48.2	5.3	32.3	55.3
Unprotected dug well	17.2	-	6.5	20.6
Pond, river or stream	17.3	2.0	6.8	20.4
Unimproved rainwater collection	1.8	0.4	2.1	1.9
Vendor-provided water/Tanker truck provision of water	11.2	3.0	9.8	12.3
Bottled water	0.7	-	7.0	-
Other	0.0	-	-	0.1
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663

The results in Table 9 also show that for both seasons, about 89 percent of the households in Phnom Penh had piped water in their dwellings or on premises. In other urban areas, about 30 percent of the households had piped water in their dwellings, and about 26 percent had tube/piped well or borehole. In other rural areas, only about 3 percent of the households had piped water in their dwellings. More common is tube/piped well or borehole (26.3 percent in wet season and 31.8 percent in dry season). Still many households in other rural areas depended on pond, river or stream and rainwater as drinking water.

Treatment of water for drinking

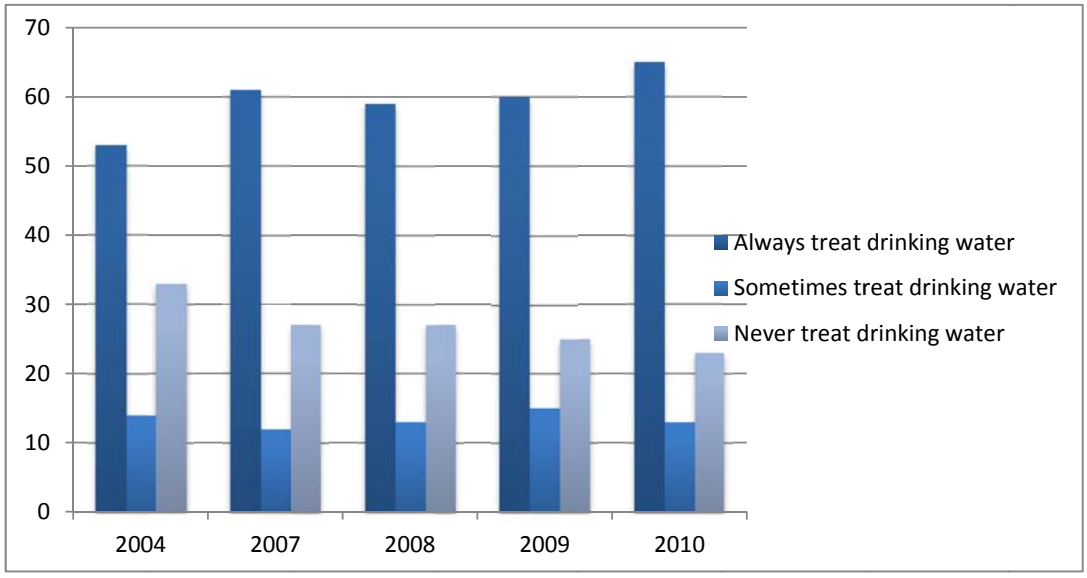
Table 10 shows that about 65 percent of the Cambodian households said that they always treat water for drinking, 12 percent of households said that they sometimes treated water for drinking and 23 percent of households never treated drinking water.

Table 10: Households treating drinking water by geographical domain, 2010. Percent.

Treatment of drinking water	Cambodia	Phnom Penh	Other urban	Other rural
Always treat drinking water	64.8	91.1	73.5	60.6
Sometimes treat drinking water	12.4	4.5	10.0	13.6
Never treat drinking water	22.8	4.4	16.5	25.8
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663

The results in Table 10 also show that about 91 percent of the households in Phnom Penh and 73 percent in other urban areas and about 61 percent in other rural areas always treated their drinking water. However 26 percent of households in other rural areas and about 21 percent in other urban areas never treated drinking water. In Phnom Penh this share was about 4 percent.

Figure 4: Treatment of drinking water 2004-2010. Percent.



The figure 4 illustrate that the percentage of households that always treat drinking water increased from slightly above 50 percent to about 65 percent over the last seven years. The diagram also shows that the percentage of households that never treat their drinking water decreased from more than 30 percent to about 23 percent over the last seven years. However, the percentage of households that only sometimes treat drinking water seemed to be unchanged over the last seven years from 2004 to 2010.

Distance to fetch drinking water sources (wet and dry season)

Of all the households in Cambodia about 98 percent had access to water in a distance of less than 250 meters from their dwelling in the wet season (94 percent in the dry season). For the households in Phnom Penh and other urban area almost all had access to water in a distance less than 250 meters in both seasons. And somewhat about 95 percent of households in the rural area had access to the source of drinking water in a distance less than 250 meters in both seasons, see Table 11.

Table 11: Distance to main drinking water sources by geographical domain, 2010. Percent.

Distance in wet season	Cambodia	Phnom Penh	Other urban	Other rural
Less than 0.25 km	98.0	100	100	98.0
0.25 to 0.99 km	2.0	-	0.0	2.0
1.00 to 1.99 km	0.0	-	-	0.0
2.00 to 2.99 km	0.0	-	-	0.0
3 km or more	-	-	-	-
Total	100	100	100	100

Distance in dry season	Cambodia	Phnom Penh	Other urban	Other rural
Less than 0.25 km	94.0	100	98.0	93.0
0.25 to 0.99 km	4.0	-	2.0	5.0
1.00 to 1.99 km	1.0	-	0.0	1.0
2.00 to 2.99 km	0.0	-	0.0	0.0
3 km or more	0.0	-	0.0	0.0
Total	100	100	100	100

3.5. Sanitation facilities

Another of the Millennium Development Goals (MDG) adopted by the Royal Government of Cambodia (RGC) is:

- Overall Target 15: Halve by year 2015 the proportion of people without sustainable access to improved sanitation.

Under this Overall Target there are two sub-targets formulated for the urban and rural populations separately:

- Target 7.11: Increasing the proportion of the rural population with access to improved sanitation from 8.6 percent in year 1998 to 30 percent in year 2015.
- Target 7.12: Increasing the proportion of urban population with access to improved sanitation from 49 percent in 1998 to 74 percent in 2015.

Improved sanitation facility is the facility that is private-owned by the household and it can effectively separate human excreta from human contact. Types of improved sanitation facility that the urban and rural populations have access to are defined as follows in CSES 2010:

- Pour flush/flush toilet connected to sewerage, septic tank or pit is defined as a flush toilet using a cistern or holding tank for flushing water and has a water seal, which is a U-shaped pipe below the seat or squatting pan, that prevents the passage of flies and odors. A pour flush toilet uses a water seal or a pour flush toilet uses water poured by hand for flushing.
- A pit latrine with slab is defined as that the excreta is deposited without flushing directly into a hole in the ground. Pit latrine can be a ventilated improved pit latrine (VIP).

Toilet facilities of dwellings

The type of toilet facilities used is a measure of sanitary conditions available. The definition of "improved sanitation facility" includes three types of toilets namely: "pour flush/flush toilet connected to sewerage", "pour flush/flush toilet connected to septic tank", and "pit latrine with slab". About 40

percent of all households in Cambodia had access to improved toilet facilities. Almost all of them had modern toilet facility connected to sewerage or septic tank in their dwellings, see Table 12.

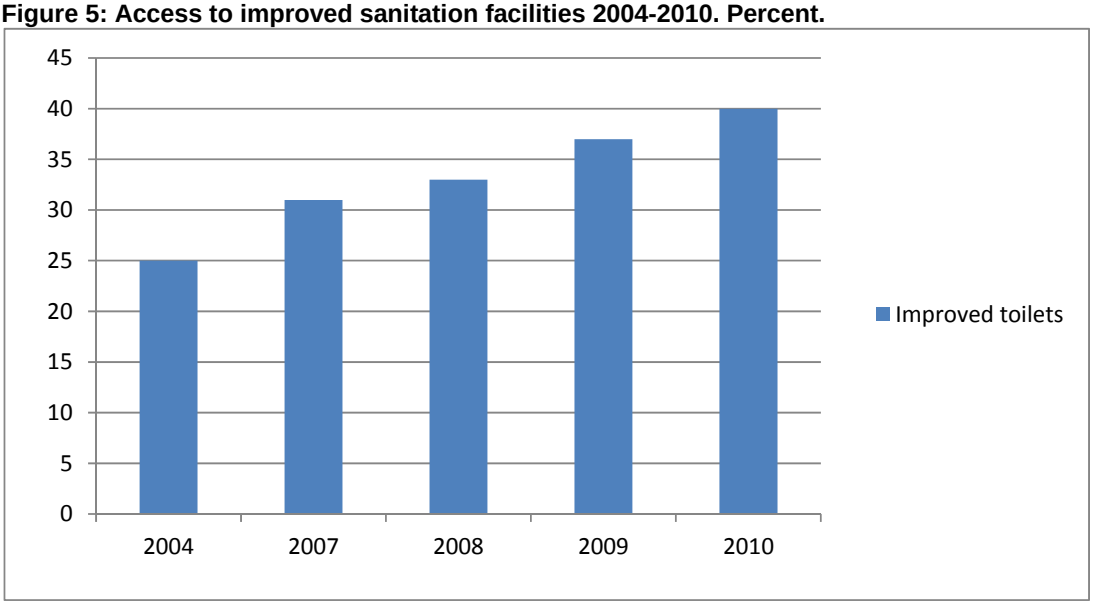
Table 12: Toilet facilities by geographical domain, 2010. Percent.

Type of facilities	Cambodia	Phnom Penh	Other urban	Other rural
Improved toilets	40.0	97.1	76.0	28.7
Pour flush/flush connected to sewerage	9.1	82.6	7.0	0.7
Pour flush/flush connected to septic tank	30.0	13.3	68.5	27.1
Pit latrine with slab	0.9	1.2	0.5	0.9
Unimproved toilets	58.1	2.8	23.4	69.1
Pit latrine without slab/open pit	1.0	-	0.8	1.1
Latrine overhanging field/water	0.2	-	0.2	0.2
Public toilet (pit latrine/latrine)	1.8	0.9	3.2	1.7
Open land	55.1	1.9	19.2	66.0
Other included in not improved	0.1	-	-	0.1
Not stated	1.9	-	0.6	2.2
Total	100	100	100	100
Number of households (thousands)	2,917	276	298	2,344

Table 12 shows that about 69 percent of households in other rural areas were using unimproved toilet facilities. The figure is much lower in Phnom Penh and other urban areas (3 percent and 23 percent respectively). In the other rural and urban area many households depended on “Open land”, about 66 percent and 19 percent respectively.

In Phnom Penh, almost all households had access to improved toilet facilities. Almost 83 percent had toilets connected to sewerage and about 13 percent had toilets connected to septic tank. The corresponding shares in other urban and other rural areas were lower, about 76 and 29 percent respectively.

Figure 5: Access to improved sanitation facilities 2004-2010. Percent.



The figure 5 shows that the percentage of household that had access to improved sanitation increased from 25 percent to 40 percent over the last seven years from 2004 to 2010.

3.6. Energy sources for lighting and cooking

Energy sources for lighting

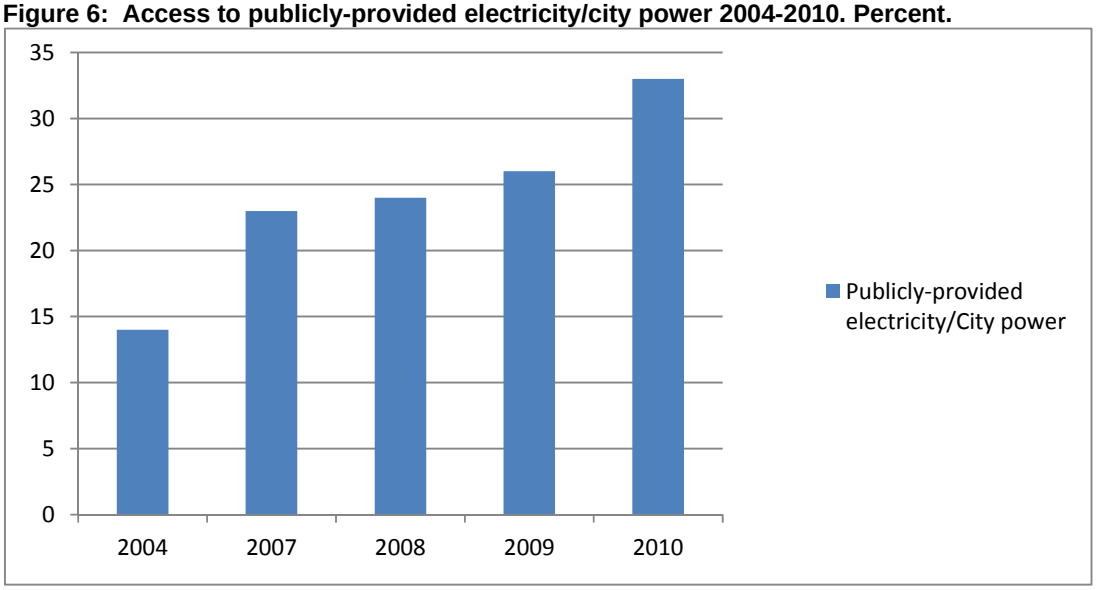
The results in Table 13 show the main sources of lighting used by households in Cambodia. Of all Cambodian households, about 32 percent had access to publicly provided electricity or city generated electricity. Even more households had electricity for lighting by using batteries (about 36 percent), probably also used for powering the TV set. The kerosene lamp was a commonly used energy source for lighting in Cambodia (about 29 percent).

Table 13: Main sources of lighting by geographical domain, 2010. Percent.

Sources of lighting	Cambodia	Phnom Penh	Other urban	Other rural
Publicly-provided electricity/City power	32.5	99.0	78.1	18.8
Generator	1.0	0.1	0.6	1.2
Battery	35.7	-	8.1	43.5
Kerosene lamp	29.3	0.7	12.4	34.8
Candle	0.1	-	0.3	0.1
Solar	0.1	-	0.1	0.2
Other	1.2	0.1	0.4	1.5
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663

In Phnom Penh, almost all households used publicly provided electricity or city provided electricity as sources of lighting. The shares of households using publicly provided electricity in other urban and other rural areas were lower compared to Phnom Penh, about 78 percent and 19 percent respectively. In other rural areas, the most commonly used source of lighting was battery and kerosene lamp, about 43 percent and 35 percent respectively which were much higher shares than in the other areas.

Figure 6: Access to publicly-provided electricity/city power 2004-2010. Percent.



The figure 6. show that the percentage of Cambodian household that had access to publicly-provided electricity/city power highly increased from 25 percent to 40 percent over the last seven years from 2004 to 2010.

Energy sources for cooking

One of the Millennium Development Goals (MDG) adopted by the Royal Government of Cambodia (RGC) is:

- Overall Target 13: Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.

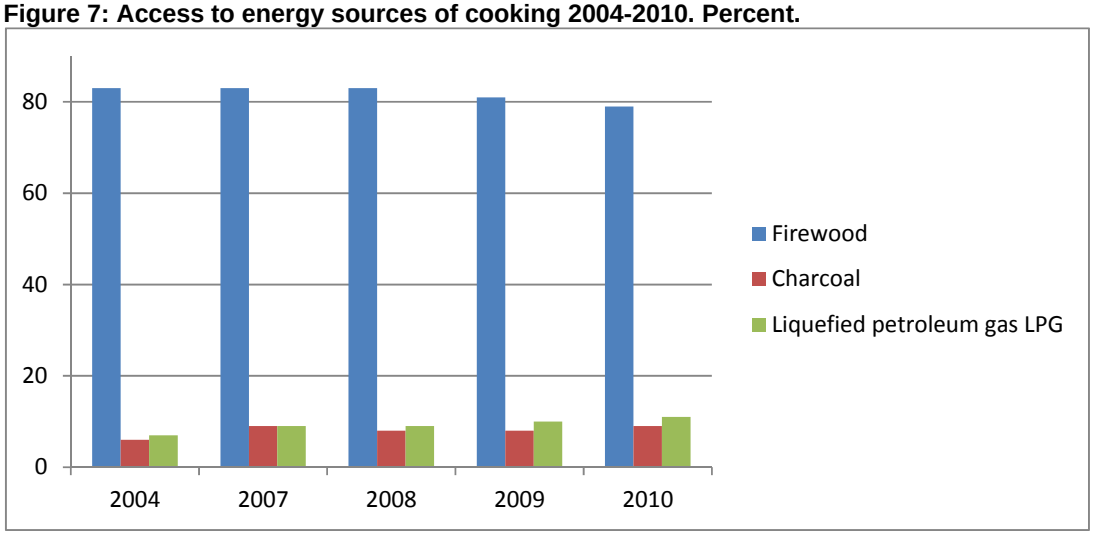
Under this Overall Target there are a number of sub-targets, e.g. target 7.9 which concerns wood fuel dependency for cooking as defined in the MDG to include the first three sources in Table 14 (firewood, charcoal and liquefied petroleum gas (LPG)). In all Cambodia, about 79 percent of the households used firewood for cooking, about 9 percent used charcoal and 11 percent used LPG.

Table 14: Type of fuel for cooking by geographical domain, 2010. Percent.

Type of fuel	Cambodia	Phnom Penh	Other urban	Other rural
Firewood	79.1	11.2	43.0	91.7
Charcoal	9.1	11.8	31.3	5.9
Liquefied petroleum gas (LPG)	11.1	74.7	23.1	2.1
Kerosene	-	-	-	-
Publicly-provided electricity/City power	0.4	1.8	2.7	-
Household generator	-	-	-	-
None/don't cook	0.0	0.4	-	-
Other	0.2	-	-	0.3
Total	100	100	100	100
Number of households	2,917,026	275,633	297,730	2,343,663

In rural areas more than 91 percent of the households used firewood as fuel for cooking. In other urban areas about 43 percent of the households also used firewood for cooking. In Phnom Penh liquefied petroleum gas (LPG) was the most common fuel; about 75 percent of the households used LPG for cooking and only about 11 percent of the households used firewood or charcoal respectively for cooking.

Figure 7: Access to energy sources of cooking 2004-2010. Percent.



The figure 7 illustrate that the percentage of households that used firewood for cooking slightly decreased from 83 percent to 79 percent over the last seven years from 2004 to 2010. The figure also shows that the percentage of households using charcoal or liquefied petroleum gas (LPG) for cooking increased from just about 6 percent to about 10 percent over the last seven years from 2004 to 2010.

3.7. Annex of additional tables for housing

Table 15: Main sources of drinking water by season and urbanization degree, 2010. Percent.

Water sources	Cambodia	Urban	Rural
Dry season			
Improved drinking water	51.8	80.0	45.2
Unimproved drinking water	48.2	20.0	54.8
Total	100	100	100
Wet season			
Improved drinking water	44.7	77.9	36.9
Unimproved drinking water	55.3	22.1	63.1
Total	100	100	100
Annually			
Improved drinking water	48.2	79.0	41.1
Unimproved drinking water	51.8	21.0	58.9
Total	100	100	100

Note: Improved water source includes piped in dwelling, public tap, tube/piped well or borehole protected dug well and improved rainwater collection, the rest are unimproved water source.

Table 16: Toilet facilities by urbanization degree, 2010. Percent.

Type of facilities	Cambodia	Urban	Rural
Improved toilets	40.0	86.4	29.2
Pour flush/flush connected to sewerage	9.1	43.6	1.0
Pour flush/flush connected to septic tank	30.0	41.9	27.3
Pit latrine with slab	0.9	0.9	0.9
Unimproved toilets	58.1	13.2	68.6
Pit latrine without slab/open pit	1.0	0.4	1.1
Latrine overhanging field/water	0.2	0.1	0.2
Public toilet (pit latrine/latrine)	1.8	2.0	1.7
Open land	55.1	10.7	65.5
Other included in not improved	0.1	-	0.1
Not stated	1.9	0.4	2.2
Total	100	100	100

Table 17: Main sources of lighting by urbanization degree, 2010. Percent.

Sources of lighting	Cambodia	Urban	Rural
Publicly-provided electricity/City power	32.5	87.8	19.6
Generator	1.0	0.4	1.2
Battery	35.7	4.4	43.0
Kerosene lamp	29.3	7.0	34.5
Candle	0.1	0.1	0.1
Solar	-	-	-
Other	0.1	0.1	0.2
Total	100	100	100

Table 18: Type of fuel for cooking by urbanization degree, 2010. Percent.

Type of fuel	Cambodia	Urban	Rural
Firewood	79.1	26.7	91.3
Charcoal	9.1	22.8	5.9
Liquefied petroleum gas (LPG)	11.1	47.9	2.5
Kerosene	-	-	-
Publicly-provided electricity/City power	0.4	2.4	-
Household generator	-	-	-
None/don't cook	0.0	0.2	-
Other	0.2	-	0.3
Total	100	100	100

4. Agriculture

The CSES is a multipurpose survey. As it also covers household production, where agricultural production plays a dominating role, it can contribute to the knowledge about agriculture as well.
Data from the agricultural module of the CSES is much in demand from primarily Ministry of Agriculture, Forestry and Fisheries (MAFF), national account department at National Institute of Statistics (NIS) and from the World Bank.

Statistics by gender (households headed by women and men respectively) provide information of great importance in many areas. Organizations such as NIS, FAO, MAFF and the Ministry of Women Affairs (MoWA) have also emphasized the use of such presentation.

The presentation of results is divided in six sections and one annex for additional tables:

- Land ownership
- Production of crops
- Cost of cultivation of crops
- Livestock and poultry
- Fish cultivation and fisheries
- Forestry and hunting

The statistics are mostly disaggregated on five regional zones: Phnom Penh, Plain, Tonle Sap, Coastal and Plateau/Mountain.

4.1. Land ownership

The agricultural land in the Cambodia Social Economics Survey (CSES) refers to the land that households owned or operated, rented in, rented out, free use of land, etc., to use for vegetable gardening, agricultural or farming activities such as crop cultivation, livestock raising, fishing and fish breeding, and private forestry. This excludes land under permanent pasture, wood or forest and all other non-agricultural land put under residential use or for other enterprise activities.

Private ownership of land was recognised in 1989. Farming households were then invited to apply for title to the land they cultivated. Around 4 million such applications were made, and the intention was that these should be processed urgently by the central cadastre authorities. Households with agriculture as their main occupation received land according to household size and other household characteristics. However, since then, there have been significant socio-economic changes (refugee repatriation, urbanization, economic growth, and population growth) that have placed varied demands on land.

Table 1 shows that Tone Sap zone has the largest share of agricultural land in 2010, followed by Plain zone. Of the total 3,168,000 hectares in Cambodia, approximately 15 percent (485,000 hectares) was owned by women headed households. In addition, see Figure 1.

Table 1: Agricultural land by sex of household head and zone, 2010, in thousand hectares.

Zone	Women		Men		Total
	Hectares	Percent	Hectares	Percent	Hectares
Cambodia	485	15	2,659	85	3,168
Phnom Penh	2	8	23	92	25
Plain	147	13	946	87	1,093
Tonle Sap	255	22	933	79	1,188
Coastal	31	13	207	87	238
Plateau/Mountain	51	9	551	92	602

Figure 1: Agricultural land by sex of household head and zone, 2010.

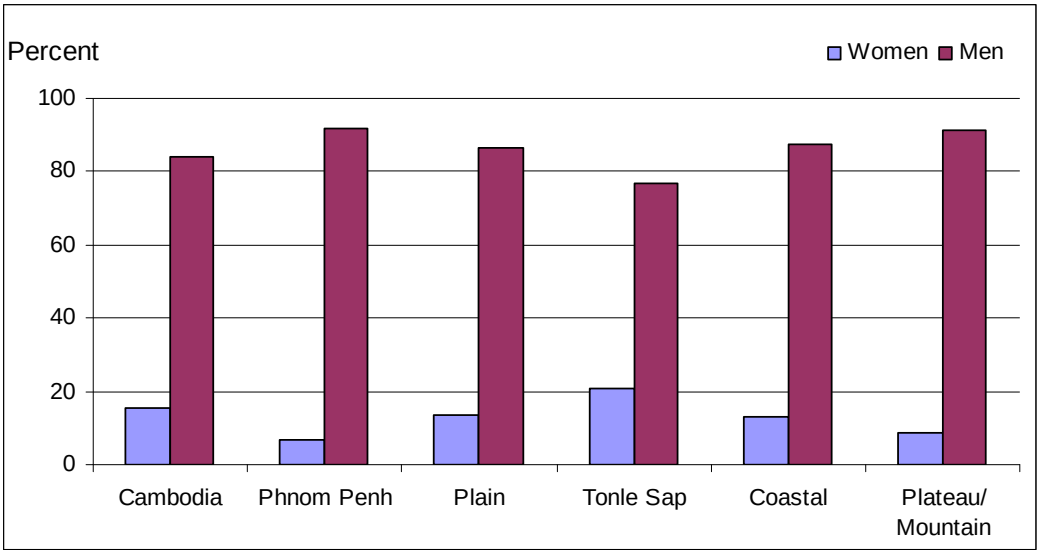


Table 2 shows that about 2 million hectares of agricultural land were used in the wet season, in which 309,000 hectares used by households who headed by women and 1,697,000 hectares used by households headed by men. The second most common type of land is chamkar land with 539,000 hectares. Approximately 15 percent (485,000 hectares) of the agricultural land in Cambodia was owned by women headed households.

Table 2: Agricultural land by sex of household head, type of land and zone, 2010.

Type of land	Cambodia		Phnom Penh		Plain		Tonle Sap		Coastal		Plateau /Mount.	
	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men
	Thousand hectares											
Wet-season land	309	1,697	1	8	102	496	143	696	26	162	37	335
Dry-season land	34	230	0	0	22	179	10	46	2	1	0	4
Wet and dry season land	8	120	0	2	4	44	2	18	0	2	1	53
Chamkar land	122	417	0	4	12	175	96	139	3	33	12	67
Kitchen garden	1	8	0	0	0	2	1	1	0	1	1	4
Land with permanent crops	64	27	0	1	3	18	1	0	0	6	0	3
Private forestry land	0	52	0	0	0	2	0	37	0	0	0	13
Idle land	6	132	1	8	4	31	2	20	0	3	0	71
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total	485	2,683	2	23	147	946	255	957	31	207	51	551
	Percent											
Wet-season land	15	85	11	89	17	83	17	83	14	86	10	90
Dry-season land	13	87	0	0	11	89	18	82	67	33	0	100
Wet and dry season land	6	94	0	100	8	92	10	90	0	100	2	98
Chamkar land	23	77	0	100	6	94	41	59	8	92	15	85
Kitchen garden	11	89	0	0	0	100	50	50	0	100	0	100
Land with permanent crops	13	87	0	100	14	86	100	0	0	100	0	100
Private forestry land	0	100	0	0	0	100	0	0	0	0	0	0
Idle land	4	96	11	89	11	90	9	91	0	100	0	100
Other	0	100	0	0	0	100	0	100	0	0	0	100
Total	15	85	8.0	92	13	87	21	79	13	87	8	92

Table 3 shows the number of households reporting ownership of agricultural land in the survey. Approximately 49 percent of all households had agricultural land less than 10,000 square meters (10,000 square meters equals 1 hectare). The total estimated number of households having agricultural land was approximately 72 percent of all households in 2010.

Table 3: Number of households with agricultural land by area and zone, 2010.

Area	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
			Number			
Less that 10,000 m^2	1,012	18	530	260	95	109
10,000 m^2 - 19,999 m^2	574	5	235	177	54	103
20,000 m^2 - 29,999 m^2	246	2	92	93	8	50
30,000 m^2 - 39,999 m^2	111	1	36	42	9	23
40,000 m^2 - 49,999 m^2	53	1	12	28	3	8
50,000 m^2 - 99,999 m^2	68	0	16	31	1	19
100,000 m^2 -	25	0	6	11	3	5
Total	2,088	26	927	642	175	318
			Percent			
Less that 10,000 m^2	49	67	57	41	55	34
10,000 m^2 - 19,999 m^2	28	17	25	28	31	32
20,000 m^2 - 29,999 m^2	12	7	10	15	5	16
30,000 m^2 - 39,999 m^2	5	5	4	7	5	7
40,000 m^2 - 49,999 m^2	3	3	1	4	2	3
50,000 m^2 - 99,999 m^2	3	0	2	5	1	6
100,000 m^2 -	1	1	1	2	2	2
Total	100	100	100	100	100	100

Table 4 shows that the owning land is the most common type of land tenure. The share of owned plots not being rented out was approximately 89 percent in 2010 (compared to 93 percent in 2009).

Table 4: Number of agricultural plots by ownership and zone, 2010, in thousand.

Land tenure	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
			Number			
Owned	3,596	19	1,606	1,055	369	547
Owned, rented out	227	8	119	70	17	12
Rented in	151	2	68	65	10	5
Free use of land	58	1	27	14	3	12
Other tenure	7	0	6	0	0	0
Total	4,039	30	1,827	1,205	400	577
			Percent			
Owned	89	63	88	88	93	95
Owned, rented out	6	25	7	6	4	2
Rented in	4	8	4	5	3	1
Free use of land	1	3	2	1	1	2
Other tenure	0	1	0	0	0	0
Total	100	100	100	100	100	100

Households were asked about conflicts concerning their agricultural plots. The conflict refers to any kind of claims for the ownership of land. Table 5 shows that about 1.4 percent had been affected by previous conflicts and that about 0.3 percent of all plots were subject to an ongoing conflict.

Table 5: Number of households by plot conflict and zone, 2010, in thousand.

Conflict situation	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Number					
Ongoing plot conflict	13	0	4	2	1	6
Previous plot conflict	56	3	19	14	2	18
No plot conflict	3,970	27	1,804	1,189	396	553
Total	4,039	30	1,827	1,205	400	577
	Percent					
Ongoing plot conflict	0.3	1.1	0.2	0.2	0.3	1.1
Previous plot conflict	1.4	9.2	1.0	1.1	0.6	3.2
No plot conflict	98.3	89.6	98.8	98.7	99.1	95.7
Total	100	100	100	100	100	100

Table 6 shows that the total area of agricultural land was 3,168,000 hectares (3,068,000 in 2009). About 2,793,000 hectares of agricultural land in 2010 were owned by individual households.

Table 6: Area of agricultural land by ownership and zone, 2010.

Land tenure	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Thousand hectares					
Owned	2,793	17	955	1,017	221	584
Owned, rented out	186	6	62	101	9	8
Rented in	152	1	55	83	7	7
Free use of land	32	1	17	11	1	3
Other tenure	3	0	3	0	0	0
Total	3,168	25	1,093	1,211	237	602
	Percent					
Owned	88.2	70.0	87.4	83.9	93.0	97.1
Owned, rented out	5.9	24.2	5.7	8.3	4.0	1.3
Rented in	4.8	2.7	5.1	6.9	2.8	1.1
Free use of land	1.0	2.9	1.6	0.9	0.2	0.5
Other tenure	0.1	0.2	0.3	0.0	0.0	0.0
Total	100	100	100	100	100	100

Table 7 shows that approximately 63 percent of total land area in 2010 was used in the wet season. In term of chamkar land, the survey found that approximately 17 percent of all agricultural land was defined as chamkar land in 2010. Approximately 8 percent of the area was used in the dry season.

Table 7: Area of agricultural land by type of land and zone, 2010.

Type of land	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Thousand hectares					
Wet-season land	2,005	8	598	839	188	372
Dry-season land	265	0	201	56	3	4
Wet and dry season land	128	3	48	20	2	55
Chamkar land	539	4	187	234	35	79
Kitchen garden	40	1	23	3	7	7
Idle land	52	0	1	37	0	13
Other	139	8	35	22	3	72
Total	3,168	25	1,093	1,211	237	602
	Percent					
Wet-season land	63	32	55	69	79	62
Dry-season land	8	0	18	5	1	1
Wet and dry season land	4	12	4	2	1	9
Chamkar land	17	16	17	19	15	13
Kitchen garden	1	4	2	0	3	1
Idle land	2	0	0	3	0	2
Other	4	32	3	2	1	12
Total	100	100	100	100	100	100

4.2. Crop production

The NIS classification of crops, based on FAO classification, provides a grouping into 23 groups. However, in order to get more reliable estimates, six main groups are used. See Section on Definitions and Classifications which is attached in Chapter 10 (About the Cambodia Socio-Economic Survey).

Table 8 presents figures on crop production for the years 2009 and 2010. Data on activities during wet season, dry season and total are shown. If a particular household grows more than one crop and/or during more than one season, these data will occur in more than one column and/or row in the table.

The estimated number of household activities of crop planting in 2009 was 1,979,000 in wet season and 738,000 in dry season. The total number of household activities of crop planting in 2010 was slightly higher, estimated at 2,204,000 in the wet season and 883,000 in the dry season.

The most common crop product in Cambodia is cereals harvested for grain which accounted for 74 percent of all household activities of crop planting. The second most important crop group was fruits and nuts.

Table 8: Household activities by main group of crop production and season, 2009 and 2010, In thousand.

Main group of crop production	CSES 2009			CSES 2010		
	Total	Wet season	Dry season	Total	Wet season	Dry season
	Number of activities					
Cereal harvested for grain	1,969	1,627	341	1,937	1,627	311
Tubers and leguminous plants	154	75	79	167	96	70
Industrial temporary crops	108	67	41	100	44	56
Vegetables	117	56	61	183	98	85
Fruits and nuts	296	117	179	595	286	308
Industrial permanent crops	73	37	36	103	53	51
Other crop not classified elsewhere	1	1	1	1	0	1
Total	2,717	1,979	738	3,086	2,204	883
	Percent					
Cereal harvested for grain	71	80	46	63	74	35
Tubers and leguminous plants	4	3	6	5	4	8
Industrial temporary crops	4	3	6	3	2	6
Vegetables	6	4	1	6	4	10
Fruits and nuts	10	6	22	19	13	35
Industrial permanent crops	4	3	7	3	2	6
Other crop not classified elsewhere	1	1	2	0	0	0
Total	100	100	100	100	100	100

Table 9 presents the value of average yield per square meter by main crop for the year 2010. The gross output in dry season is more than two times higher than the wet season yield (546 as compared to 241).

Table 9: Average yield per square meter by main group of crop and season, 2010, in Riels.

Main group of crop production	Wet season		Dry season	
	Gross output	Net output	Gross output	Net output
Cereals harvested for grain	219	213	401	396
Tubers and leguminous plants	273	265	857	846
Industrial temporary crops	370	362	844	829
Vegetables	910	906	1765	1732
Fruits and nuts	199	195	333	328
Industrial permanent crops	179	179	170	170
Other crops not specified elsewhere	0	0	1250	1250
Total	241	235	546	538

Gross output value of all crops in the wet season was about 3,974 billion Riels in 2010. Of this value, about 66 billion Riels, approximately 2 percent of gross output, was the post harvest loss and the remaining around 98 percent was the net output of crop production. Table 10 shows that the value added is estimated at approximately 66 percent.

For the dry season, Table 10 shows that the value of gross output for all crops was 1,896 billion Riels which is much lower than for the wet season. The percentage of post harvest loss and net output of all groups of crop production in the dry season was approximately 1 percent and about 99 percent respectively, also shows the value added around 68 percent.

Table 10: Value added by season and zone, 2010.

Item	Wet season						Dry season					
	Cam.	Phnom Penh	Plain	Tonle Sap	Coast	Plat./ Mount.	Cam.	Phnom Penh	Plain	Tonle Sap	Coast	Plat./ Mount.
	Billion Riels											
Gross output	3,974	16	1,498	1,438	302	720	1,896	36	1,239	351	61	209
Post harvest loss	66	0	25	25	4	12	14	0	9	3	1	1
Net output	3,910	16	1,474	1,413	298	709	1,883	36	1,230	348	61	208
Cost	1,301	4	554	453	89	201	603	2	484	77	15	25
Value added	2,609	12	920	960	209	508	1,281	35	746	271	46	183
	Percent											
Gross output	100	100	100	100	100	100	100	100	100	100	100	100
Post harvest loss	2	0	2	2	1	2	1	0	1	1	2	1
Net output	98	100	98	98	99	99	99	100	99	99	100	100
Cost	33	25	37	32	30	28	32	6	39	22	25	12
Value added	66	75	61	67	69	71	68	97	60	77	75	88

4.3. Cost of cultivation of crops

Nationally, the costs for crop production for both seasons are estimated to 1,904 billion Riels in 2010. However, there are pronounced differences between the two seasons regarding the amounts spent on cultivation. Table 11 and 12 show the costs of crop production by zone for wet and dry season respectively.

The cost of crop production is estimated at 1,301 billion Riels in the wet season and 603 billion Riels in the dry season. The highest total costs was for chemical fertilizers (i.e. pesticide, weedicide and fungicide) at 566 billion Riels which is equivalent to about 30 percent of total costs, followed by planting materials at 333 billion Riels (about 18 percent of total costs). For other costs of crop production, see Figure 2.

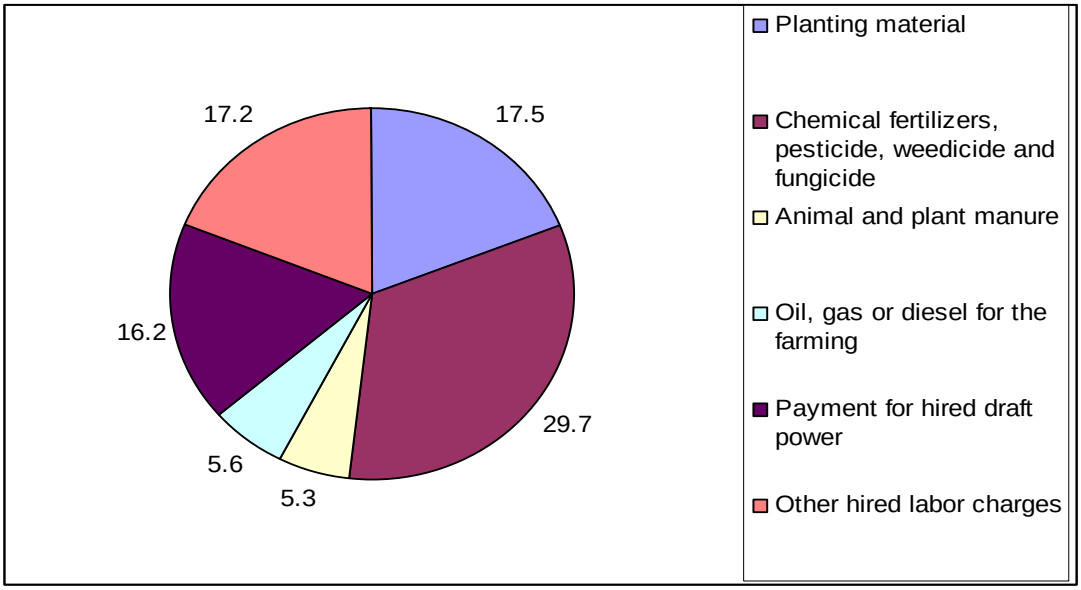
Table 11: Cost of crop production in wet season by group items and zone, 2010.

Cost items	Phnom Penh	Plain	Tonle Sap	Coast	Plateau/ Mountain
	Billion Riels				
Planting material	0	92	92	11	49
Chemical fertilizers, pesticide, weedicide and fungicide	1	180	98	25	22
Animal and plant manure	0	39	22	10	17
Electricity for the farming	0	0	0	0	0
Oil, gas or diesel for the farming	0	11	21	1	14
Storage items	0	9	10	3	6
Payment for hired draft power	1	93	100	16	33
Other hired labor charges	1	105	80	16	54
Irrigation charges	0	6	0	0	1
Services/technical supports from government and agencies	0	0	0	0	0
Transportation of input materials, equipment and products	0	11	15	1	4
Repair and maintenance of farm house, farm equipment, animal shed	0	2	2	1	1
Rental paid to owner for farm land, farm house, equipment etc.	0	4	12	4	1
Total	3	554	453	89	201
	Percent				
Planting material	19	9	17	20	13
Chemical fertilizers, pesticide, weedicide and fungicide	25	19	33	22	29
Animal and plant manure	7	7	7	5	12
Electricity for the farming	0	0	0	0	0
Oil, gas or diesel for the farming	4	1	2	5	2
Storage items	2	4	2	2	3
Payment for hired draft power	19	16	17	22	18
Other hired labor charges	20	34	19	18	18
Irrigation charges	1	1	1	0	0
Services/technical supports from government and agencies	0	0	0	0	0
Transportation of input materials, equipment and products	2	2	2	3	1
Repair and maintenance of farm house, farm equipment, animal shed	1	0	0.4	0	1
Rental paid to owner for farm land, farm house, equipment etc.	2	7	1	3	5
Total	100	100	100	100	100

Table 12: Cost of crop production in dry season by group items and zone, 2010.

Cost items	Phnom Penh	Plain	Tonle Sap	Coast	Plateau/ Mountain
	Billion Riels				
Planting material	0	64	15	1	6
Chemical fertilizers, pesticide, weedicide and fungicide	0	213	21	3	3
Animal and plant manure	0	7	2	4	1
Electricity for the farming	0	0	0	0	0
Oil, gas or diesel for the farming	0	45	11	3	0
Storage items	0	7	3	0	1
Payment for hired draft power	0	48	9	2	7
Other hired labor charges	0	54	10	2	5
Irrigation charges	0	20	3	0	0
Services/technical supports from government and agencies	0	0	0	0	0
Transportation of input materials, equipment and products	0	8	2	0	1
Repair and maintenance of farm house, farm equipment, animal shed	0	1	0	0	0
Rental paid to owner for farm land, farm house, equipment etc.	0	17	0	0	1
Total	2	484	77	15	25
	Percent				
Planting material	14	10	13	20	9
Chemical fertilizers, pesticide, weedicide and fungicide	40	25	44	27	17
Animal and plant manure	2	12	1	2	25
Electricity for the farming	0	0	0	0	0
Oil, gas or diesel for the farming	10	1	9	14	19
Storage items	2	3	2	4	1
Payment for hired draft power	11	10	10	12	12
Other hired labor charges	12	6	11	13	13
Irrigation charges	4	12	4	5	1
Services/technical supports from government and agencies	0	0	0	0	0
Transportation of input materials, equipment and products	2	3	2	3	3
Repair and maintenance of farm house, farm equipment, animal shed	0	1	0	0	0
Rental paid to owner for farm land, farm house, equipment etc.	3	17	4	0	0
Total	100	100	100	100	100

Figure 2: Cost of crop production by cost item. Percent.



4.4. Livestock and poultry

Table 13 shows figures on households by zone and Table 14 by sex of head of household head and zone. As indicated, the number of households engaged in raising livestock and poultry was estimated at almost 2,045,000 (70 percent of all households). In Cambodia, the men headed households who raised livestock and poultry were 74 percent in 2010, whereas women headed households were 57 percent. If compared among the five zones, Phnom Penh's households were in the least percentage points (very small) for raising livestock and poultry.

Table 13: Number of households raising livestock or poultry by zone, 2010, in thousand.

Number of households	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
Households raising livestock or poultry	2,045	8	918	634	175	310
All households	2,917	276	1162	888	213	379
Percent of all households	70	3	79	72	82	82

Table 14: Number of households raising livestock or poultry by sex of head of households and zone, 2010, in thousand.

Number of households	Cambodia		Phnom Penh		Plain		Tonle Sap		Coastal		Plateau/ Mountain	
	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men
Raising livestock or poultry	372	1,673	1	7	161	757	134	500	32	143	43	267
All households	649	2,268	69	207	247	915	224	664	45	168	65	314
% of all households	57	74	1	3	65	83	60	75	72	85	67	85

Table 15 and 16. show the number of livestock and poultry by type in 2009 and 2010. In 2010 the three most common types of livestock and poultry were chicken approximately 70 percent, duck 14 percent and cattle 9 percent. If compared among the five zones by type of livestock and poultry, chicken are the most common and numerous amounts to be raised by Cambodian households.

Table 15: Number of livestock and poultry by zone, 2010, in thousand.

Type of livestock and poultry	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
			Number			
Cattle	3,052	5	1,291	838	270	648
Buffalos	669	0	303	210	48	108
Horses, ponies	24	0	17	2	2	3
Pigs	1,435	9	750	334	173	169
Sheep	5	0	5	0	0	0
Goats	35	0	31	1	0	3
Chicken	23,138	79	9,657	7,189	3,227	2,986
Duck	4,618	6	2,016	2,102	225	269
Quail	164	0	0	0	102	62
Other	5	2	3	0	0	0
Total	33,145	101	14,072	10,675	4,048	4,250
			Percent			
Cattle	9	5	9	8	7	15
Buffalos	2	0	2	2	1	3
Horses, ponies	0	0	0	0	0	0
Pigs	4	9	5	3	4	4
Sheep	0	0	0	0	0	0
Goats	0	0	0	0	0	0
Chicken	70	79	69	67	80	70
Duck	14	6	14	20	6	6
Quail	1	0	0	0	3	2
Other	0	2	0	0	0	0
Total	100	100	100	100	100	100

Table 16: Number of livestock and poultry by zone, 2009, in thousand.

Type of livestock and poultry	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
			Number			
Cattle	3,768	11	1,563	1,134	302	758
Buffalos	711	0	314	236	52	109
Horses, ponies	23	0	18	2	2	1
Pigs	1,860	23	931	440	187	279
Sheep	5	0	4	0	1	0
Goats	58	0	18	3	0	37
Chicken	22,348	106	10,017	6,784	2,550	2,891
Duck	10,149	11	5,836	2,979	989	334
Quail	2	0	1	1	0	0
Other	28	0	19	7	0	2
Total	38,952	151	18,721	11,586	4,083	4,411
			Percent			
Cattle	10	7	8	10	7	17
Buffalos	2	0	2	2	1	3
Horses, ponies	0	0	0	0	0	0
Pigs	5	15	5	4	5	6
Sheep	0	0	0	0	0	0
Goats	0	0	0	0	0	1
Chicken	57	70	54	59	63	66
Duck	26	7	31	26	24	8
Quail	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	100	100	100	100	100	100

The cost for raising livestock and poultry in Cambodia during 2010 was estimated at 645 billion Riels. Table 17 shows that the highest cost for raising livestock and poultry was costs for "feed for livestock-purchased" which is estimated at 614 billion Riels (95 percent) of the total costs for raising livestock. The total cost for "veterinary services and medicine" was 24 billion Riels (4 percent), and the cost for "hired labor caring for livestock" was about 6 billion Riels (1 percent). See Table 18 for a comparison with the 2009 estimates.

Table 17: Cost for raising livestock and poultry by zone, 2010.

Type of costs	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Billion Riels					
Feed for livestock-purchased	614	4	279	179	60	92
Hired labor caring for livestock	6	0	2	2	0	1
Veterinary services and medicine	24	0	12	5	2	4
Other costs	1	0	0	0	0	0
Total	645	4	293	186	63	98
	Percent					
Feed for livestock-purchased	95	100	95	96	95	94
Hired labor caring for livestock	1	0	1	1	0	1
Veterinary services and medicine	4	0	4	3	3	4
Other costs	0	0	0	0	0	0
Total	100	100	100	100	100	100

Table 18: Cost for raising livestock and poultry by zone, 2009.

Type of costs	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Billion Riels					
Feed for livestock - purchased	699	9	413	152	51	73
Hired labor caring for livestock	5	1	3	1	0	0
Veterinary services and medicine	29	1	14	8	2	4
Other costs	3	0	1	1	0	0
Total	736	10	432	162	54	78
	Percent					
Feed for livestock - purchased	95	87	96	94	96	94
Hired labor caring for livestock	1	7	1	1	0	1
Veterinary services and medicine	4	6	3	5	4	6
Other costs	0	0	0	0	0	0
Total	100	100	100	100	100	100

The household questionnaire included information on the value of livestock/poultry sold, consumed in the household or given away as gifts, etc. during past 12 months. In this section, the households also reported livestock and poultry currently owned and for each type of animal an estimated sales value was collected. For each type of animal an imputed value for household consumption, barter, gifts, charity, etc. and value of other than meat products (milk, butter, eggs, hide and skin, manure, etc.) was estimated.

Table 19 shows the value of livestock and poultry "income" in the past 12 months. The income includes sold, consumed, barter, gifts etc. Cattles stand for approximately 39 percent, pigs for 29 percent and chicken 18 percent.

Table 19: Value of livestock and poultry "income" in the past 12 months by zone, 2010.

Type of livestock and poultry	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Billion Riels					
Cattle	586	0	248	106	82	151
Buffalos	178	0	114	42	7	15
Horses, ponies	3	0	0	1	0	1
Pigs	433	2	249	80	61	42
Sheep	0	0	0	0	0	0
Goats	1	0	0	0	0	0
Chicken	274	0	124	80	36	33
Duck	28	0	14	10	2	3
Quail	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	1,504	2	748	319	189	246
	Percent					
Cattle	39	0	33	33	43	61
Buffalos	12	0	15	13	4	6
Horses, ponies	0	0	0	0	0	0
Pigs	29	75	33	25	32	17
Sheep	0	0	0	0	0	0
Goats	0	0	0	0	0	0
Chicken	18	22	17	25	19	14
Duck	2	3	2	3	1	1
Quail	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	100	100	100	100	100	100

Table 20: Value of livestock and poultry "income" in the past 12 months by zone, 2009.

Type of livestock and poultry	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Billion Riels					
Cattle	487	1	227	121	61	77
Buffalos	86	0	51	23	4	7
Horses, ponies	1	0	1	0	0	0
Pigs	448	7	187	181	32	42
Sheep	1	0	1	0	0	0
Goats	1	0	0	0	0	0
Chicken	247	4	111	75	28	30
Duck	54	0	37	11	4	2
Quail	0	0	0	0	0	0
Other	1	0	0	0	0	0
Total	1,325	11	615	412	128	159
	Percent					
Cattle	37	9	37	29	47	49
Buffalos	6	0	8	6	3	5
Horses, ponies	0	0	0	0	0	0
Pigs	34	59	30	44	25	26
Sheep	0	0	0	0	0	0
Goats	0	0	0	0	0	0
Chicken	19	32	18	18	22	19
Duck	4	0	6	3	3	1
Quail	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	100	100	100	100	100	100

4.5. Fish cultivation and fishery

The results show a total estimated number of households participating in fish cultivation and fishery. Out of the 3 million households in Cambodia about 1,680,000 households had engaged in fishing activities (58 percent). Table 21 shows the households by zone and Table 22 shows figures by sex of the household head and zone. Fishing activities were more common among male headed households, 62 percent of those households reported fishing activities as compared to 43 percent among female headed households. See both Tables for more details.

Table 21: Number of households with fishing activities by zone, 2010, in thousand.

Number of households	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
Households with fishing activities	1,680	2	739	532	142	265
All households	2,917	276	1162	888	213	379
Percent of all households	57.6	0.6	63.6	60.0	66.7	70.1

Table 22: Number of households with fishing activities by sex of household head and zone, 2010, in thousand.

Number of households	Cambodia		Phnom Penh		Plain		Tonle Sap		Coastal		Plateau/ Mountain	
	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men
Households with fishing activities	276	1,404	0	2	121	618	101	432	20	122	35	231
All house-holds	649	2,268	69	207	247	915	224	664	45	168	65	314
Percent of all house-holds	43	62	0	1	49	68	45	65	44	73	54	74

Table 23 shows that about 90,000 households raised fish in the last 12 months. About 65,000 households had their own pond for fish cultivation. See Table for more details.

Table 23: Number of households by practicing fish cultivation by zone, 2010, in thousand.

Activities	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Number of activities					
Have owned pond for fish cultivation	65	0	41	11	4	9
Have raised fish in the past 12 months	90	0	48	19	4	19

4.6. Forestry and hunting

In 2010 the total number of households participating in forestry and hunting activities was 2,165,000 which is about 74 percent of all households. Table 24 presents the households in forestry and hunting activities by zone and Table 25 presents these activities by sex of the household head and zone. As observed, out of all women and men headed households the respective percentage points of households with forestry and hunting activities was 68 and 76.

Table 24: Number of households with forestry and hunting activities by zone, 2010, in thousand

Number of households	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
Households with forestry and hunting activities	2,165	4	1,011	651	163	336
All households	2,917	276	1,162	888	213	379
Percent of all households	74	2	87	73	77	87

Table 25: Number of households with forestry and hunting activities by sex of the household head and zone, 2010, in thousand.

Number of households	Cambodia		Phnom Penh		Plain		Tonle Sap		Coastal		Plateau/ Mountain	
	Wom.	Men	Wom	Men	Wom	Men	Wom.	Men	Wom	Men	Wom.	Men
Households with forestry and hunting activities	441	1,725	1	3	200	811	150	502	33	129	57	279
All house-holds	649	2,268	69	207	247	915	224	664	44	168	65	314
Percent of all households	68	76	2	2	81	89	67	76	75	77	87	89

Table 26 shows the forestry and hunting activities by type of activities and zone. As indicated in 2010 the most common one was related to the firewood collection by households which was approximately 39 percent, and followed by the root crop, fruit and vegetable collection at 37 percent. For rattan, bamboo, palm leaves, other fibrous material collection, the figure indicated about 12 percent. See Table 27 for a comparison on the activities with the year 2010.

Table 26: Number of forestry and hunting activities by type of activity and zone, 2010, in thousand.

Activities	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Number of activities					
Sawing logs	32	0	9	5	1	16
Firewood	2,112	4	999	628	156	325
Wood for charcoal	61	0	4	35	7	17
Rattan, bamboo, palm leaves, other fibrous material	661	0	263	223	44	131
Palm juice	42	0	14	16	4	8
Root crops, fruit, vegetables	2,026	2	921	633	160	309
Herbs	238	0	41	134	9	54
Honey	90	0	16	18	8	48
Wild animals and birds	171	0	52	41	18	60
Other products	20	0	3	2	0	14
Total	5,454	6	2,322	1,736	406	982
	Percent					
Sawing logs	1	0	0	0	0	2
Firewood	39	66	43	36	39	33
Wood for charcoal	1	0	0	2	2	2
Rattan, bamboo, palm leaves, other fibrous material	12	0	11	13	11	13
Palm juice	1	0	1	1	1	1
Root crops, fruit, vegetables	37	34	40	37	39	32
Herbs	4	0	2	8	2	6
Honey	2	0	1	1	2	5
Wild animals and birds	3	0	2	2	5	6
Other products	0	0	0	0	0	2
Total	100	100	100	100	100	100

Table 27: Number of forestry and hunting activities by type of activity and zone, 2009, in thousand.

Activities	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Number of activities					
Sawing logs	83	0	9	37	6	31
Firewood	2,111	3	993	623	160	331
Wood for charcoal	50	0	6	35	2	7
Rattan, bamboo, palm leaves, other fibrous material	536	0	240	153	22	122
Palm juice	0	0	0	0	0	0
Root crops, fruit, vegetables	62	0	28	26	2	7
Herbs	1,501	2	688	487	83	240
Honey	232	0	74	73	14	72
Wild animals and birds	79	0	21	21	2	35
Other products	187	0	35	81	7	64
Total	18	0	3	5	0	10
	Percent					
Sawing logs	2	5	1	2	2	3
Firewood	43	57	47	41	54	36
Wood for charcoal	1	0	0	2	1	1
Rattan, bamboo, palm leaves, other fibrous material	11	0	12	10	7	13
Palm juice	1	0	1	2	1	1
Root crops, fruit, vegetables	31	38	33	32	28	26
Herbs	5	0	4	5	5	8
Honey	2	0	1	1	1	4
Wild animals and birds	4	0	2	5	2	7
Other products	0	0	0	0	0	1
Total	100	100	100	100	100	100

4.7. Annex of additional tables for agriculture

Table 28: Number of households with access to plot of land by zone, 2010, in thousand.

Plot of land	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
Total	2,090	26	928	642	175	319
One plot	908	24	389	293	58	144
2-5 plots	1,158	2	529	343	112	172
6 plots -	24	0	11	6	4	3
	Percent					
Total	100	100	100	100	100	100
One plot	44	93	42	46	34	45
2-5 plots	55	7	57	53	64	54
6 plots -	1	1	1	1	2	1

Table 29: Number of plots of land by ownership and zone, 2010, in thousand.

Category	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
Owned	3,596	19	1,606	1,055	369	547
Owned, rented out	227	8	119	70	17	12
Rented in	151	2	68	65	10	5
Free use of land	58	1	27	14	3	12
Other tenure	7	0	6	0	0	0
Total	4,039	30	1,827	1,205	400	577
			Percent			
Owned	89	63	88	88	92	95
Owned, rented out	6	25	7	6	4	2
Rented in	4	8	4	5	3	1
Free use of land	1	3	2	1	1	2
Other tenure	0	1	0	0	0	1
Total	100	100	100	100	100	100

Table 30: Area of agricultural land by land acquirement and zone, 2010.

Land acquirement	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
			Thousand hectares			
Given by the government or local authority	887	2	327	290	117	152
Inheritance or gift from relatives	1,080	4	416	368	60	232
Bought from relatives	115	2	39	37	18	18
Bought from non-relatives	583	14	157	333	25	55
Cleared land/occupied for free	320	0	83	92	11	134
Donated by friend	12	0	9	1	0	1
Rented in	153	1	55	83	7	7
Other means	18	1	6	7	0	4
Total	3,168	25	1,093	1,211	237	602
			Percent			
Given by the government or local authority	28	10	30	24	49	25
Inheritance or gift from relatives	34	17	38	30	25	39
Bought from relatives	4	10	4	3	8	3
Bought from non-relatives	18	58	14	28	11	9
Cleared land/occupied for free	10	1	8	8	5	22
Donated by friend	0	1	1	0	0	0
Rented in	5	3	5	7	3	1
Other means	1	2	1	1	0	1
Total	100	100	100	100	100	100

Table 31: Area of agricultural land by type of crop and zone, 2010.

Type of crop	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
			Thousand hectares			
Rice	2,214	10	791	852	189	372
Other crop	403	1	119	177	23	83
Fruit and nut trees	174	1	56	45	18	55
Rubber	41	0	40	0	0	0
Unknown crop	319	13	73	135	7	90
No crop grown	6	0	4	1	0	0
Total	3,156	25	1,083	1,210	237	602
			Percent			
Rice	70	39	73	70	80	62
Other crop	13	4	11	15	10	14
Fruit and nut trees	6	2	5	4	7	9
Rubber	1	0	4	0	0	0
Unknown crop	10	54	7	11	3	15
No crop grown	0	0	0	0	0	0
Total	100	100	100	100	100	100

Table 32: Average yield per square meter by main group of crop production, 2010. Kilograms.

Main group of crop production	Wet season	Dry season
Cereal harvested for grain	0.22	0.44
Tubers and leguminous plants	0.64	1.83
Industrial temporary crops	0.24	0.42
Vegetables	0.73	1.36
Fruits and nuts	0.22	0.28
Industrial permanent crops	0.30	0.26
Other	0.00	0.31
Total	0.25	0.56

Table 33: Gross output of livestock and poultry by zone, 2010, in thousand.

Type of livestock and poultry	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
Cattle	3,652	6	1,560	899	423	765
Buffaloes	1,032	0	489	343	82	119
Horses, ponies	31	0	28	2	0	1
Pigs	706	4	401	135	95	71
Sheep	1	0	0	0	0	1
Goats	2	0	1	0	0	1
Chicken	460	1	196	140	63	59
Duck	71	0	33	27	6	5
Quail	2	0	0	0	1	1
Other	0	0	0	0	0	0
Total	5,956	12	2,707	1,545	669	1,023
			Percent			
Cattle	61	50	58	58	63	75
Buffaloes	17	0	18	22	12	12
Horses, ponies	1	0	1	0	0	0
Pigs	12	34	15	9	14	7
Sheep	0	0	0	0	0	0
Goats	0	0	0	0	0	0
Chicken	8	12	7	9	9	6
Duck	1	2	1	2	1	1
Quail	0	0	0	0	1	0
Other	0	2	0	0	0	0
Total	100	100	100	100	100	100

Table 34: Cost of fish cultivation and fishing by zone, 2010, in Million Riels.

Cost of fish cultivation and fishing	Cambodia	Phnom Penh	Plain	Tonle Sap	Coastal	Plateau/ Mountain
	Million Riels					
Breeding stock for raising fish	11	0	7	3	1	0
Feed for raising fish	36	0	18	15	2	0
Hired labour	9	0	7	2	0	0
Ice	0	0	0	0	0	0
Repair and maintenance of nets and traps	82	0	35	28	4	14
Repair and maintenance of boat	10	1	5	3	0	1
Boat fuel	16	0	8	6	1	1
Boat rent	0	0	0	0	0	0
Cash rent for tank	2	0	2	0	0	0
Transport of fish to market	0	0	0	0	0	0
Service(technical assistance) received	0	0	0	0	0	0
Other cost item	8	0	1	7	0	0
Total	175	1	84	65	9	17
	Percent					
Breeding stock for raising fish	7	0	9	5	12	2
Feed for raising fish	20	0	22	23	21	2
Hired labour	5	0	8	4	0	0
Ice	0	0	0	0	1	0
Repair and maintenance of nets and traps	47	29	42	44	48	82
Repair and maintenance of boat	6	71	6	4	3	6
Boat fuel	9	0	10	9	13	7
Boat rent	0	0	0	0	1	0
Cash rent for tank	1	0	3	0	0	0
Transport of fish to market	0	0	0	0	1	0
Service(technical assistance) received	0	0	0	0	0	0
Other cost item	5	0	1	12	0	0
Total	100	100	100	100	100	100

5. Education

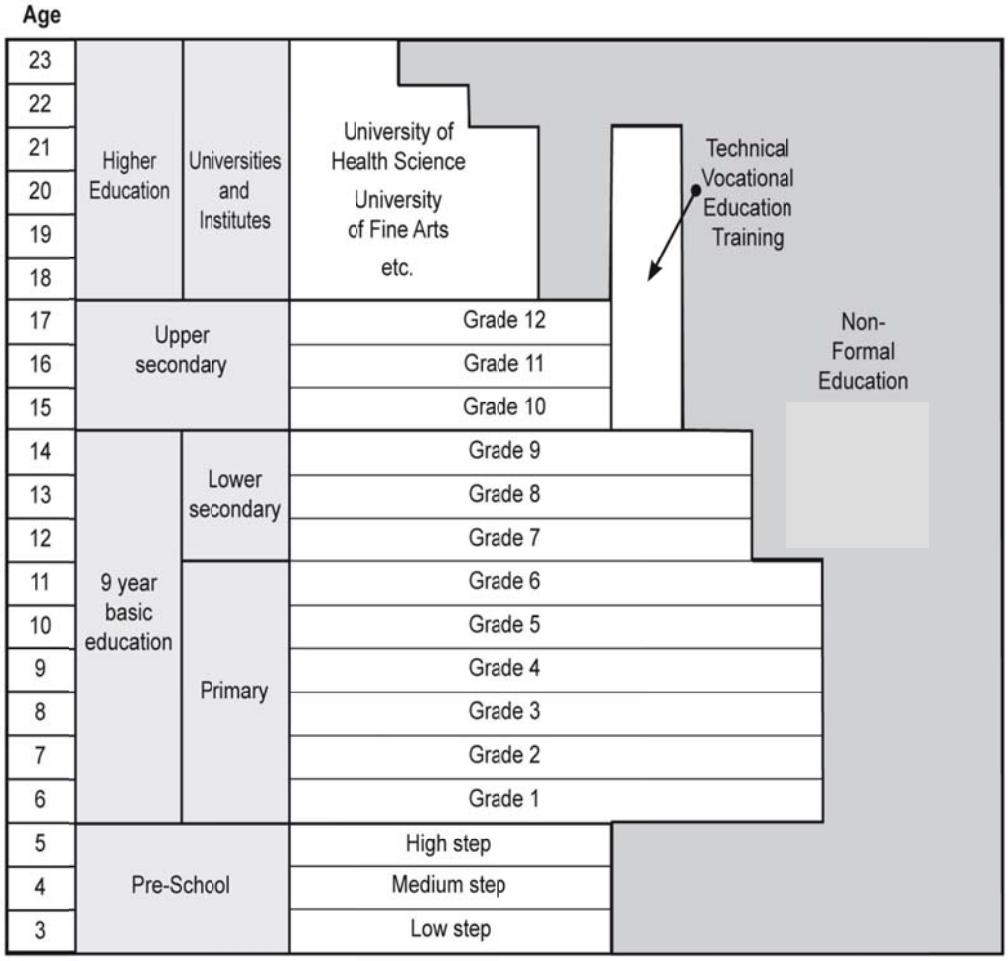
The CSES 2010 includes a module, which makes it possible to produce the indicators on education: Literacy, educational attainment, school attendance/enrolment, public and private school, and education expenditure. Similar questions have been asked in the previous runs of the survey.

The questions about education were posed to the household head. All household members aged 3 years and above were included. This is a change since the previous CSES where questions about education were put to persons age 5 and over. The household questionnaire is included in Appendix 4.

Official education data for Cambodia is mainly based on administrative information and organized in an Education Management Information System (EMIS). There are also educational modules in other surveys; The Population Census 1998 and 2008, Cambodia Demographic and Health Survey (CDHS) 2000, 2005, 2011, and Cambodia Inter-Censal Population Survey (CIPS) 2004.

Figure 1 shows the structure of the educational system in Cambodia

Figure 1: Education system in Cambodia



5.1. Literacy

There is a strong relationship between literacy and poverty. Thus, it is important to measure literacy. Literacy is defined as the ability to read and write a simple message in any language.

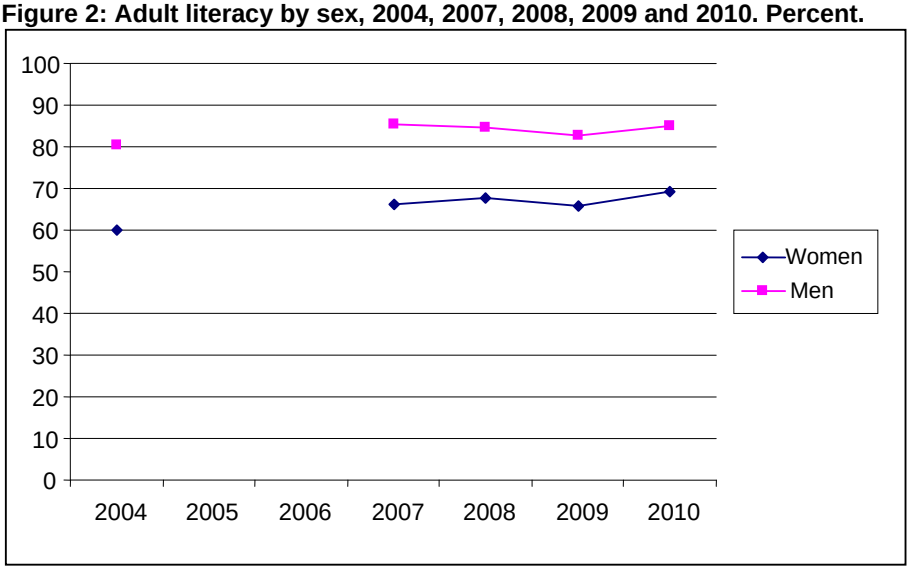
Adult literacy

The adult literacy rate is the share of the population aged 15 years and older who can both read and write a simple message in any language. The adult literacy rate for 2010 was estimated to about 77 percent for both sexes, 69 and 85 percent for women and men respectively. The adult literacy rate has increased somewhat since 2004. The increase is higher for women than for men. See Table 1 and Figure 2 for more details.

Table 1: Adult literacy by sex, 2004, 2007, 2008, 2009 and 2010. Percent.

Sex	CSES 2004	CSES 2007	CSES 2008	CSES 2009	CSES 2010
Women	59.9	66.0	67.7	65.9	69.1
Men	80.3	85.3	84.6	82.7	85.1
Total	69.4	75.1	75.6	73.9	76.7

Figure 2: Adult literacy by sex, 2004, 2007, 2008, 2009 and 2010. Percent.

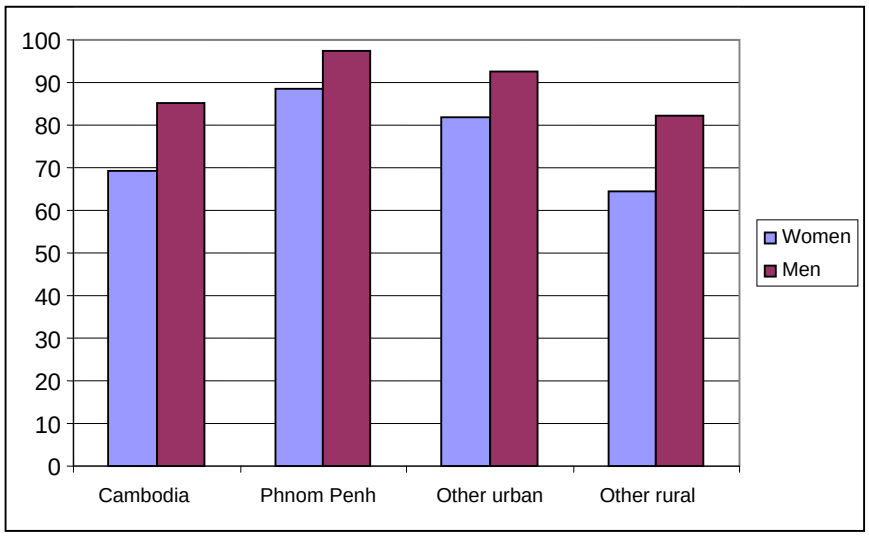


The adult literacy rate was highest in Phnom Penh with rates of about 89 percent for women and 97 percent for men. The adult literacy rates were in turn higher in other urban areas than other rural areas. The rates among men were higher than among women in all geographical areas. The gap between women and men was smaller in Phnom Penh than in the rural areas. See Table 2 and Figure 3 for more details.

Table 2: Adult literacy by geographical domain and sex, 2010. Percent.

Domain	Women	Men	Total
Cambodia	69.1	85.1	76.7
Phnom Penh	88.7	97.4	92.9
Other urban	81.7	92.5	86.6
Other rural	64.6	82.4	73.1

Figure 3: Adult literacy by geographical domain and sex, 2010. Percent.



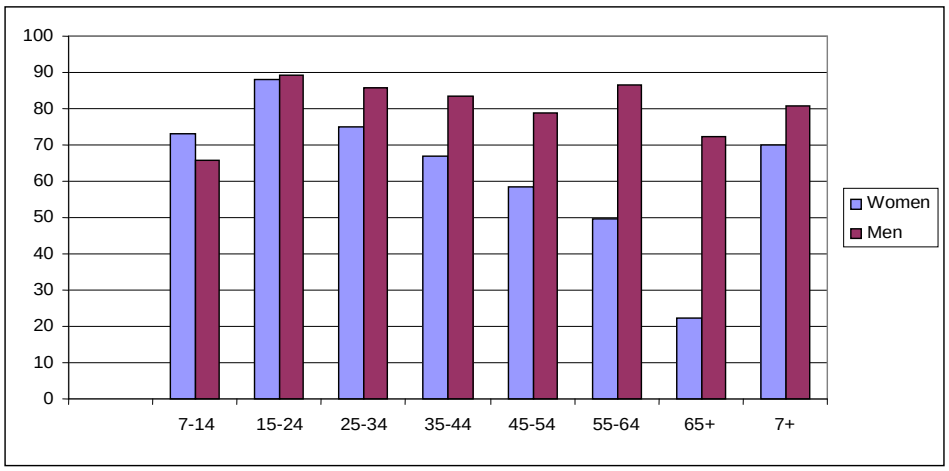
Literacy in different age groups

The literacy rates were highest in the age group (15-24 years) and lower in the older age groups. The literacy rate among women was lower than literacy rates among men in all age groups except in the age group (7-14 years) where literacy among women was higher than among men. The difference between men and women were small in the younger groups and bigger among the older groups. See Table 3 and Figure 4 for more details.

Table 3: Literacy by age group and sex, 2010. Percent.

Age group	Literacy for 2010		
	Women	Men	Total
7-14	73.2	65.9	69.5
15-24	88.2	89.4	88.8
25-34	74.9	85.7	80.2
35-44	66.8	83.5	74.6
45-54	58.5	79.0	67.6
55-64	49.8	86.4	65.0
65^{+}	22.4	72.5	42.9
7^{+}	69.9	80.9	75.2

Figure 4. Literacy by age group and sex, 2010. Percent



5.2. School attendance

Concepts and definitions

The Net Enrolment Ratio (NER) is the ratio of the number of children of the official school age in school to the number of children of official school age in the population. The NER can be calculated both from administrative (EMIS) and survey data; NER is reported through administrative data from schools and Net Attendance Rate (NAR) derived from household surveys or population censuses.

There does not seem to be a clear distinction between enrolment and school attendance in Cambodia. The terms are sometimes used as they mean the same thing. By enrolment we should mean the number of pupils reported by the schools in an annual school census (EMIS). By school attendance we mean that the person/head of the household answer the question(s) on school attendance in surveys.

There are a number of reasons why the data on enrolment and school attendance differs, sometimes there are large differences. One reason could be that a child may be enrolled in school but for a number of reasons not attending, e.g. because he or she helps with the family farm or business or because the school wants to boost enrolment numbers to receive more funds. The opposite is also possible; a child may attend school but is not enrolled e.g. due to incomplete school records.

In this report we follow earlier reports on education in Cambodia and use the terms enrolment and attendance as they mean the same thing.

Never attended school by geographical domain and sex

16 percent of the population aged 7 years and over had never attended school. There were big differences between geographical domains and sex. Only about 6 percent in Phnom Penh had never attended school, while about 19 percent in other rural areas had never attended school. 21 percent of women in Cambodia had never attended school compared to 11 percent of men. See Table 4.

Table 4: Persons aged 7 years and over never attended school by geographical domain and sex, 2010. Percent.

Domain	Men	Women	Total
Cambodia	11.0	21.3	16.3
Phnom Penh	2.3	8.5	5.5
Other urban	4.5	12.6	8.8
Other rural	12.9	24.1	18.7

Never attended school by age groups and sex

16 percent of population aged 7 years and over had never attended school. The share of women who had never attended school was higher than that for men in almost all age groups. Except in the age group (7-14 years) were the share for men were higher than for women. See Table 5.

Table 5: Persons aged 7 years and over never attended school by age groups and sex, 2010. Percent.

Age group	Men	Women	Total
7-14	6.2	3.5	4.9
15-24	7.6	8.7	8.2
25-34	12.1	18.6	15.4
35-44	14.4	26.1	20.6
45-54	17.1	35.9	27.6
55-64	12.0	42.4	29.8
65^{+}	25.1	73.8	53.9
7^{+}	11.0	21.3	16.3

Currently attending school

In Table 6, the rate of persons who are currently attending school was about 58 percent, 66 percent in Phnom Penh, 64 and 56 percent in other urban and other rural areas respectively. Being compared with different areas, the rates in other rural areas for women and men were lower than in Phnom Penh and other urban areas, whereas the rates in Phnom Penh reached the highest percentage points for both sexes (women and men).

Table 6: Persons currently attending school by geographical domain and sex, 2010. Percent.

Domain	Women	Men	Total
Cambodia	56.5	59.2	57.9
Phnom Penh	60.3	72.3	66.2
Other urban	58.6	68.5	63.6
Other rural	55.8	56.6	56.2

Table 7 shows that the rate of persons who are currently attending school aged (6-24 years) was about 58 percent for both sexes, followed by about 59 and 57 percent for men and women respectively. The age group (6-14 years) were among the persons who are in the highest rate in currently attending school.

Table 7: Persons currently attending school by age groups and sex, 2010. Percent.

Age group	Women	Men	Total
6-14	88.7	86.0	87.3
15-24	27.4	35.0	31.3
6-24	56.5	59.2	57.9

Net attendance/enrolment

The net attendance rate in primary school for both sexes (children aged from 6 to 11 years) has increased from about 77 percent to 86 percent in the last 6 years (2004-2010). It is also observed that the increase on school attendance during the same period in respect of women is higher than men. The gap has however reduced in 2009 compared to 2008 for women and men. See Table 8 and Figure 5 for more details.

Table 8: Net attendance rates in primary school by sex, 2004, 2007, 2008, 2009 and 2010. Percent.

Sex	CSES 2004	CSES 2007	CSES 2008	CSES 2009	CSES 2010
Women	75.9	82.1	83.9	82.1	87.9
Men	77.2	81.0	83.4	80.2	83.4
Total	76.6	81.5	83.6	81.1	85.6

Figure 5: Net attendance rates in primary school by sex, 2004, 2007, 2008, 2009 and 2010. Percent.

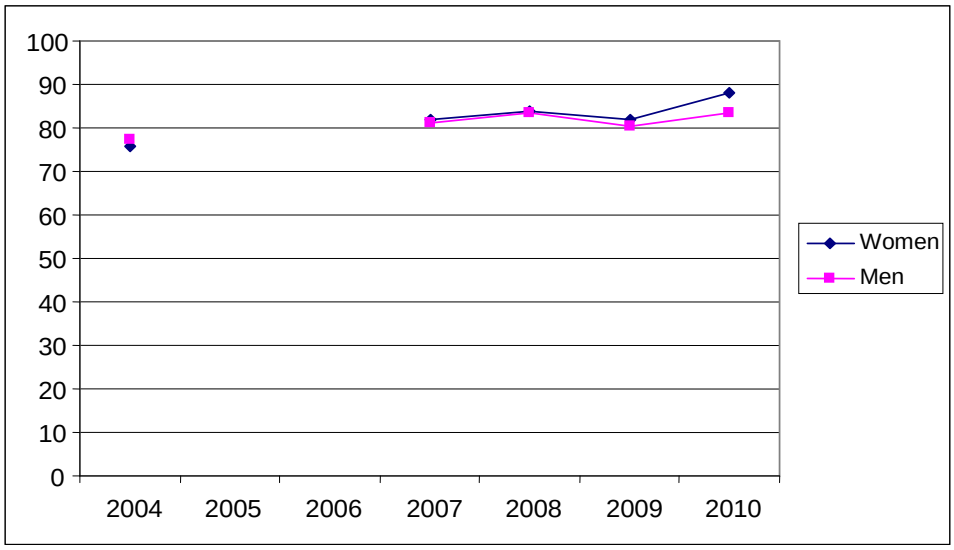


Table 9 shows net attendance rates in primary school for children aged (6 -11 years). In term of rate shown in the Table, the net enrolment rates for women were higher than for men in overall Cambodia, other urban and other rural areas, with the exception of Phnom Penh, the rate is higher for men. For both sexes, the rate is slightly higher in other urban areas than in Phnom Penh and other rural areas.

Table 9: Net attendance rates in primary school by geographical domain and sex, 2010. Percent.

Domain	Men	Women	Total
Cambodia	83.4	87.9	85.6
Phnom Penh	92.4	86.3	89.3
Other urban	89.6	91.0	90.2
Other rural	81.9	87.7	84.8

The net enrolment/attendance rates in lower secondary school were very much lower than in primary school. In Phnom Penh more men and women continued into lower secondary school to a greater extent compared to other urban and other rural areas. In general, in Cambodia the men have highly attended lower secondary school, whereas the rate for women is still lower. See Table 10.

Table 10: Net attendance rate in lower secondary school by geographical domain and sex, 2010. Percent.

Domain	Men	Women	Total
Cambodia	31.8	29.7	30.8
Phnom Penh	58.5	59.1	58.8
Other urban	41.7	38.2	40.0
Other rural	28.5	26.4	27.4

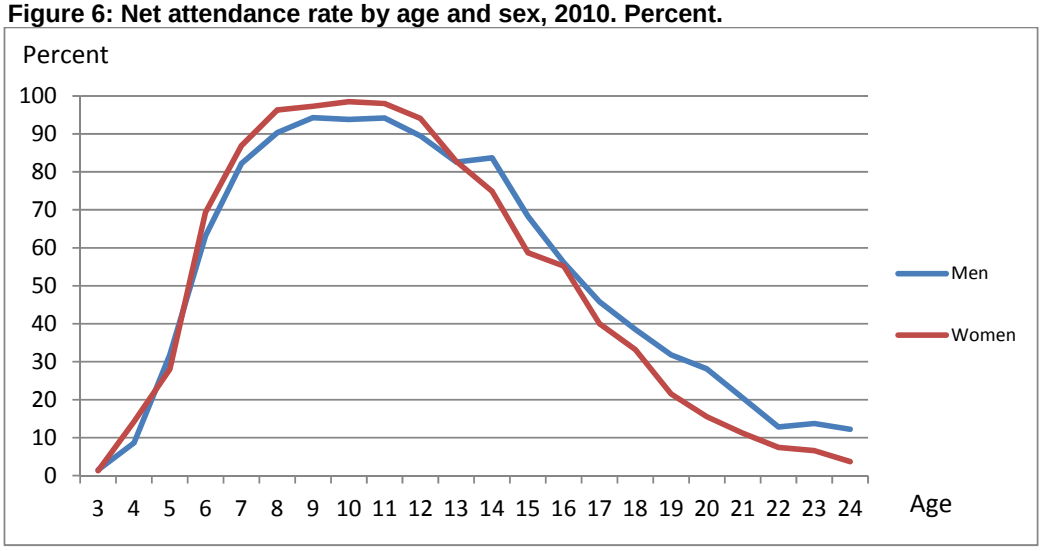
In Table 11 the net enrolment/attendance rates in upper secondary school differ significantly between Phnom Penh where nearly 40 percent attended upper secondary and other rural where only 14 percent were attending upper secondary. In other urban less than one out of three continued to upper secondary school.

Table 11: Net attendance rate in upper secondary school, by geographical domain and sex, 2010. Percent.

Domain	Men	Women	Total
Cambodia	17.5	17.7	17.6
Phnom Penh	39.9	38.5	39.2
Other urban	29.1	28.8	29.0
Other rural	14.0	14.1	14.1

The net enrolment/attendance rates increased and were highest among children who were 10 and 11 years, see Figure 6. More than 90 percent attended school in the age of 8 to 12 years old. Beyond the age of 13 years, the enrolment rates declined rapidly confirming that smaller rates of children continued from primary to secondary and post-secondary level of education and training. Up to the age 13 years women and men reached almost the same enrolment rates, then the women enrolment rates drop and were lower than the men.

Figure 6: Net attendance rate by age and sex, 2010. Percent.



Public and private school

Only about 0.7 to 3.6 percent of persons attending school from primary school to upper secondary schools studied at private school, see Table 12. There were large differences between primary and secondary education and higher education. In higher education 69.7 percent of women and 67.6 percent of men went to private school. This indicates that most private educational institutions were in higher education.

Table 12: Attending private schools among persons who are currently attending school by current grade and sex, 2010. Percent.

Private school	Women	Men	Total
Primary	1.0	1.0	1.0
Lower secondary	0.8	0.7	0.8
Upper secondary-technical/vocational pre-secondary diploma/certificate	1.7	3.6	2.8
Technical/vocational post-secondary diploma/certificate-Undergraduate/graduate	69.7	67.6	68.3

Private lessons

About 28 percent of the persons attending school took private lessons after school, see Table 13. There were large differences by level of education, but the gender differences were small. Private lessons were most common in upper secondary school, 69.8 percent for women and 64.6 percent for men.

Table 13: Persons who are taking private lessons after school by current grade and sex, 2010. Percent.

School	Women	Men	Total
Primary	12.6	14.0	13.3
Lower secondary	50.3	46.4	48.2
Upper secondary-technical/vocational pre-secondary diploma/certificate	69.8	64.6	66.9
Technical/vocational post-secondary diploma/certificate-Undergraduate/graduate	47.9	46.6	47.1
Total	27.1	28.6	27.9

Never attended school

More than 16 percent of the population aged 7 years and over had never attended school. There were big differences between different geographical domains and between men and women. Only about 6 percent in Phnom Penh had never attended school, while about 19 percent in other rural areas had never attended school. More than 21 percent of women in Cambodia had never attended school compared to 11 percent of men. See Table 14.

Table 14: Persons aged 7 years and over who never attended school by geographical domain and sex, 2010. Percent.

Domain	Men	Women	Total
Cambodia	11.0	21.3	16.3
Phnom Penh	2.3	8.5	5.5
Other urban	4.5	12.6	8.8
Other rural	12.9	24.1	18.7

More than 16 percent of the population aged 7 years and over had never attended school. The proportion of women who have never attended school were higher in almost all age groups, except for age group 7-14 years where the proportion of men were higher than women. See Table 15 for more details.

Table 15: Persons aged 7 years and over who never attended school by age group and sex, 2010. Percent.

Age group	Men	Women	Total
7-14	6.2	3.5	4.9
15-24	7.6	8.7	8.2
25-34	12.1	18.6	15.4
35-44	14.4	26.1	20.6
45-54	17.1	35.9	27.6
55-64	12	42.4	29.8
65^{+}	25.1	73.8	53.9
7^{+}	11	21.3	16.3

Reasons for not attending school

The question on reasons for not attending school was asked to persons below 18 years, who were not attending school. 33 percent of the women and 26 percent of the men responded "Must contribute to household income". About 15 percent for women and 13 percent for men gave the reason that they were too poor. 12 percent of women and 15 percent of men responded they were too young. See Table 16 below.

Table 16: Reasons for not attending school among persons aged (6-17 years) who are not attending school by sex, 2010. Percent.

Reasons for not attending school	Women	Men
Don't want to	8	17
Did not do well in school	10	12
No suitable school available/school is too far - No teacher/Supplies	6	8
High cost of schooling	-	-
Must contribute to household income	33	26
Must help with household chores	11	6
Too poor	15	13
Due to disability - Due to long term illness (over 3 months)	3	3
Too young	12	15
Other	2	0
Total	100	100

Non-formal education

About 8 percent of persons aged (6-24 years) attended non formal class. The share of the age group (15-24 years) was higher than for the age group (6-14 years). For all groups the share of women was lower than for men. See Table 17.

Table 17: Currently attending non-formal school by age group and sex, 2010. Percent.

Age group	Women	Men	Total
6-14	5.0	6.6	5.8
15-24	8.4	9.5	9.0
6-24	6.8	8.1	7.5

Table 18 shows the percentages of persons aged (6-24 years) who attended non-formal class by sex. Among the classes, about 94 percent for women and men respectively studied foreign languages, followed by vocational training about 4 and 2 percent as well as literacy programs and other trainings about 2 and 3 percent.

Table 18: Persons aged (6-24 years) who are currently attending non-formal class by sex, 2010. Percent.

Type of non-formal class	Women	Men	Total
Foreign languages	94	94	94
Vocational training	4	2	3
Literacy programs - Others	2	3	3
Total	100	100	100

5.3. Educational attainment

Information on educational attainment in CSES 2010 was collected from persons aged 3 years and over. The results from CSES 2010 are presented for the population from 15 years and over.

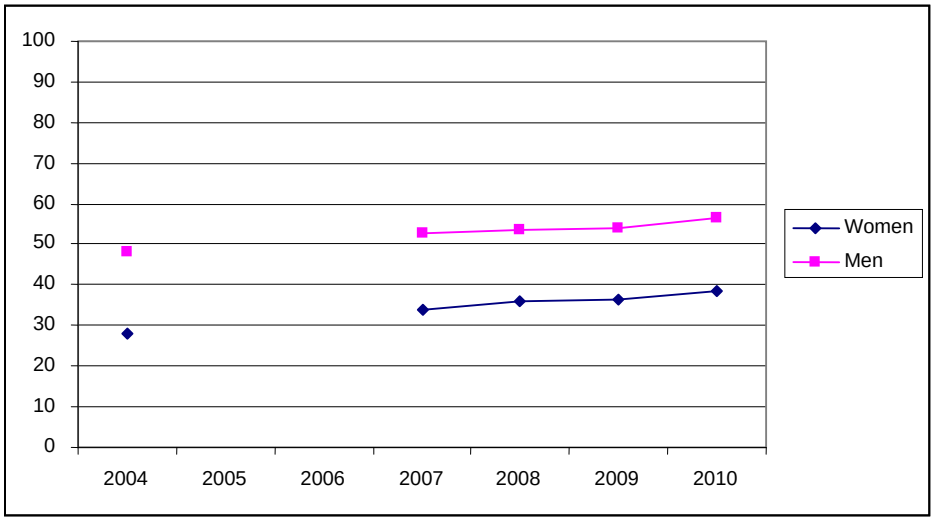
Completed primary school

The share of the population who at least have completed primary school increased since 2004. More men than women had at least completed primary school and the gap between women and men was still big. See Table 19 and Figure 7 for more details.

Table 19: Persons aged 15 years and over with at least completed primary school by sex, 2004, 2007, 2008, 2009 and 2010. Percent.

Sex	CSES 2004	CSES 2007	CSES 2008	CSES 2009	CSES 2010
Women	28.0	33.8	35.9	36.2	38.4
Men	48.0	52.7	53.6	54.1	56.5
Total	37.3	42.7	44.1	44.7	47.0

Figure 7: Persons aged 15 years and over with at least completed primary School by sex, 2004, 2007, 2008, 2009 and 2010. Percent.

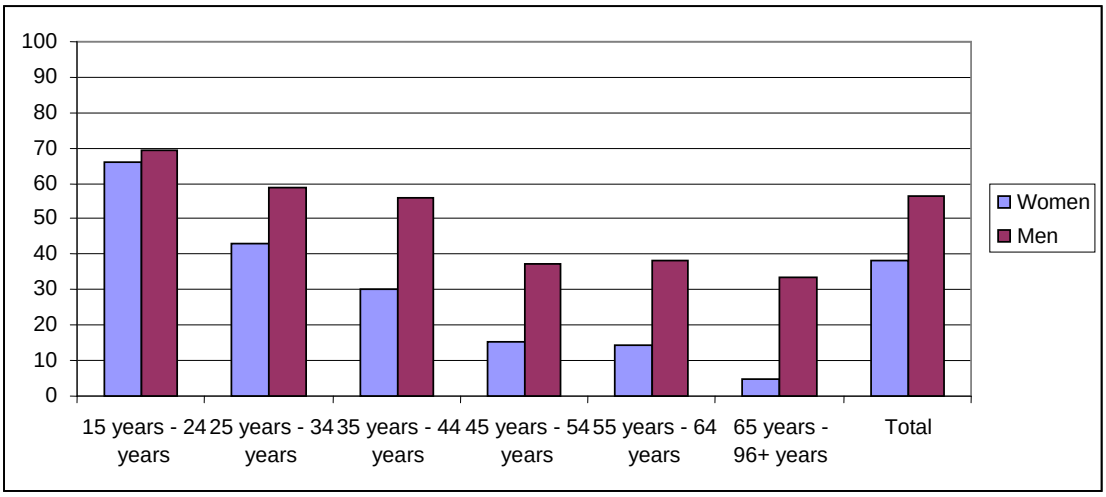


Having at least completed primary education was most common in the age group (15-24 years). The share that had at least completed primary education was lower among all older age groups. More men than women had at least completed primary education. The difference between women and men was smallest in the youngest age group, women 66.2 percent and men 69.6 percent, and biggest in the oldest age group. See Table 20 and Figure 8 for more details.

Table 20: Persons with at least completed primary school by age group and sex, 2010. Percent.

Age group	Women	Men	Total
15-24	66.2	69.6	67.9
25-34	42.9	58.7	50.6
35-44	30.2	56.2	42.3
45-54	15.5	37.2	25.1
55-64	14.3	38.1	24.2
65-96^{+}	4.9	33.3	16.5
15^{+}	38.4	56.5	47.0

Figure 8: Persons with at least completed primary school by age group and sex, 2010. Percent.



Educational attainment

25 percent of persons aged 25 years and over had no or only little education, women 33 percent and men 15 percent. Higher shares of men than women completed secondary and post-secondary education. See Table 21.

Table 21: Persons aged 25 years and over by educational attainment and sex, 2010. Percent.

Educational attainment	Women	Men	Total
None or only some education	33	15	25
Primary school not completed	40	36	38
Primary school completed	16	25	20
Lower secondary completed	6	14	10
Upper secondary completed	2	7	5
Post-secondary education	1	4	2
Other	-	0	0
Total	100	100	100

There were large differences in educational attainment between geographical domains. Educational attainment in secondary and post-secondary level was much higher in Phnom Penh than in other urban and other rural areas. See Table 22.

Table 22: Persons aged 25 years and over by educational attainment and geographical domain, 2010. Percent

Educational attainment	Phnom Penh	Other urban	Other rural	Cambodia
None or only some education	8	14	29	25
Primary school not completed	23	33	41	38
Primary school completed	23	25	19	20
Lower secondary completed	18	16	8	10
Upper secondary completed	13	9	3	5
Post-secondary education	14	3	0	2
Other	-	0	-	0
Total	100	100	100	100

5.4. Educational expenses

The amounts incurred as educational expenses during the last school year for each household member attending the formal school system, taking private lessons after school or following non-formal classes were recorded separately. The total expenses include the following seven categories:

- School fees
- Tuition
- Text books
- Other school supplies
- Allowances for children studying away from home
- Transport cost
- Gift to teachers, building funds etc.

The average total educational expenses was estimated to about 384,400 Riels per school year, see Table 23. There were large differences by level. In primary schools, which had the highest share of students, the cost was about 146,000 Riels in average. For education above secondary school, the cost was between 1.4 and 1.8 million Riels in average. At higher levels one find more school fees and tuition expenses which could explain the large differences in cost between different levels.

Table 23: Average annual expenses by level, 2010. Thousand Riel.

Educational level	CSES 2004	CSES 2007	CSES 2008	CSES 2009	CSES 2010
Pre-primary	37	58	41	70	113
Primary	43	60	75	107	146
Lower secondary	184	182,209	252	277	404
Upper secondary	423	419	520	659	738
Technical/vocational	1,254	1,402	1,256	2,007	1,351
Undergraduate/graduate	2,137	1,854	2,310	2,754	2,786
Other	1,451	-	-	-	-
Total	148	170	224	324	384,365

As the composition of education was very different in different geographical domains it follows that the average expenses differ a lot. Phnom Penh had a higher share in levels above primary school and more private schools. In Table 24 the average annual expenses are presented for Phnom Penh, other urban and other rural areas. There were large differences in expenses between Phnom Penh and the rest of Cambodia.

Table 24: Average annual expenses by geographical domains, 2010. Thousand Riel.

Domain	Average annual expenses
Phnom Penh	1,218
Other urban	598
Other rural	238

According to Table 25 the average annual expenses for men in the field of education is higher than women's expenses. The annual difference is about 87,000 Riels.

Table 25: Average annual expenses by sex, 2010. Thousand Riel.

Sex	Average annual expenses
Women	339
Men	425

6. Labour force

The special demographic phenomena that Cambodia experienced in the seventies and in the eighties give Cambodia a unique labour market in the 2000s. Between the population census in 1998 and 2008 the population increased from 11.4 million to 13.4 million, an average annual increase of 1.5 percent[1].

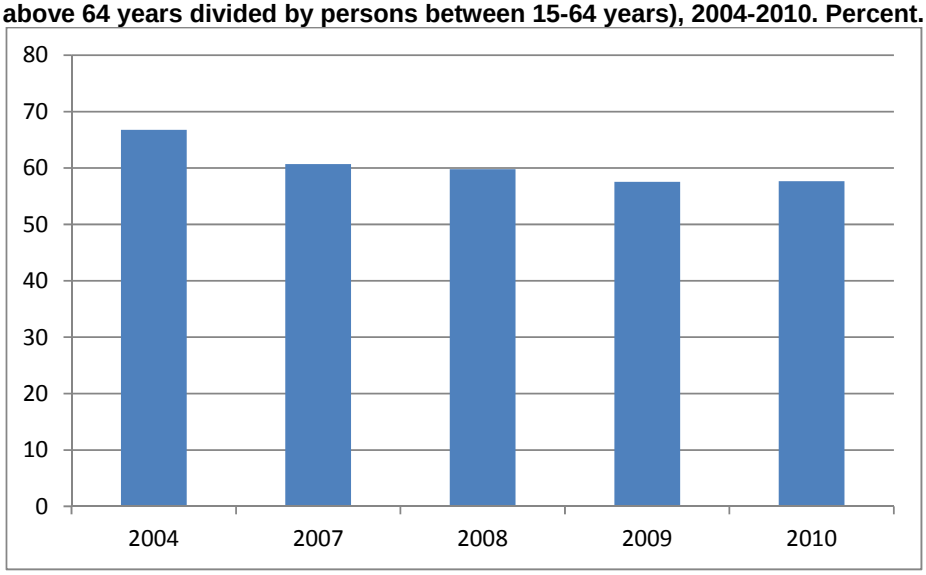
According to the Population Census 2008 the dependency ratio was 61 percent. The dependency ratio is defined as the number of children (0-14 years) and elderly (65 and over) divided by the number of people aged (15-64 years), i.e. the dependency ratio is a ratio between those typically not in the labour force (the dependent part) and those typically in the labour force.

Since 2004 a recurrently Cambodia Socio-Economic Survey has been produced by NIS including statistics concerning the labour market. The CSES has been produced 2004, 2007, 2008, 2009 and 2010. Every fifth year the CSES is conducted with a large sample, approximately 12 000 households. This relates to CSES 2004 and 2009. For 2010 the sample was smaller, approximately 3 600 households, which was the same sample size as for CSES 2007 and 2008.

Cambodia has a very young population. In 2010 almost one third (32 percent) of the population was below 15 years according to CSES data. This is a slight decrease compared with the situation in 2004 when approximately 36 percent of the population were below 15 years.

According to the CSES the working age population within the age group (15-64 years) increased with almost 1.3 million persons from 2004 until 2010. An annual average of more than three percent. The increase of the working age population has resulted in a decreasing dependency ratio. It has decreased from 67 percent in 2004 to 58 percent in 2010.

Figure 1: The dependency ratio (the number of persons below 15 years or above 64 years divided by persons between 15-64 years), 2004-2010. Percent.



In this report results on labour force participation (economically active) are presented for the years 2004, 2007, 2008, 2009 and 2010. The labour force consists of those with employment and those who are unemployed (without a job, seeking and available for work). Since CSES 2009 the population (15-64 years) is adopted as the population of working age since international comparison often focus on

[1]National Institute of Statistics (2009). General Population Census of Cambodia 2008, National Report on Final Census Results, August, 2009.

this age group. Earlier CSESs have focused on the age 10 years and over. Being able to compare the CSES (2004-2008) has been recompiled according to the age group (15-64 years).

Results are compared not only for Cambodia as a total but also for three geographical domains; Phnom Penh, Other urban and other rural broken down by gender and age groups.

Results on the economically active population based on the Cambodian Population Census 2008 were released in September 2009. The results in this report are different from the results presented in the census report due to different concepts for measuring economic activity (see Section 6.1 below).

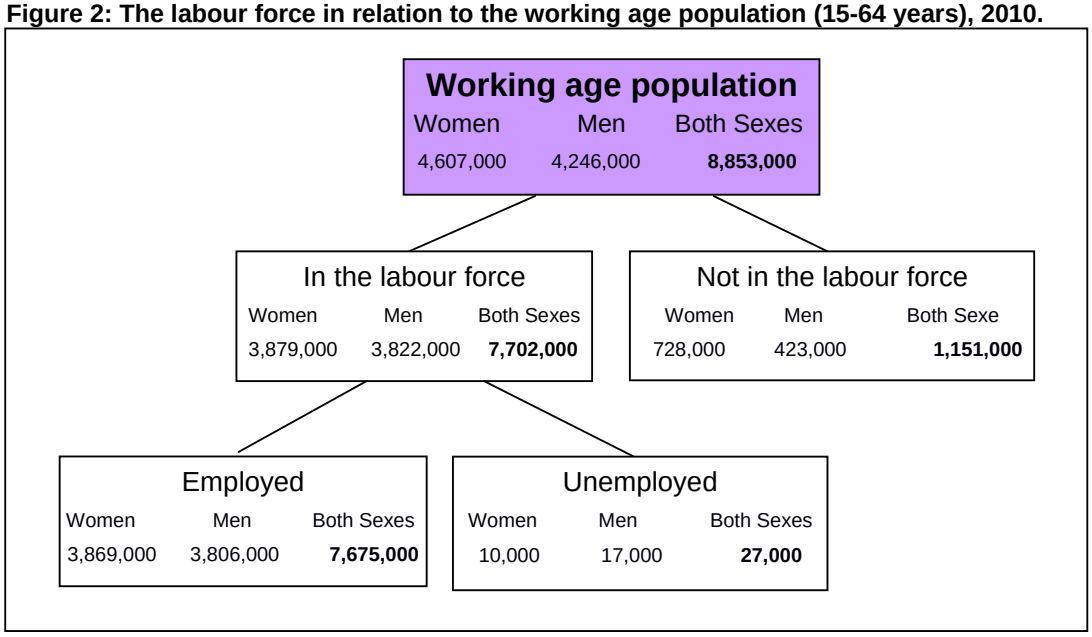
In separate section the child labour is described 5 year and above.

Definitions

See Section on Definitions and Classifications which is attached in Chapter 10 (About the Cambodia Socio-Economic Survey).

Figure 2. Below shows the relation between the working age population, in the labour force (economically active) and not in the labour force (economically inactive).

Figure 2: The labour force in relation to the working age population (15-64 years), 2010.



6.1. Labour force (currently active population)

In Table 1 below, the labour force participation rate, i.e. the labour force in relation to the working age population (15-64 years) is presented. The table also shows the employment rate and unemployment rate. Employment rate is the share of the employed in relation to the working age population and unemployment rate is the unemployed in relation to the labour force.

The labour force participation rate in Cambodia was about 87 percent, about 84 percent for women and about 90 percent for men. These rates were higher in other rural areas than in Phnom Penh and other urban areas. About 90 percent of the total population in other rural areas were in the labour force compared to about 71 percent in Phnom Penh and about 82 percent in other urban areas.

Table 1 also shows the differences in participation rates between women and men. More men than women are in the labour force in all geographical domains. The gender difference seems to be somewhat larger in Phnom Penh compared to the other domains.

The employment rate in relation to the working age population (15-64 years) was about 87 percent. In all Cambodia the differences between women and men was about 6 percentage points with an

employment rate of about 84 percent for women and about 90 percent for men. Other rural areas had the highest employment rate with about 90 percent, followed by other urban areas with about 82 percent and Phnom Penh with 70 percent. The employment rate was higher for men than for women in all geographical domains.

According to the international definition the total unemployment rate in Cambodia is very low. About 0.3 percent of the labour force was unemployed in 2010. In Phnom Penh and other urban areas the unemployment rates are somewhat higher than in other rural areas, see Table 1.

Table 1: Population and labour force (15-64 years) by sex and geographical domain, 2010. In thousand people and in percent.

Labour force and sex	Cambodia	Phnom Penh	Other urban	Other rural
Total population	13,958	1,363	1,436	11,158
Total working age population	8,853	981	946	6,926
Labour force	7,702	693	776	6,233
Labour force participation rate				
Both Sexes	87.0	70.7	82.0	90.0
Women	84.2	64.8	79.3	87.6
Men	90.0	76.9	85.3	92.5
Employment rate				
Both Sexes	86.7	70.1	81.7	89.7
Women	84.0	64.3	78.9	87.5
Men	89.6	76.4	84.8	92.2
Unemployment rate				
Both Sexes	0.3	0.5	0.4	0.3
Women	0.2	0.5	0.4	0.2
Men	0.4	0.5	0.4	0.4

Table 2 shows the labour force participation rate for women and men in different age groups. The highest rates for both women and men are in the age group (35-44 years) with about 91 percent and 98 percent respectively.

In the youngest age groups (15-19 years) women and men have about the same rates, about 73 percent. From 20 years and over the participation rates for women are lower than for men in all age groups. The largest difference between women and men is in the age group (25-34 years) where about 87 percent of the women and about 97 of the men are in the labour force.

Table 2: Labour force participation rate (15-64 years) by age group and sex, 2010. Percent.

Age group	Women	Men	Both Sexes
Total (15-64)	84.2	90.0	87.0
15-19	73.2	74.2	73.7
20-24	83.3	86.4	84.9
25-34	87.4	97.1	92.2
35-44	91.2	98.2	94.5
45-54	88.7	96.7	92.2
55-64	77.2	87.4	81.4
Of which			
15-24	77.8	79.5	78.7

In the figure below results on labour force participation (age groups 15-64 years) are presented for the years 2004, 2007, 2008, 2009 and 2010. There is a significant increase in the participation rate for women over the period.

Figure 3: Labour force participation rate age group (15-64 years) and sex, 2004-2010. Percent.

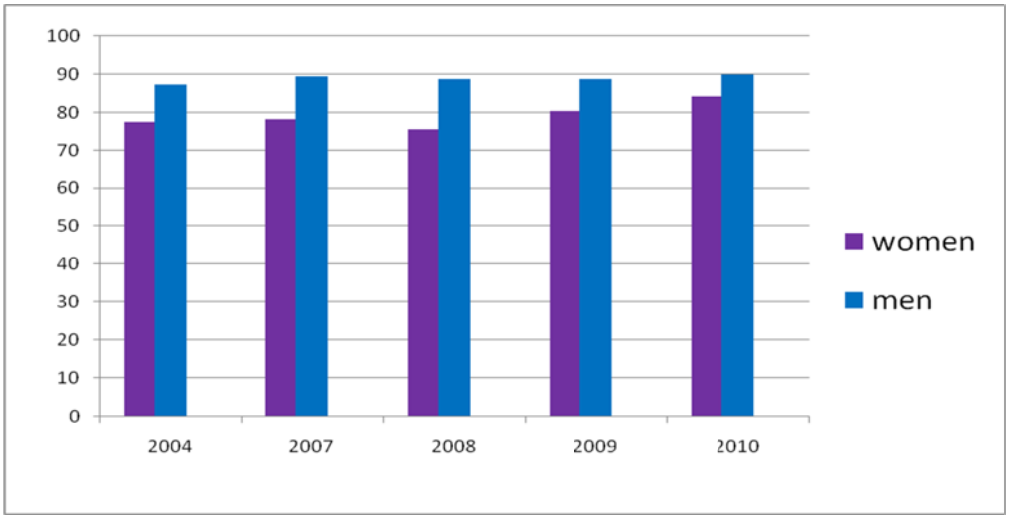


Table 3 shows the labour force participation rate in different age groups by geographical domains. The highest rates in all three geographical domains are in the age group (35-44 years). In Phnom Penh about 86 percent are in the labour force in that age group while the proportions in other urban areas and in other rural areas are about 93 percent and 96 percent.

The geographical differences are large in the young age groups. In the age group (15-19 years) about 80 percent in the other rural areas are in the labour force, compared to Phnom Penh with about 34 percent.

Table 3: Labour force participation rate (15-64 years) by age group and geographical domain, 2010. Percent.

Age group	Phnom Penh	Other urban	Other rural
Total (15-64)	70.7	82.0	90.0
15-19	33.8	58.1	80.0
20-24	64.9	77.6	89.2
25-34	84.0	90.0	93.9
35-44	86.1	92.8	95.8
45-54	79.2	92.8	93.7
55-64	59.1	77.6	85.0
Of which			
15-24	50.7	66.8	84.0

In Table 4 the labour force participation rates are presented by age group, sex and geographical domain. Women in Phnom Penh have lower participation rates in all age groups compared to other urban and other rural areas. The same pattern cannot be seen for men.

Men have higher labour force participation rates than women in almost all age groups and geographical domains. The exception is in Phnom Penh where women have somewhat higher labour force participation rates in the age groups (15-19 years) and (20-24 years).

Table 4: Labour force participation rate (15-64 years), by age group, geographical domain and sex, 2010. Percent.

Age group	Phnom Penh		Other urban		Other rural	
	Women	Men	Women	Men	Women	Men
Total (15-64)	64.8	76.9	79.3	85.3	87.6	92.5
15-19	42.5	25.4	62.5	52.8	78.2	81.6
20-24	68.7	60.7	76.4	79.0	87.0	91.4
25-34	75.7	92.5	83.6	97.2	90.1	97.9
35-44	72.8	98.5	87.3	99.0	94.0	98.0
45-54	63.8	97.2	89.5	96.5	91.3	96.7
55-64	47.5	77.3	75.0	81.7	81.8	89.5
Of which						
15-24	57.1	44.0	68.6	64.8	82.0	85.7

6.2. Education level of the labour force

The education level of the labour force is presented in Table 5 below. The table shows for each age group the share of the labour force with the different levels of education.

According to educational statistics there is a steady increase in school enrolment rates which over time decreases the share of the Cambodian labour force with no or only some education. This effect can be seen by comparison over age groups of the share of labour force with none or only some education. About 18 percent of the labour force (i.e. 15-64) has none or only some education, but in the youngest age group the share is only 8 percent while in the eldest age group the share is about 30 percent.

Table 5: Education level of the labour force by age group, 2010. Percent distribution over education levels.

Age group	None or only some education	Primary school not completed	Primary school completed	Lower secondary completed	Upper secondary completed	Post secondary education	Don't know	Total
Labour force (thousand)	1,363	2,712	2,040	1,022	402	161	2	7,702
Total 15 -64	17.7	35.2	26.5	13.3	5.2	2.1	0.0	100
15-19	8.0	27.9	41.1	21.1	1.9	0.0	-	100
20-24	10.7	25.9	33.0	18.4	9.6	2.4	-	100
25-34	15.6	33.9	26.2	13.2	7.0	4.2	0.0	100
35-44	21.1	35.9	22.0	11.8	6.6	2.5	0.1	100
45-54	27.7	47.2	17.0	5.4	1.8	0.9	-	100
55-64	29.5	46.6	14.9	6.8	1.7	0.4	0.1	100
of which								
15-24	9.3	27.0	37.2	19.8	5.5	1.2	-	100

Table 6 presents for each age/sex group the share of the labour force with the different levels of education. Looking at the total labour force (i.e. 15-64) and comparing women and men it can be seen that the share with none or only some education is significantly higher among the women (about 23 percent for women vs. about 12 percent for men). This pattern can be seen in all age groups except the youngest group (15-19) the share is actually lower for the women. Over the age groups there is also a pattern of increasing gender differences; the difference is much smaller in the lower age groups than in the higher (and, as we saw, in the youngest group the difference is even reversed). These differences are the effects of increasing school enrolment (as discussed above) and of decreasing gender difference in school enrolment.

The proportion of the labour force with post secondary education is small, overall just about one percent for women and three percent for men. Just as for the lowest education level a clear pattern over age groups and sex can be seen, indicating better education and smaller gender differences in the younger age groups. (The youngest age group (15-19) should not be included in the comparison as very few in that age group have completed post secondary education).

Table 6: Education level of the labour force by age group and sex, 2010. Percent distribution over education levels.

Age group	None or only some education		Primary school not completed		Primary school completed		Lower secondary completed		Upper secondary completed		Post secondary education	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Total (15-64)	23.3	12.0	38.0	32.4	24.1	28.9	10.1	16.5	3.4	7.1	1.2	3.0
15-19	6.2	9.8	27.0	28.8	45.0	37.4	19.5	22.5	2.3	1.5	-	0.1
20-24	13.8	7.9	28.0	23.8	31.5	34.5	16.4	20.3	8.0	11.0	2.4	2.5
25-34	19.3	12.1	38.2	29.8	26.2	26.1	9.4	16.8	4.0	9.8	2.8	5.4
35-44	27.6	14.1	42.6	28.9	17.6	26.6	8.0	16.0	3.6	9.8	0.6	4.5
45-54	37.0	16.9	48.3	45.8	10.8	24.2	3.1	8.0	0.5	3.4	0.2	1.6
55-64	44.6	10.7	43.1	51.1	8.4	22.9	2.6	12.0	1.0	2.5	0.4	0.5
Of which												
15-24	9.8	8.9	27.5	26.5	38.5	36.0	18.0	21.4	5.1	6.0	1.1	1.2

6.3. Employment status

In CSES 2010[2] persons who currently worked the past seven days in contribution for their own household, that is operating her or his own enterprise (e.g. farmers cultivating their own land, small shop keeper or small restaurants) without payment or income of any kind are classified as own account worker or self-employed. The reclassification mainly affects women.

Table 7 shows the employed population (15-64 years) by employment status for the years 2004, 2009 and 2010. The employment status is in the tables are based on main occupation. The total employed population in working age (15-64 years) has increased over the years, both for women and men.

The share of paid employees increased steadily over the period. It may be related to extension/increased demand for labour in garment factory and other service sector. Concerning the new classification in CSES 2010 of own account worker/self-employed, the share of women in this employment status has increased substantially, from about 34 percent in 2004 to 56 percent in 2010.

[2]In CSES 2008 and before they were classified as unpaid family workers.

Table 7: Employment status, main occupation (15-64 years), by sex, 2004, 2009, and 2010. Percent.

Employment status	2004			2009			2010		
	Women	Men	Both Sexes	Women	Men	Both Sexes	Women	Men	Both Sexes
Employed population, number (thousand)	3,079	3,092	6,171	3,713	3,752	7,466	3,869	3,806	7,675
Total	100	100	100	100	100	100	100	100	100
Paid employee	19.6	29.2	24.4	22.8	30.9	26,9	24.3	35.4	29.8
Employer	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.2	0.2
Own account worker/self-employed	34.4	47.5	41.0	52.4	46.1	49.2	56.0	44.7	50.4
Unpaid family worker	49.0	29.1	39.0	24.5	22.6	23.5	19.3	19.5	19.4
Other/Don't know	2.3	1.7	2.0	0.1	0.1	0.1	0.3	0.2	0.2

Table 8 shows the employed population (15-64 years) by employment status. The general picture is that the urban areas (Phnom Penh and other urban) have a larger proportion of paid employees than other rural. The most common employment status in rural areas is own account worker/self employed.

Table 8: Employment status, main occupation (15-64 years), by geographical domain, 2010. Percent.

Employment status	Phnom Penh	Other urban	Other rural
Employed population, number (thousand)	688	772	6,215
Total	100	100	100
Paid employee	58.9	40.1	25.3
Employer	0.1	-	0.2
Own account worker/self-employed	28.7	44.2	53.6
Unpaid family worker	12.3	15.8	20.6
Other/Don't know	-	-	0.3

Table 9 shows employed population by geographical domain and sex. There are clear gender differences in employment status in all three domains except for unpaid family workers in other rural. The share is about 20 percent for both women and men.

Table 9: Employment status, main occupation (15-64 years) by geographical domain and sex, 2010. Percent.

Employment status	Phnom Penh		Other urban		Other rural	
	Women	Men	Women	Men	Women	Men
Employed population, number (thousand)	326	362	401	371	3,142	3,073
Total	100	100	100	100	100	100
Paid employee	52.2	65.0	35.4	45.2	19.9	30.7
Employer	-	0.1	-	-	0.2	0.2
Own account worker/self-employed	32.8	25.0	47.7	40.3	59.5	47.6
Unpaid family worker	15.0	9.9	16.9	14.5	20.0	21.3
Other/Don't know	-	-	-	-	0.3	0.3

6.4. Employment by occupation

The employment by occupation is indicated in Table 10. The results show the total employed population (15-64 years) by main occupation for women and men. Generally almost half of the population in Cambodia were employed as skilled agricultural, forestry and fishery workers. This held for both women and men. Barely twice as many women than men were employed as service and sales workers about 33 percent more men than women were employed in elementary occupations. All together two thirds of the Cambodian population were employed in these three occupation categories. In the other occupational categories fairly small shares were employed. Some smaller differences between women and men were measured with an exception for plant and machine operators and assemblers and in armed forces where the employed share of men was ten times higher than the share of women.

Table 10: Employed population (15-64 years) by main occupation and sex, 2010. Percent.

Main occupation	Women	Men	Both sexes
Armed forces occupations	0.1	1.5	0.8
Manager	0.2	0.9	0.5
Professionals	2.0	3.5	2.7
Technicians and associate professionals	0.5	1.2	0.9
Clerical support workers	1.6	3.2	2.4
Service and sales workers	22.4	10.9	16.7
Skilled agricultural, forestry and fishery workers	44.7	43.5	44.1
Craft and related worker	13.7	11.8	12.8
Plant and machine operators and assemblers	0.5	6.2	3.3
Elementary occupations	14.4	17.3	15.9
Other/Don't know/Not stated	-	-	-
Total	100	100	100

Table 11 presents the employed population by main occupation and geographical domain for 2010. The shares of employed population by main occupation vary with references to geographical domains. Phnom Penh relative other urban and other rural areas the conditions for skilled service occupations seemed to be somewhat better off indicating higher shares of managers, professionals, clerical support workers for example. In other rural areas on the other hand manual work counts for a large part of the employment by occupation like skilled agricultural, forestry and fishery workers and elementary occupations.

Table 11: Employed population (15-64 years) by main occupation and geographical domain, 2010. Percent.

Main occupation	Phnom Penh	Other urban	Other rural
Armed forces occupations	1.7	1.1	0.6
Manager	1.4	0.8	0.4
Professionals	7.4	5.1	1.9
Technicians and associate professionals	4.1	1.3	0.4
Clerical support workers	12.4	3.7	1.1
Service and sales workers	36.9	37.0	11.9
Skilled agricultural, forestry and fishery workers	1.5	15.3	52.4
Craft and related worker	21.7	14.7	11.5
Plant and machine operators and assemblers	6.6	7.1	2.5
Elementary occupations	6.1	14.0	17.2
Other/Don't know/Not stated	-	-	-
Total	100	100	100

The share of employed population by main occupation in Phnom Penh, other urban and other rural areas by sex is described in Table 12.

In Phnom Penh the share of employment by occupation differed between women and men considerably. About 46 percent of all women in Phnom Penh were employed in occupations related to services and sales which is almost twice as large as the share for men (29 percent). About 27 percent of women in Phnom Penh were employed as craft and related workers. The gender differences are most pronounced in the occupation "plant and machine operators and assemblers" where there are very few women.

Table 12: Employed population (15-64 years), by main occupation, geographical domain and sex, 2010. Percent.

Main occupation	Phnom Penh		Other urban		Other rural	
	Women	Men	Women	Men	Women	Men
Armed forces occupations	0.2	3.1	0.1	2.1	0.1	1.2
Manager	1.1	1.8	0.4	1.2	0.1	0.7
Professionals	6.0	8.7	4.5	5.6	1.2	2.6
Technicians and associate professionals	2.6	5.4	1.2	1.5	0.2	0.7
Clerical support workers	9.8	14.8	2.7	4.8	0.6	1.6
Service and sales workers	45.7	29.0	47.3	25.9	16.8	7.0
Skilled agricultural, forestry and fishery workers	1.3	1.7	16.5	14.1	52.8	52.0
Craft and related worker	27.3	16.7	15.1	14.3	12.1	10.9
Plant and machine operators and assemblers	0.3	12.3	0.6	14.1	0.5	4.5
Elementary occupations	5.7	6.5	11.8	16.3	15.7	18.7
Other/Don't know/Not stated	-	-	-	-	-	-
Total	100	100	100	100	100	100

6.5. Employment by industry

In the following tables employment by industrial sector (main occupation) is presented. The Total employment by industry sector is presented in Table 13. In general, for most of the employment rates in all sectors no or very small differences were measured between women and men.

Table 14 shows employment by industrial sector and geographical domain. As expected, there are large differences between the geographical domains. In Phnom Penh and other urban areas the share of employment in service sector was highest with 75 percent and 63 percent respectively. For other rural areas the share of employment in agriculture sector was highest. In other urban areas, about one fifth of employment was in agriculture sector.

Table 13: Employed population (15-64 years) by industrial sector (main occupation) and sex, 2010. Percent.

Industrial sector (main occupation)	Women	Men	Total
Employed population, number (thousand)	3,867	3,806	7,673
Total	100	100	100
Agriculture (Primary)	55.4	52.9	54.2
Industry (Secondary)	15.5	17.0	16.2
Services (Tertiary)	29.1	30.1	29.6
Other/Don't know/Not stated	-	0.1	0.0

Table 14: Employed population (15-64 years) by industrial sector (main occupation) and geographical domain, 2010. Percent.

Industrial sector (main occupation)	Phnom Penh	Other urban	Other rural
Employed population, number (thousand)	687	772	6,214
Total	100	100	100
Agriculture (Primary)	1.6	19.7	64.3
Industry (Secondary)	23.3	17.8	15.3
Services (Tertiary)	74.9	62.5	20.5
Other/Don't know/Not stated	0.2	0.0	-

Figure 4 shows the results on the employment population (15-64 years) for the years 2004, 2007, 2008, 2009 and 2010. The total employment by industry sector is presented. There are no significant changes over the years in the distribution of the employed over industrial sectors.

Figure 4: Employment population (15-64 years) by industry sector, 2004-2010. Percent.

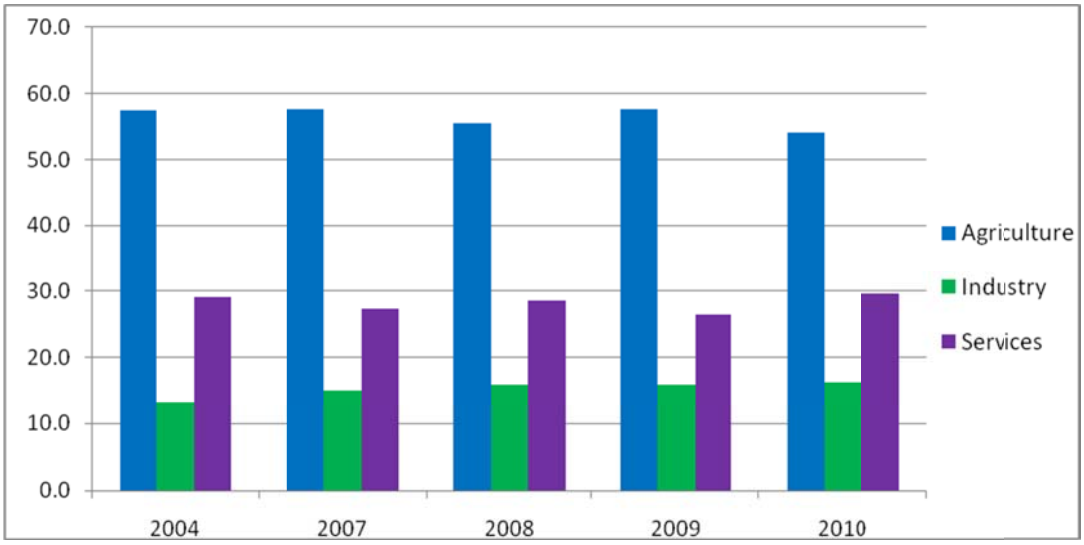


Table 15 shows employed population by industrial sector, geographical domain and sex. In other urban and other rural areas there are no or very small differences between women and men in the share of employment in agriculture, industry and services sector. In Phnom Penh there are significant gender differences; women have a higher proportion employed in the industry. In other urban and other rural there are no significant gender differences

Table15: Employed population (15-64 years) by industrial sector (main occupation), geographical domain and sex, 2010. Percent.

Industrial sector (main occupation)	Phnom Penh		Other urban		Other rural	
	Women	Men	Women	Men	Women	Men
Employed population, thousand	325	362	401	371	3,141	3,073
Total	100	100	100	100	100	100
Agriculture (Primary)	1.2	1.9	21.8	17.4	65.3	63.2
Industry (Secondary)	28.0	19.1	16.7	18.9	14.1	16.5
Services (Tertiary)	70.9	78.5	61.6	63.6	20.6	20.3
Other/Don't know/Not stated	-	0.5	-	0.1	-	-

6.6. Annex of additional tables for labour force (child labour and working age 15-64 years)

Table 16: Labour participation by sex, geographical domain and age group. Percent.

Sex and Age group	Employment rate	Unemployment rate	Labour force participation rate	Not in the labour force	Working age population
Cambodia					
Women					
5^{+}	68.0	0.2	68.1	31.9	100
15-64	84.0	0.3	84.2	15.8	100
5-9	8.1	-	8.1	91.9	100
10-14	41.1	-	41.1	58.9	100
15-17	70.5	1.2	71.3	28.7	100
Men					
5^{+}	71.7	0.4	72.0	28.0	100
15-64	89.6	0.4	90.0	10.0	100
5-9	8.9	-	-	100.0	100
10-14	69.6	-	-	100.0	100
15-17	70.2	0.5	70.6	29.4	100
Both sexes					
5^{+}	69.8	0.3	70.0	30.0	100
15-64	86.7	0.3	87.0	13.0	100
5-9	8.1	-	8.1	91.9	100
10-14	41.1	-	41.1	58.9	100
15-17	70.3	0.9	70.9	29.1	100
Phnom Penh					
Women					
5^{+}	52.1	0.8	52.5	47.5	100
15-64	64.3	0.8	64.8	35.2	100
5-9	-	-	-	100.0	100
10-14	8.5	-	8.5	91.5	100
15-17	36.5	-	36.5	63.5	100
Men					
5^{+}	61.3	0.7	61.7	38.3	100
15-64	76.4	0.7	76.9	23.1	100
5-9	-	-	-	100.0	100
10-14	3.7	-	3.7	96.3	100
15-17	18.1	-	18.1	81.9	100
Both sexes					
5^{+}	56.6	0.7	57.0	43.0	100
15-64	70.1	0.8	70.7	29.3	100
5-9	-	-	-	100.0	100
10-14	6.0	-	6.0	94.0	100
15-17	26.6	-	26.6	73.4	100

Sex and Age group	Employment rate	Unemployment rate	Labour force participation rate	Not in the labour force	Working age population
Other urban					
Women					
5+	64.3	0.4	64.5	35.5	100
15-64	78.9	0.5	79.3	20.7	100
5-9	1.7	-	1.7	98.3	100
10-14	23.3	-	23.3	76.7	100
15-17	57.3	-	57.3	42.7	100
Men					
5+	64.4	0.6	64.8	35.2	100
15-64	84.8	0.5	85.3	14.7	100
5-9	1.0	-	1.0	99.0	100
10-14	20.4	-	20.4	79.6	100
15-17	46.1	-	46.1	53.9	100
Both sexes					
5+	64.3	0.5	64.7	35.3	100
15-64	81.7	0.5	82.0	18.0	100
5 -9	1.3	-	1.3	98.7	100
10-14	21.8	-	21.8	78.2	100
15-17	52.2	-	52.2	47.8	100
Other rural					
Women					
5+	70.4	0.2	70.5	29.5	100
15-64	87.5	0.2	87.6	12.4	100
5-9	10.4	-	-	100.0	100
10-14	84.1	-	-	100.0	100
15-17	75.2	0.6	75.6	24.4	100
Men					
5+	73.9	0.3	74.2	25.8	100
15-64	92.2	0.4	92.5	7.5	100
5-9	9.7	-	9.7	90.3	100
10-14	46.6	-	46.6	53.4	100
15-17	78.5	1.3	79.5	20.5	100
Both sexes					
5+	72.1	0.3	72.3	27.7	100
15-64	89.7	0.3	90.0	10.0	100
5-9	9.6	-	9.6	90.4	100
10-14	46.2	-	46.2	53.8	100
15-17	76.9	1.0	77.6	22.4	100

Table 17: Labour participation and school attendance by sex and age group.

Number (thousand)

Age group	Women				Men				Both Sexes			
	Working		Not working	Total	Working		Not working	Total	Working		Not working	Total
	Attending school				Attending school				Attending school			
	Yes	No			Yes	No			Yes	No		
5+	1,651	3,343	1,453	6,447	1,837	3,429	795	6,062	3,488	6,772	2,248	12,509
15 - 64	416	3,187	1,004	4,607	574	3,182	489	4,246	990	6,369	1,493	8,853
5 - 9	533	1	167	702	543	4	209	757	1,076	5	377	1,458
10 - 14	701	62	16	780	720	57	35	811	1,421	119	51	1,591
of which												
5 - 14	1,234	63	183	1,481	1,263	61	244	1,568	2,497	125	427	3,049
15 - 17	259	221	24	504	302	196	36	535	561	417	61	1,039
	Percent											
5+	25.6	51.9	22.5	100	30.3	56.6	13.1	100	27.9	54.1	18.0	100
15 - 64	9.0	69.2	21.8	100	13.5	74.9	11.5	100	11.2	71.9	16.9	100
5 - 9	76.0	0.2	23.8	100	71.8	0.6	27.7	100	73.8	0.4	25.8	100
10 - 14	89.9	8.0	2.1	100	88.7	7.0	4.3	100	89.3	7.5	3.2	100
of which												
5 - 14	83.3	4.3	12.4	100	80.5	3.9	15.6	100	81.9	4.1	14.0	100
15 - 17	51.3	43.8	4.9	100	56.6	36.6	6.8	100	54.0	40.1	5.9	100

Table 18: Labour force participation rates, aged 5-17 years by sex and geographical domain

Year and sex	Cambodia	Phnom Penh	Other urban	Other rural
2004				
Both Sexes	35.6	16.9	26.2	38.5
Women	35.4	21.2	27.7	37.7
Men	35.9	12.6	24.8	39.3
2007				
Both Sexes	38.0	11.7	22.0	42.4
Women	38.3	11.1	20.2	43.5
Men	37.7	12.3	24.2	41.5
2008				
Both Sexes	35.0	12.3	22.4	38.6
Women	33.8	15.7	21.6	37.0
Men	36.2	8.7	23.2	40.2
2009				
Both Sexes	38.1	10.6	24.6	42.1
Women	37.4	13.3	26.3	40.9
Men	38.8	8.1	23.1	43.3
2010				
Both Sexes	36.9	10.0	22.2	40.9
Women	36.9	13.2	26.4	40.2
Men	36.9	6.9	18.4	41.7

Table 19: Number of persons having wage employment by industry sector and sex. Thousand.

Year and industry	Women	Men	Total	Percent women
2004				
Agriculture	167	162	329	50.8
Industry	233	257	490	47.6
Service	233	514	746	31.2
2007				
Agriculture	242	194	436	55.5
Industry	300	399	699	42.9
Service	282	544	826	34.1
2008				
Agriculture	222	239	460	48.3
Industry	380	437	816	46.6
Service	279	591	870	32.1
2009				
Agriculture	269	271	540	49.8
Industry	354	389	743	47.6
Service	257	533	790	32.5
2010				
Agriculture	269	287	556	48.4
Industry	388	457	846	45.9
Service	307	639	946	32.5

7. Health

In this chapter the main data on disability, illnesses, health care seeking, maternal and child health are summarized. When possible comparison with CSES 2004, 2007, 2008, 2009 is done.

The interviews on health were done by trained, non-medical interviewers. The health questions were asked in the third week of the month in CSES 2010. For 2010, the health module were separated into five parts: "Maternal health", "Child health", "Health check of children under 5", "Health care seeking and expenditure", and "Disability".

The household questionnaire is included in Appendix 4.

7.1. Disabilities in the population of private households

Disability is defined as a restriction or lack of ability to perform an activity in the manner or within the range considered as normal for a human being. It is a condition in which a person has a problem with his/her body, mind or behaviour that limits his/her ability to participate normally in work, school, or ordinary social life. It is a permanent or long-term condition and should not include a temporary illness or injury.

The survey information was collected by asking household heads about each household member. There have been some changes in the disability module in the questionnaire. In 2009 and 2010 the question was phrased in the same way: "Does ...[NAME].. have any of the following?"

It was the same response options both years "Difficulty seeing, difficulty hearing,…" See questionnaire in Appendix 4. In the questionnaire on disability/difficulty only three kinds of difficulties was asked. If the person had more than three difficulties, the three main (most important) difficulties should be reported.

Prevalence of disabilities

About 5 percent of the total non-institutional population of Cambodia are disabled. The number of disabled persons was about 712000 persons.

Note that severely disabled living in institutional households are not included in the survey. The most severely disabled are covered by this survey only if they live in a private household.

The estimates show a much higher share of the population with disability/difficulty than previous CSES which is discussed below. The Population Census 2008 also shows lower shares. The definition of disability in the Population Census 2008 differs a lot from the definition used in the CSES. In Census 2008, the definition of disability focuses on physical or mental disability rather than on functional limitation or activity restriction caused by impairment (CSES 2010). For example, the definition of seeing disability in Population Census 2008 is: "A person who could not see at all (had no perception of light) or had blurred vision even with the help of glasses was considered as having disability in seeing or as visually disabled…".[3]

Table 1 shows the prevalence of different types of disabilities/difficulties. The respondent could report up to three difficulties (the most important ones if more than three). The table shows the share of population having at least one disability/difficulty in 2004, 2009 and 2010. The types refer to the first or most important reported difficulty. Table 1 also shows that the seeing disability/difficulty is the most common difficulty both years.

[3] National Institute of Statistics (2009). General Population Census of Cambodia 2008, National Report on Final Census Results, January, 2012.

Table 1: Persons (in the non-institutional population) with at least one disability/difficulty, 2004, 2009 and 2010. Percent.

Type of difficulty	CSES 2004	CSES 2009	CSES 2010
Seeing	1.5	4.0	2.8
Hearing	0.5	1.2	1.0
Speaking	0.2	0.3	0.3
Moving	1.0	1.6	1.6
Feeling or sensing*	0.4	0.4	0.3
Psychological	0.3	0.4	0.3
Learning	0.0	0.1	0.1
Fits	0.1	0.1	0.1

*2004: "Feeling", 2009, 2010: "Feeling or sensing"

In the following only results from 2010 survey are presented due to the changes in the questionnaire.

Table 2 shows that the prevalence of disability/difficulty increases by age. In the youngest age group (0-14 years) only about 1 percent had disabilities/difficulties while in the oldest age group (60 years and over) almost one third had disabilities/difficulties (about 31 percent).

Table 2: Persons (in the non-institutional population) with at least one difficulty by age, 2010. Percent.

Age group	Women	Men	Both Sexes
All	5.2	5.0	5.1
0-14	0.9	0.8	0.9
15-29	2.0	2.1	2.1
30-44	4.0	3.8	3.9
45-59	9.3	15.2	11.8
60^{+}	31.1	29.8	30.5

Degree of difficulties

Table 3 below shows the level of the most common difficulties (seeing, moving and hearing) by degree of difficulty. In the population about 3 percent had seeing difficulties (see Table 1 above). About half of them had a moderate degree of the seeing difficulty (1.4 percent in the population). Having severe seeing difficulty was quite rare (about 0.3 percent in the population). For moving and hearing difficulties it was more common with moderate degree.

Table 3: Degree of most common difficulties, 2010. Percent.

Type of difficulty	Mild	Moderate	Severe
Seeing	1.0	1.4	0.3
Moving	0.4	0.8	0.5
Hearing	0.3	0.6	0.2

Cause of difficulties

The questionnaire mentioned 18 different causes. The interviewer asked about the cause for each reported difficulty. Table 4 shows the main causes of disabilities/difficulties in the total non-institutional population whatever kind of disability/difficulty. Overall, old age and disease were reported as the major causes of disabilities/difficulties, about 2.1 percent in the population reported old age and about 1.4 percent disease. Women suffered difficulty caused by old age and disease more than men, men reported somewhat higher shares than women for causes like mine/UXO or war injuries, and traffic or work accidents.

Table 4: Some causes of difficulties by sex, 2010. Percent.

Sex	Mine/UXO or war injuries	Traffic or work accidents	Disease	Old age	Congenital
Women	0.1	0.3	1.6	2.6	0.6
Men	0.6	0.7	1.3	1.6	0.6
Both Sexes	0.4	0.5	1.4	2.1	0.6

7.2. Illness, injury or other health problem in the last 30 days

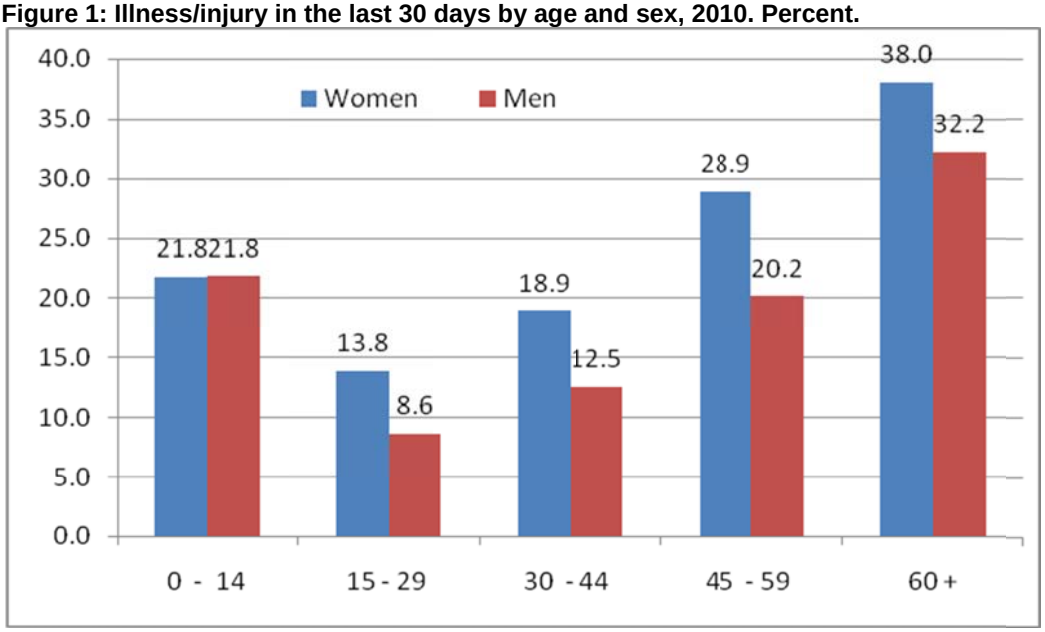
In CSES 2010 household heads were asked about each household member whether they had been sick or had an illness and/or injury in the last 30 days. There was a separate question which asked if there had been any other reason to go to the health facility or seek health care. About 19 percent of all persons had an illness/injury at any time in the last 30 days, see Table 5. Of the women about 21 percent had an illness or injury and of the men about 17 percent. In absolute numbers this means that close to 2.7 million Cambodians had health problems. The share was somewhat higher in other rural areas than in Phnom Penh and other urban areas.

Table 5: Illness/injury in the last 30 days, 2010. Percent.

Domain	Women	Men	Both sexes
Cambodia	21.3	16.8	19.1
Phnom Penh	19.6	13.7	16.7
Other urban	18.2	14.6	16.5
Other rural	21.9	17.5	19.8

Figure 1. shows the pattern of illness and injury by age and sex in the population the last 30 days. Health problems were highest among elderly people. For example the share of elderly 60 years and over that had an illness or injury during the last 30 days was about 38 percent among women and about 32 percent among men. In the youngest age group (0-14 years) women's and men's health problems seems to be on the same level. From age group (15-29 years), (30-44 years), (45-59 years) and (60 years and over), more women have health problem than men.

Figure 1: Illness/injury in the last 30 days by age and sex, 2010. Percent.



Health care visits

Table 6 shows that about 18 percent of the population had sought care once or more in the last 30 days, women to a greater extent than men among all different geographical domains in Cambodia. The share of persons with one or more health care visit was somewhat higher in other rural areas than in Phnom Penh and other urban areas. About 19 percent of the population in other rural and about 16 percent in Phnom Penh sought care.

Table 6: Health care visits (one or more visits) in the last 30 days by geographical domain and sex, 2010. Percent.

Domain	Women	Men	Both sexes
Cambodia	20.2	15.9	18.1
Phnom Penh	18.6	13.0	15.9
Other urban	17.0	13.3	15.2
Other rural	20.8	16.6	18.8

Table 7 shows health care visits by sex/age group and number of visits. The table shows that about half of those who sought care during the last 30 days did so only once.

The elderly sought more care than younger people, see Table 7. One third of the population in age 60 and over sought care at least once in the last 30 days (34 percent) compared to one of ten in age group 15-29 years (11 percent). Women in all ages sought more care than men. The tendency was also that women sought care more times than men.

Table 7: Health care visits in the last 30 days by sex and age, 2010. Percent.

Sex and Age group	Once	2-5 times	6 times or More	Once or more
Women				
0-14	12.8	8.9	0.1	21.8
15-29	7.1	5.5	0.1	12.8
30-44	9.3	8.5	0.1	18.0
45-59	12.5	13.9	0.9	27.3
60^{+}	14.4	20.4	1.3	36.0
Men				
0-14	4.0	2.7	0.1	6.8
15-29	12.5	8.6	0.2	21.3
30-44	4.5	3.8	0.1	8.5
45-59	6.0	6.3	0.2	12.6
60^{+}	9.5	8.9	0.5	18.9
Both sexes				
0-14	12.7	8.7	0.2	21.5
15-29	5.8	4.7	0.1	10.6
30-44	7.8	7.5	0.2	15.4
45-59	11.2	11.7	0.7	23.6
60^{+}	14.0	19.1	1.0	34.1

Provider of health care

Any household members who had health problems and sought care were asked what kind of care that was sought for the treatment (provider). A first question was asked about the provider for the first treatment and for those who had more than one treatment in the last 30 days there was also a question about the last provider. The different kind of care providers were grouped in public, private, self care and traditional care. Table 8 shows the first provider sought among those who needed care for illness, injury or other health problem in the last 30 days. About 48 percent used self care as the first treatment. There were no differences between women and men.

Table 8: First provider of health care among those who were seeking care in the last 30 days by sex, 2010. Percent.

Sex	Public	Private	Self care*	Traditional care	Total
Women	17.9	33.1	46.7	2.3	100
Men	15.4	32.2	50.0	2.4	100
Total	16.9	32.7	48.1	2.4	100

* Self Care includes visit in home/office of trained health worker/nurse, visit of trained health worker/nurse, Shop selling drugs/market

According to Table 9, Phnom Penh had the highest share of persons seeking care by private providers the first time. Four out of five (about 77 percent) sought private care. In other urban areas the share of persons seeking care by private providers was 51 percent whereas in other rural areas only about 26 percent sought private care. Self care was the most common care in other rural areas while private care was the most common care in other urban areas and other rural areas.

Table 9: First provider of health care among those who were seeking care in the last 30 days by geographical domain, 2010. Percent.

Domain	Public	Private	Self care*	Traditional care	Total
Cambodia	16.9	32.7	48.1	2.4	100
Phnom Penh	12.6	77.3	10.0	0.2	100
Other urban	11.8	51.0	35.4	1.9	100
Other rural	17.8	26.2	53.4	2.6	100

*Self care includes visit in home/office of trained health worker/nurse, visit of trained health worker/nurse, shop selling drugs/market

7.3. Maternal health

Antenatal care

To ensure the health and safety of mothers during pregnancy, WHO recommends that pregnant women see a trained health worker at least four times prior to delivery. It is recommended that women seek antenatal care (ANC) within the first three months of pregnancy and that they continue on a monthly basis in order to identify problems early. These visits should include, among others, a check of the woman's vital signs, tetanus immunizations if she has not received the recommended minimum, and iron/folate supplementation to counteract deficiencies associated with pregnancy.

About 90 percent of the women reported that they received ANC from someone at least once during their last pregnancy. The proportion of women reporting ANC usage is highest among women aged 35-49 years (90 percent). ANC usage is higher in Phnom Penh in all age groups (average 96 percent).

The data were also disaggregated by educational attainment. It is important to note that the classification of education attainment used in this chapter differs slightly from that used in other parts of this report. Because there were an insufficient number of women in the uppermost educational categories, educational attainment was categorized into three classes: none, primary, and secondary or higher. Women were considered to have primary educational status if they had completed any grade from (1-6), in the same manner, women were considered to have secondary educational status if they had completed any grade from (7-12) or any additional schooling above grade 12. This method is consistent with that used by the Cambodia Demographic and Health Survey (CDHS) and the data are therefore considered comparable.

Breaking down ANC usage by education level reveals that there are no significant differences between the three education level groups. See Table 10 for more details.

Table 10: Antenatal care. Percent distribution of women with living children less than 5 years old by ANC status during pregnancy for the most recent birth.

Characteristics	Attended at least once	Number of women
Mother's age at birth		
<20	100	2
20-34	89.1	573
35-49	90.4	396
Domain		
Phnom Penh	96.4	219
Other urban	92.1	226
Other rural	89.2	786
Mother's education		
None	82.9	213
Primary	91.9	425
Secondary and higher	91.7	606
Total	90.1	1,231

Table 11 shows that 7.3 percent of the women reported that they had suffered night blindness during their most recent pregnancy. Women aged (20-29 years) reported the highest level of supplementation at about 8 percent; followed by age group (40-49 years) at 7.5 percent and the age group (30-39 years) was least likely to suffer from night blindness (7 percent).

The geographical differences for women with night blindness during the most recent pregnancy are higher in other rural areas at about 8 percent. In Phnom Penh and other urban areas, the corresponding percentage points were lower at 3.9 and 4.8 respectively. For mother's education, the percentage in having night blindness also shown differently between the three classes (none, primary, and secondary or higher). See Table 11 for more details.

Table 11: Night blindness. Percent distribution of women with living children under 5 years old by occurrence of night blindness during the most recent pregnancy.

Characteristics	Suffered night blindness	Number of women
Mother's age at birth		
<20	0.0	2
20-29	8.1	327
30-39	7.0	449
40-49	7.5	200
Region		
Phnom Penh	3.9	219
Other urban	4.8	226
Other rural	8.0	792
Mother's education		
None	8.6	214
Primary	7.8	720
Secondary and higher	4.7	311
Total	7.3	1,237

Delivery care

Women can successfully manage or avoid many of the dangers associated with delivery by giving birth in the presence of a skilled birth attendant. Health workers with appropriate training can recognize the signs of complications and help reduce the risk of infection.

About 62 percent of the women reported delivering their most recent birth at either a public or private facility. This rate is 8 percentage points higher than the rate reported in the CDHS 2010 (54 percent). Women aged (20-34 years) were the most likely to deliver at a health facility; 59 percent of the deliveries occurred at a health facility. Ninety-eight percent of women living in Phnom Penh reported delivering at a health facility. Women with secondary or higher education reported delivering at a facility in four-fifths of the cases. Women who accessed ANC during their pregnancy were more than twice as likely to deliver at a health facility (66 percent) as those who did not (29 percent). See Table 12 for more details.

Table 12: Place of delivery. Percent distribution of women with living children under 5 years old by place of delivery for the most recent birth.

Characteristics	Health Facility		Home	Total	Number of women
	Public Sector	Private Sector			
Mother's age at birth					
<20	-	-	100	100	2
20-34	53.1	5.8	41.1	100	576
35-49	57.2	4.4	38.4	100	398
Domain					
Phnom Penh	76.3	21.8	1.9	100	219
Other urban	67.6	15.2	17.2	100	226
Other rural	52.6	3.1	44.2	100	792
Mother's education					
None	48.0	1.7	50.3	100	214
Primary	54.4	5.3	40.3	100	720
Secondary and higher	68.9	11.6	19.5	100	311
Antenatal Care					
Yes	59.5	6.3	34.2	100	1,115
No	26.8	2.3	70.9	100	117
Total	56.3	5.9	37.8	100	1,231

The CSES 2010 also asked mothers about who had assisted them with the delivery of their most recent pregnancy. They were prompted to identify all of the people present during the delivery – these responses were then collated and ranked hierarchically, with the most trained person receiving the highest rank.

Among all women questioned, 78 percent reported that a trained health professional assisted with the delivery (i.e. a doctor, nurse, or midwife). Women aged (20-34 years) were again the most likely to have delivered under optimal conditions, with 75 percent reporting a trained health professional in attendance. There was also a considerable difference between women delivering in urban and rural areas, with trained health professionals attending 99 percent of births in Phnom Penh compared to just 75 percent in rural areas. Deliveries at home were attended by a professional in only 43 percent of the births. See Table 13 for more details.

Table 13: Assistance during delivery. Percent distribution of women with living children under 5 years old by person providing assistance during delivery for the most recent birth.

Characteristics	Doctor	Nurse	Midwife	Traditional birth attendant	friend/ Other	No one	Total
Mother's age at birth							
<20	-	-	-	100	-	0.0	100
20-34	17.7	8.3	50.4	23.2	0.4	0.0	100
35-49	20.8	6.4	51.6	20.6	0.6	0.0	100
Domain							
Phnom Penh	52.2	7.5	39.6	0.3	0.0	0.4	100
Other urban	28.1	4.9	59.8	7.1	0.0	0.0	100
Other rural	15.9	7.6	51.1	24.7	0.7	0.0	100
Mother's education							
None	13.9	11.8	39.8	33.9	0.6	0.0	100
Primary	17.8	5.3	49.6	26.7	0.5	0.0	100
Secondary and higher	24.6	7.0	57.3	10.4	0.7	0.1	100
Place of Delivery							
Private	49.8	1.8	48.4	0.0	0.0	0.0	100
Public	27.7	11.3	60.5	0.0	0.6	0.0	100
Home	4.3	2.2	37.6	55.0	0.8	0.1	100
Total	20.1	7.3	51.1	21.0	0.6	0.0	100

7.4. Child health

Vaccinations

In the CSES 2010, mothers were asked to show the interviewer the yellow vaccination cards of all children aged less than two years. The interviewer then recorded the dates on which the various vaccinations were received. A child was considered fully vaccinated if he or she had received a BCG vaccination against tuberculosis, three doses of DPT vaccine to prevent diphtheria, pertusis and tetanus, at least three doses of polio vaccine, and one dose of measles vaccine. The CSES 2010 findings differ from other national surveys in that it did not use the mother's recall in cases where no vaccination card was available. As such, these results represent the coverage rate as measured exclusively from the cards.

Among all children aged (0-23 months old), 89 percent had verifiably received all vaccination to protect against tuberculosis. Among children whose mother had a secondary or higher education, about 92 percent received all vaccination, while only 82 percent of children whose mothers had no education received all vaccination. See Table 14 for more details.

Table 14: Vaccinations. Percent distribution of children aged (0-23 months old) who received specific vaccines at any time before the survey (according to vaccination card).

Characteristics	Percentage with vaccination card seen	Number of children
Sexes		
Men	88.7	1,065
Women	94.3	184
Domain		
Phnom Penh	99.0	111
Other urban	96.4	121
Other rural	95.7	404
Mother's education		
None	82.2	214
Primary	91.0	720
Secondary and Higher	91.9	311
Total	89.4	1,237

7.5. Child nutrition

Infant and young child feeding

Infant and young child feeding (IYCF) guidelines recommend exclusive breastfeeding for the first six months of a child's life. Beginning at six months, children should continue breastfeeding and be supplemented with appropriate complementary food. The frequency of these complementary feeds should increase with age. IYCF guidelines recommend breastfeeding for all children up to 2 years and beyond to encourage healthy physical and mental development.

The CSES 2010 asked mothers about their breastfeeding practices with their youngest child 0-23 months of age. Ninety percent of women reported that they had breastfed their youngest child. This figure did not change based on location, maternal education, or place of delivery, suggesting that breastfeeding is nearly universal in Cambodia. See Table 15 for more details.

Table 15: Initial Breastfeeding. Percent distribution of last-born children aged (0-23 months old) who were ever breastfed, and if so, percent distribution by time initiated.

Characteristics	Among last-born children	
	Ever breastfed	Number of children
Sexes		
Men	98.2	311
Women	97.8	323
Domain		
Phnom Penh	95.1	110
Other urban	100	120
Other rural	98.0	402
Mother's education		
None	82.9	213
Primary	91.2	718
Secondary and Higher	93.5	308
Place of delivery		
Private	95.3	734
Public	96.1	108
Home	81.4	392
Total	90.1	1,231

8. Victimization

In this section findings from the CSES about crime, victimization and feelings of safety is presented. The areas studied include victimization by violence, victimization by theft/burglary/robbery (property crimes), victimization by accidents, and feelings of safety.

The questions on violence, property crimes and accidents refer to the last 12 months. The questions about violence were asked to each household member (for children the parents were asked), while the questions about property crimes, accidents and safety were asked to the household head.

The main questions dealt with in this section are:

- How many households and/or persons in Cambodia are victimized by violence and property crimes?
- How many households in Cambodia are victimized by accidents?
- How many households in Cambodia feel safe from crime?
- What differences in the above can be found when comparing different subpopulations and different years?

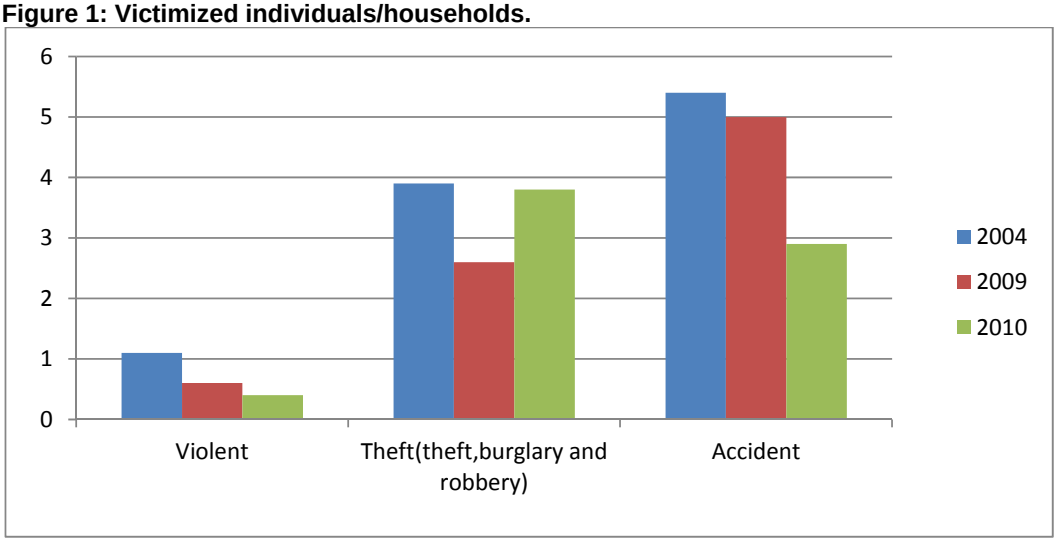
8.1. Victimization in total

In this section victimization by violence that caused injury is studied in more detail. In the following CSES results on differences according to sex, kind of violence, violence in different population groups, repeated violence, relation to the perpetrator and reporting behaviour will be in focus.

The total number of victimized persons or households in CSES is not to be seen as the total number of victims or victimized households in Cambodia. The study does not cover all crimes and a study like this underestimates crime because many people don't feel comfortable telling about their experiences. Moreover, some experiences defined by the victim as crimes may in fact not be a crime in the criminal code. Nevertheless, the data presented in Figure 1 which is compared to other victimization studies around the world sharing the same limitations, of relatively high quality.

About 0.4 percent of the individuals reported being a victim of violence that caused injury in 2010, see Figure 1. This is slightly lower than 2009. The change is not significant. However, compared to 2004 there is a significant reduction in the victimization rate. About four percent of the households were victimized by property crimes (theft, burglary or robbery) in 2010. There is no significant change over the years. About three percent of the households were victimized by accidents in 2010. This is a significant reduction from 2004 and 2009.

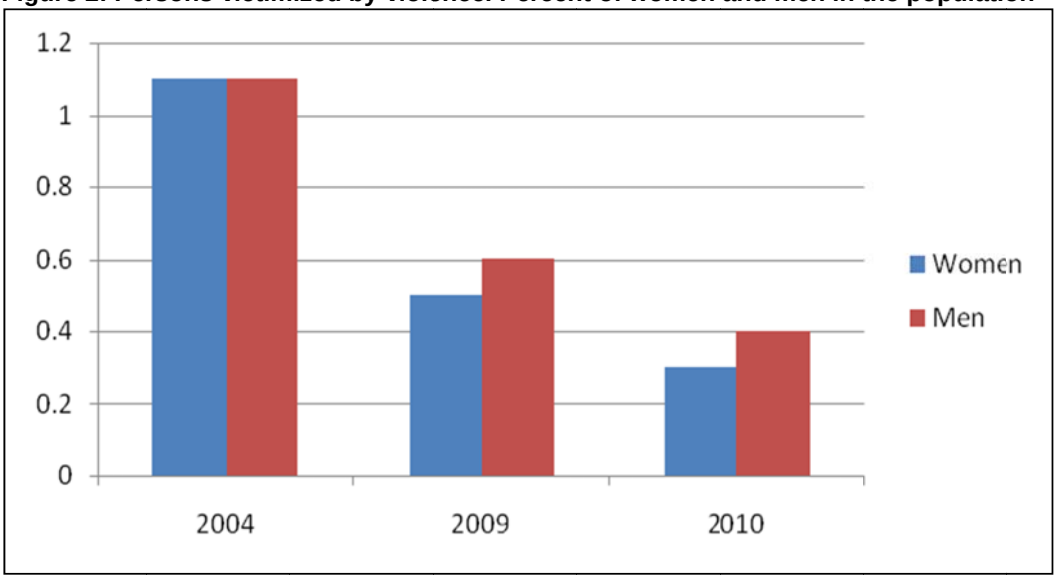
Figure 1: Victimized individuals/households.



8.2. Persons victimized by violence

Figure 2 shows thatt victimized persons who caused injury have decreased from 2004 (that has over 1 percent of population for both sexes) to around 0.5 and 0.6 percent of population in 2009 and to around 0.3 and 0.4 percent in 2010. The changes are however not statistically significant.

Figure 2: Persons victimized by violence. Percent of women and men in the population



In this section the victimization by violence that caused injury is studied in more detail. Questions were asked to all persons, therefore the share of persons are presented. In the following CSES results on differences according to sex, kind of violence, violence in different geographical areas, violence in different population groups, repeated violence, relation to the perpetrator and reporting behaviour will be in focus.

Table 1 shows all persons which were victimized by violence as of the total population. In 2004 the victimized persons for both sexes was 1.1 percent, and after 5 years later, it decreased about 0.5 percent until 2009 and continued to decrease to 0.4 percent in 2010. The change between 2004 and 2010 is significant.

Table 1: Victim of violence that caused injury by sex. Percent.

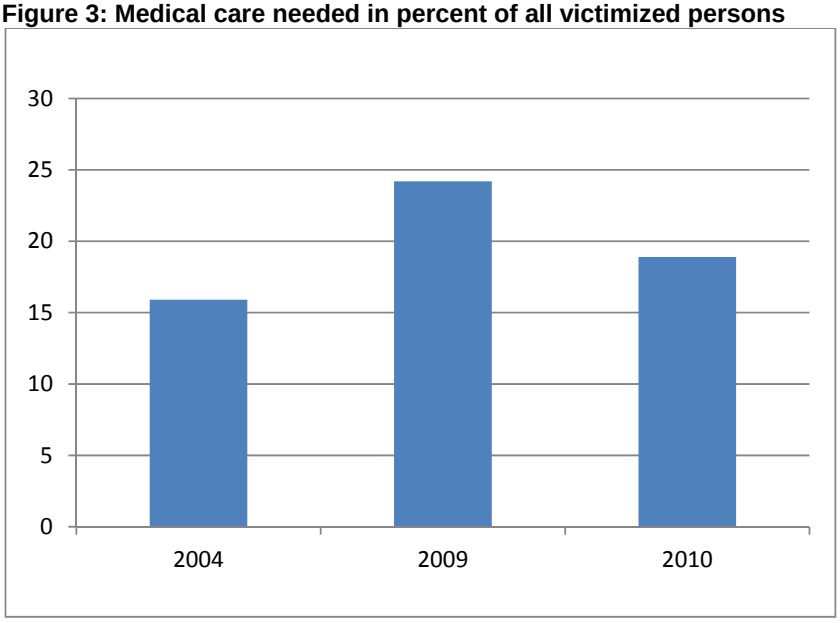
Victim of violence	CSES 2004			CSES 2009			CSES 2010		
	Women	Men	Both Sexes	Women	Men	Both Sexes	Women	Men	Both Sexes
Victimized persons in percent of total population	1.1	1.1	1.1	0.6	0.5	0.6	0.3	0.4	0.4
Number of victimized persons	74,000	65,000	139,000	45,000	34,000	79,000	24,000	26,300	50,300
Share of women and men of all victimized persons	53.0	47.0	100	57.0	43.0	100	48.0	52.0	100

Table 2 shows victims of violence that caused injury by sex and need for medical care. About 19 percent of the victimized persons needed medical care. The rate is a bit higher in 2009 than in 2004 and 2010, see Figure 3. However, the differences between the years are not statistically significant.

Table 2: Victim of violence that caused injury by sex that needed medical care. Percent.

Victim of violence	CSES 2004			CSES 2009			CSES 2010		
	Wom.	Men	Both Sexes	Wom.	Men	Both Sexes	Wom.	Men	Both Sexes
Victimized persons in percent of total population	1.1	1.1	1.1	0.5	0.6	0.6	0.3	0.4	0.4
Number of victimized persons	70000	65000	139000	45,000	34,000	79,000	24,000	26,300	50,300
Medical care needed in percent of all victimized persons	18.7	12.7	15.9	21.3	27.9	24.2	26.2	12.3	18.9
Share of women and men of all victimized persons who needed medical care	67.7	37.3	100	51.7	49.3	100	66.0	34.0	100

Figure 3: Medical care needed in percent of all victimized persons



Type of violence

The CSES also gives the possibility to study the share of different kinds of violence. The most frequent type of violence according to CSES 2010 was “push you”, “shake you”, or “throw something at you”. The second most frequent almost was the same, “kick you or drag you” and “slap/strike/beat you with object”. The third was “punch you with a fist or with something that could hurt you”. It is noted the percentage points in Table 3 below sum up to over 100 percent because one person probably was victimized by only one violent event or more.

Table 3: Violent events by type of violence. Percent.

Type of violence	CSES 2010
All types of violent events	100
Violent events by type of violence	
Push you, shake you, or throw something at you	27.7
Kick you or drag you	25.8
Slap/strike/beat you with object	25.4
Punch you with a fist or with something that could hurt you	20.9
Slap/strike/beat you with hand	16.3
Twist your arm	3.9
Other (Attack you with a knife, gun or other type of weapon, rape, forced to have sexual intercourse when you did not want to, try to strangle you or burn you and other)	-

As shown in Table 4 the women were in majority in all types of violent event. 80 percent of the events "kick you or drag you" were experienced by women.

Table 4: Violent events by type of violence and sex. Percent.

Type of violence	CSES 2010	
	Women	Men
All types of violent events	48.0	52.0
Violent events by type of violence		
Push you, shake you, or throw something at you.	55.5	44.5
Slap/strike/beat you with hand	66.6	33.4
Kick you or drag you.	80.3	19.7
Punch you with a fist or with something that could hurt you.	49.3	50.7
Slap/Strike/beat you with object	30.0	70.0
Twist your arm.	100	-
Other (Attack you with a knife, gun or other type of weapon, rape, forced to have sexual intercourse when you did not want to, try to strangle you or burn you and other)	-	-

Geographical areas

Table 5 shows victimization rates by urban and rural areas. The results indicate that more people in both sexes reported to be victims of violence in the rural than in the urban areas. In 2009 the rates were around 0.6 percent and 0.4 percent respectively while in 2010 the rates were considerably less, 0.4 and 0.2 percent respectively.

Table 5: Victim of violence that caused injury by geographical domain and sex.

Domain	CSES 2009			CSES 2010		
	Women	Men	Both Sexes	Women	Men	Both Sexes
Urban	0.4	0.3	0.4	0.2	0.3	0.2
Rural	0.7	0.5	0.6	0.4	0.4	0.4

Marital status, ethnicity, education and literacy

Table 6 shows victimization rates by marital status. Persons who get married or live together seem to have a slightly higher rates for both years, 2009 and 2010. As observed, the differences are not statistically significant.

Table 6: Victim of violence that caused injury and marital status, aged 15 years and over. Percent

Marital status	CSES 2009			CSES 2010		
	Women	Men	Both Sexes	Women	Men	Both Sexes
Never married	0.1	0.5	0.3	0.6	0.4	0.5
Married/live together	1.2	0.5	0.8	0.4	2	0.7
Widowed	0.2	-	0.2	0.1	0.9	0.2
Divorced/separated	1	-	0.8	-	0.2	0.1

The risk of victimization was a bit higher for people who could not read and write, see Table 7. This was true for both years 2009 and 2010. Also the people completed higher educational level has lower risk of being a victim of violence. The differences are not significant.

Table 7: Victim of violence that caused injury by adult literacy and highest level of education, aged 15 years and over.

Educational level	CSES 2009	CSES 2010
Can read and write	0.5	0.3
Cannot read and write	1.0	0.6
No or only some education	1.1	0.3
Primary school not completed	0.7	0.6
Primary school completed	0.4	0.2
Secondary school and higher	0.3	0.3
Other	-	0.2

Repeated victimization of violence and relation to the perpetrator

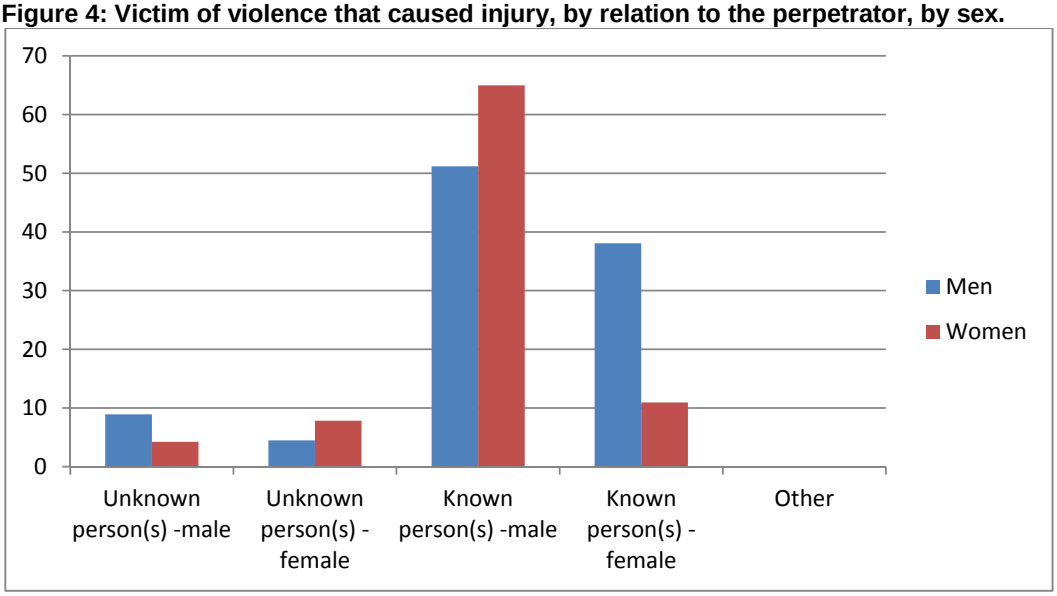
Table 8 shows that repeated victimization of violence was drastically decreased, from about 58 percent in 2009 to about 25 percent in 2010. The share of women who were victimized repeatedly was larger than the share of men for both years 2009 and 2010 that indicates about 64 percent and 35 percent respectively. The share of women who were victimized once, however, was higher in 2010 at about 65 percent, whereas 2009 was about 36 percent. The differences are statistically significant. See Table for more details.

Table 8: Repeated victimization by sex. Percent.

Repeated victimization	CSES 2009			CSES 2010		
	Women	Men	Both Sexes	Women	Men	Both Sexes
Repeated victimization (>1)	64.1	50.2	58.1	34.6	15.5	24.6
Victimized once	35.9	49.7	41.8	65.4	88.5	77.4
Victimized twice	26.4	21.4	24.2	24.3	5.8	14.8
Victimized three times	9.7	9	9.4	10.3	5.6	7.8
Victimized 4-9 times	11	9.4	10.3	-	-	-
Victimized 10 or more times	16.8	10.3	14.1	-	-	-
All victimized persons	100	100	100	100	100	100

Violence by unknown perpetrators represents a minor part of all violence, close to 65 percent of the violent acts were committed by a known perpetrator. There was also a tendency that victimized women more seldom were victimized by unknown perpetrators than victimized men. See Figure 4 for more details.

Figure 4: Victim of violence that caused injury, by relation to the perpetrator, by sex.



Reporting violence and court procedure of crimes of violence

Approximately only 39 percent of persons of both sexes subjected to violence that caused injuries did report the acts in 2010. It was a significant increase compared to 2009 that indicated about 24 percent. See Table 9 for more details.

Table 9: Victim of violence that caused injury and reporting the violence

Victims and report of violence	CSES 2009			CSES 2010		
	Women	Men	Both Sexes	Women	Men	Both Sexes
Victimized persons in % of total population	0.5	0.6	0.6	0.3	0.4	0.4
Number of victimized persons	45,000	34,000	79,000	24,000	26,300	50,300
Victimized persons who reported a violent crime in % of all victimized persons	25.2	22.9	24.2	40.0	38.7	39.3

In Table10 the distribution of victims of violence who reported a crime is presented. The share of persons who reported the crime to some authorities (i.e. police, village leader or other) in 2010 seemed to be higher in rural areas than in urban areas in both years.

Table 10: Victim of violence who reported a crime to the authorities by geographical domain and sex. Percent.

Domain	CSES 2009			CSES 2010		
	Women	Men	Both Sexes	Women	Men	Both Sexes
Urban	20	4.4	13.2	56.1	11.7	29.7
Rural	25.9	25.8	25.9	42.3	39	40.6

As seen in Table 9 above and in Table 11 below, about 39 percent of the victims reported the violence in 2010. The percentage point of reporting was higher for women (not significant, however). Table 11 shows the shares of reporting to authority respectively. It was more common to report the violence to the village leader than to the police and other authority. Over two thirds of those who reported the violence did it to the village leader. Among those who reported a violent act only about 12 percent ended up in court. For men the share that went to court was much higher than for women in both years.

Table 11: Reported violent events by sex. Percent.

Reported events	CSES 2009			CSES 2010		
	Women	Men	Both sexes	Women	Men	Both sexes
Persons victimized by violence in percent	0.6	0.5	0.6	0.3	0.4	0.4
Persons who reported a crime in percent of all victimized persons	25.2	22.9	24.2	40	38.7	39.3
All persons who reported a crime in percent	100	100	100	100	100	100
Persons who reported to the police in percent of all persons who reported a crime	18.1	51.9	31.7	10.4	8.6	9.4
Persons who reported to the village leader in percent of all persons who reported a crime	81.9	45.1	67.1	77.1	80.8	79.1
Persons who reported to other authority in percent of all persons who reported a crime	-	3.0	1.2	12.5	10.6	11.5
Event gone to court procedure in percent of persons who reported a crime	8.0	16.8	11.6	9.1	15.4	12.5

8.3. Households victimized by property crimes

In this section the concept of property crime is used which consists of theft, burglary and robbery crimes. The questions were asked to the household head. Of all households, 2.6 percent in 2009 and 3.8 percent in 2010 were victimized by property crimes. Besides the prevalence to be measured there was information on different events. It was small difference in both years. See Table 12.

Table 12: Victimization by property crimes by geographical domain. Percent.

Victimization by property crime	CSES 2009	CSES 2010
Household victimized by property crimes in percent of all households	2.6	3.8
Victimized households in percent of all households living in		
Urban	2.5	1.5
Rural	2.6	4.3

8.4. Feeling of safety

The respondent in this section was the head of household or spouse of the head of household. The respondent was asked whether he/she felt safe from crime and violence in the neighbourhood referring to security for the whole household (See the questionnaire in Appendix 4 for exact wording). The characteristics in this section refer to the head of household.

In general, the results from CSES 2010 indicate that about 78 percent of the Cambodian household heads felt safe from crime and violence in their neighbourhood, see Table 13. The result also indicates that more heads of households felt safer in 2010 if compared to 2009. A bit notable differences were found between men and women.

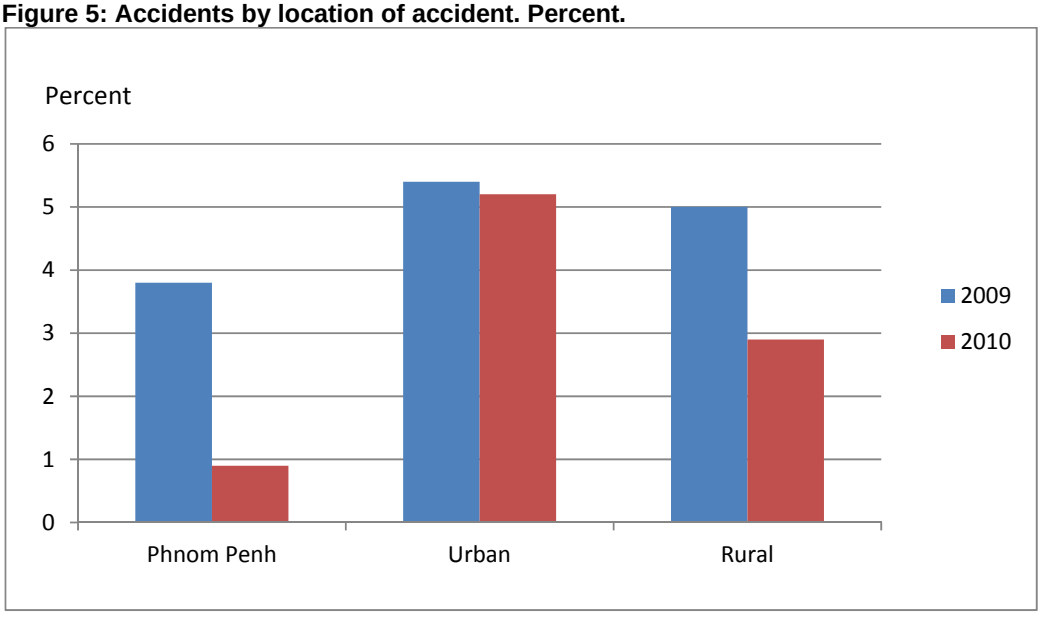
Table 13: Feeling of safety from crime and violence by geographical domain and sex of head of household. Percent.

Feeling of safety	Women headed households		Men headed households		All households	
	CSES 2009	CSES 2010	CSES 2009	CSES 2010	CSES 2009	CSES 2010
Feeling safe from crime and violence in neighborhood	66.8	76.4	67.3	78.5	67.2	78.0
Heads of household feeling safe from crime and violence in neighborhood in % of all heads of households in						
Urban	67.6	76.6	71.6	79.4	70.6	78.7
Rural	66.6	76.4	66.4	78.5	66.4	77.9

8.5. Households victimized by accidents

Figure 5 shows accident rates by urban and rural areas. In rural areas, the figure shows 5 percent of all Cambodians were victimized by accidents in 2009 and almost 3 percent in 2010. The decline is significant. The decline in accident rate in Phnom Penh is also statistically significant.

Figure 5: Accidents by location of accident. Percent.



9. Household income and Consumption

9.1. Income in Cambodia

Since 1999 there has not been any income statistics published from the Cambodia Socio-Economic Surveys (CSES). The quality of the income data has been some issues. The quality has become better but it still has to improve its quality of survey data. In countries like Cambodia where self-employment in small businesses and agriculture is common it is very difficult to gather accurate income data. There is no depreciation of investments like tools and animals resulting in a rather large number of households with negative income. Also income tends to fluctuate substantially during the year. There are a number of methodological issues to address before reliable income statistics can be produced from the CSES. They still have to start somewhere and the statistics produced are reasonably reliable to give useful information about the differences between regions in Cambodia and also about how Cambodians earn their living. But keep in mind that the results should be handled with caution. Take notes that the sample survey in CSES 2010 were 3600 households while the CSES 2009 were enumerated on 12000 households. Thus, the sample surveys are much different that might be influenced to the comparable analysis of income data.

Main sources of the Cambodian household incomes

In Cambodia most households have some kind of income from self employment. The primary income of household is mainly from self employment to the total income, representing about 65 percent. Wages and salaries represent roughly one third of the total income while the self-employment represent two third of the total income. The share of household income from self-employment to the total incomes in 2010 remains constant if compared to 2009. However the household income from self-employment increased by 20.7 percent in 2010 if compared to 2009. In Phnom Penh, the share of household income from self-employment to the total incomes was about 51 percent, which was decreased by 15 percent if compared to the previous year of 2009. In Cambodia there are very small amounts for social insurance or universal or means-tested social benefits from the government. Together with private transfers they represent up to 3 percent of the total income. Current transfers paid include different taxes on income and regular cash transfers to private households and for charities. Most of transfers paid are reported as transfers for charities. According to the survey only one third of the households have reported any transfers paid. The average amount is 3 percent of the total income in 2010.

In Cambodia, the agriculture income is common sources of income in Cambodia especially in rural areas and non-agriculture income is the main source of income in Phnom Penh and other urban areas. Cambodian agriculture income increased by 26.5 per cent in 2010 compared to 2009. Non-agriculture income increased by 16 percent in 2010 compared to a previous year. The property income of the household is very small closed to zero percent to the total incomes.

In Phnom Penh household wages and salaries increased about 19 percent in 2010 compared to 2009. The self-employment income decreased by 15 percent caused by agriculture and non-agriculture income were also decreased. The household income from owner occupied house increased by 16.4 per cent in 2010 compared to 2009. However, the income from property income decreased significantly about 41 percent in 2010 compared to 2009. The household total incomes represented decreases about 3 percent in 2010.

In other urban areas, the household total incomes increased about 37 percent in 2010 compared to 2009. The main source of household income in other urban areas is from self-employment which represented about 67 percent of the total income. Self-employment income in other urban areas is significantly increased about 52 percent in 2010 over a previous year. The income sources from wages and salaries represented about 29 percent of the total incomes which increased about 14 percent in 2010 over 2009. The capital market for household seems very small, representing only closed to 1 per cent of the total income. Household income from agriculture has significantly increased about 95 per

cent while the non-agriculture income has also increased about 47 percent in 2010 over a previous year.

In other rural areas, the household total incomes increased about 24 percent in 2010 compared to 2009. The main source of household income in other rural areas is from self-employment which represented about 68 percent of the total income. Self-employment income in other urban areas is increased about 25 percent in 2010 over a previous year. The income sources from wages and salaries represented about 29 percent of the total incomes which increased about 21 percent in 2010 over a previous year. The capital market for household seems very small, representing only closed to zero percent of the total income. Household income from agriculture and non-agriculture has increased about 25 percent in 2010 over a previous year.

Table 1: Income composition, average per month, 2009 and 2010.

Source of income	Value in thousand Riels		Share in %	
	CSES 2009	CSES 2010	CSES 2009	CSES 2010
Cambodia				
Primary income	727	877	97	97
Wage and Salary	241	292	32	32
Selfemployment Income	482	582	65	65
Agriculture	162	205	22	23
Non Agriculture	250	290	34	32
Owner occupied house(*)	70	88	9	10
Property income	4	3	1	0
Total transfers received	19	24	3	3
Total Income	747	901	100	100
Total transfers paid	11	24	1	3
Disposable Income	736	877	99	97
Phnom Penh				
Primary income	1986	1940	97	98
Wage and Salary	765	910	38	46
Selfemployment Income	1203	1023	59	51
Agriculture	22	20	1	1
Non Agriculture	878	650	43	33
Owner occupied house(*)	304	354	15	18
Property income	17	7	1	0
Total transfers received	54	47	3	2
Total Income	2039	1987	100	100
Total transfers paid	24	44	1	2
Disposable Income	2016	1944	99	98
Other urban				
Primary income	1057	1457	96	97
Wage and Salary	381	434	35	29
Selfemployment Income	664	1012	60	67
Agriculture	64	125	6	8
Non Agriculture	503	738	46	49
Owner occupied house(*)	98	150	9	10
Property income	12	11	1	1
Total transfers received	43	47	4	3
Total Income	1101	1504	100	100
Total transfers paid	13	36	1	2
Disposable Income	1089	1468	99	98
Other rural				
Primary income	550	679	98	97
Wage and Salary	167	202	30	29
Selfemployment Income	382	476	68	68
Agriculture	189	237	34	34
Non Agriculture	152	190	27	27
Owner occupied house(*)	41	49	7	7
Property income	2	1	0	0
Total transfers received	13	18	2	3
Total Income	563	697	100	100
Total transfers paid	10	21	2	3
Disposable Income	554	676	98	97

*) In 2009 income own house adjusted to max = 1000000 per month, P99-value for Cambodia - > 1 percent of the households have been adjusted. % - Shares to total

Disposable income

The disposable income varies considerably between the different areas in Cambodia. In 2010, the average household income is 214 USD per month which increased about 19 percent over a previous year. The average disposable income per capita is 48 USD per month which is increased about 25 per cent in 2010 if compared to 2009. In Phnom Penh the average household income is 474 USD per month in 2010 and per capita disposable income is 104 USD per month.

In 2010, per capita disposable income in Phnom Penh is 2.8 times larger than the per capita disposable income in other rural areas. In 2009, per capita disposable income in Phnom Penh is 3.4 times larger than the per capita disposable income in other rural areas. There is a problem comparing household incomes between households of different size and composition as a large household in fact have a lower standard with the same income as a smaller household. The economic well-being might also be influenced by how many adults and how many children there are in each household. In this report the income per capita is used. The differences between the regions remain if instead of the household disposable income per capita income is used. See Table 2.

Table 2: Disposable income, average values per month, 2009 and 2010.

Domain	Values in thousand Riels			
	Per household		Per capita	
	CSES 2009	CSES 2010	CSES 2009	CSES 2010
Cambodia	736	877	158	197
Phnom Penh	2016	1944	414	428
Other urban	1089	1468	234	329
Other rural	554	676	121	153

The mean value doesn't give a fair picture of the income level for the typical Cambodian household. The mean value gets inflated by a few households with large incomes. Most Cambodian households have an income well below the mean value. Table 3 shows the income for the household in the middle of the distribution, the median value, for the different regions in Cambodia. Also the median disposable income is considerably higher in Phnom Penh than in the other regions.

Table 3: Disposable income, median values per month, 2009 and 2010.

Domain	Values in thousand Riels			
	Per household		Per capita	
	CSES 2009	CSES 2010	CSES 2009	CSES 2010
Cambodia	384	471	87	112
Phnom Penh	1258	1303	268	290
Other urban	632	780	141	188
Other rural	323	410	73	96

The disposable income is unevenly distributed in Cambodia. Table 4 shows the population divided in five equally large groups (quintiles) by income. The 20 percent with the highest disposable income (quintile 5) have more than 60 percent of the total income. In 2010, the households in quintile 5 have a disposable income per capita that is 21 times larger than the 20 percent of the households with the lowest income. In 2009, the households in quintile 5 have a disposable income per capita that is 26 times larger than the 20 percent of the households with the lowest income.

Table 4: Quintile groups by disposable income per capita. Average values per month, 2009 and 2010.

Domain	Value in thousand Riels		Share in %	
Cambodia	CSES	CSES	CSES	CSES
Quintilegroup	2009	2010	2009	2010
1	19	28	2	3
2	49	69	6	7
3	88	113	11	11
4	148	180	19	18
5	488	595	62	61
Phnom Penh				
Quintilegroup				
1	82	85	4	4
2	177	190	8	9
3	271	290	13	14
4	405	438	20	20
5	1140	1135	55	53
Other urban				
Quintilegroup				
1	33	50	3	3
2	90	118	8	7
3	143	188	12	11
4	238	299	20	18
5	667	992	57	61
Other rural				
Quintilegroup				
1	17	25	3	3
2	43	61	7	8
3	74	97	12	13
4	121	149	20	19
5	352	433	58	57

In Table 5 the income distribution in Cambodia is presented by percentiles, where P05 represents the value that delimits the 5 percent of the households with the lowest income, P10 is the value that delimits the 10 percent with the lowest income and so on. P50, the median, represents the household in the middle of the income distribution.

A majority of the Cambodian households have a low income. In 2009, the income that delimits the top ten percent of the households with the largest incomes, P90, is roughly 16 times larger than the income that delimits the bottom ten percent, P10. In 2010, the income that delimits the top ten percent of the households with the largest incomes, P90, is roughly 12 times larger than the income that delimits the bottom ten percent, P10. Within the regions the distance is somewhat smaller.

Table 5: Disposable Income per capita per month by percentile in '000 Riels, 2009 and 2010.

Percentiles	Cambodia		Phnom Penh		Other urban		Other rural	
	CSES 2009	CSES 2010	CSES 2009	CSES 2010	CSES 2009	CSES 2010	CSES 2009	CSES 2010
P05	11	18	60	58	16	30	10	16
P10	20	30	89	92	36	55	18	27
P25	41	59	154	169	78	106	36	53
P50 Median	87	112	268	290	141	188	73	96
P75	168	201	448	480	271	330	136	163
P90	315	362	796	783	492	573	230	262
P95	478	562	1142	1122	683	1008	325	373

Definitions and methodological discussion

Income

See Section on Definitions and Classifications which is attached in Chapter 10 (About the Cambodia Socio-Economic Survey).

Recall versus Diary

The CSES data has been collected both as recall data and as data from a diary. An on-going discussion is what method is to be preferred or if there should be a combination of both. A special report handles this issue[4]. For the purpose to look on the two methods for measuring income, an investigation was carried out. This investigation ended in using recall data for income data and diary for negative transfers as taxes, transfers to other households and for charity. For these expenditures there existed no recall data. The reasons for this decision were that it is more relevant to use data for a whole year for income and expenditure for production costs and income for agriculture sector. Also with comparison with National Accounts it looked more stable. This is also in accordance to the recommendations in the report Guidelines for Constructing Consumption Aggregates for Welfare Analysis, which says that it's hard to collect income data from diaries in countries where income from agriculture is important as the income tends to fluctuate a lot over the seasons.[5]

Dealing with household negative incomes

Since there are no rules for depreciations in Cambodia, i.e. how to make expenditures for investments divided into several years. It's not unusual for households to have deficits or negative incomes. Some households have a disposable income less than zero; households with income from agriculture and non-agriculture have negative income. In this work negative incomes have been replaced by 4100 Riels, around 1 USD (2010) and replaced by 4000 Riels in 2009. This method takes away the problem with negative incomes but still give us the opportunity to measure activity in each sector, which wouldn't be the case if we replaced the negative numbers with zero.

Data cleaning

The results are very sensitive to the incomes in the very top of the distribution. Therefore a manual check of households with very high incomes has been carried through. Some errors were found and corrected which had a great influence of the results. The mean values decreased remarkably after the corrections were done.

Consumption versus income – underestimation of income

The results show that the mean disposable income is significant lower than the mean for total consumption. Empirical literature on the relationship between income and consumption show that consumption does not fluctuate as much as income over a period of time. Consumption is less variable over the period of a year and much more stable than income, especially in agricultural economies and therefore easier to estimate in a survey.[6] If we assume that the consumption data is accurate this indicates that the income is underestimated. In countries like Cambodia where self-employment in small businesses and agriculture is common it is very difficult to gather accurate income data. There is no depreciation of investments like tools and animals resulting in a rather large number of households with negative income. As mentioned above negative income is dealt with in a rough way by replacing the negative income with a small positive value of 1 USD per year. Still there are reasons to think that income from self-employment is underestimated. Also there might be households that are unwilling to

[4] Johansson,Follow-up on the Diary vs Recall issue and new plans, 2008

[5] Deaton, Zaidi, Guidelines for Constructing Consumption Aggregates For Welfare Analysis ,p 14

[6] Deaton, Zaidi, Guidelines for Constructing Consumption Aggregates For Welfare Analysis ,p 14

give a correct value believing that it will attract attention from tax-authorities. Evidence from other countries show that too little income is captured in surveys, especially this is the case with property income, as households with high income is more unwilling to answer[7].

9.2. Household consumption

The collection of data on household consumption in the Cambodia Socio-Economic Survey is used for measuring living standard, and monitoring and analysing poverty. Consumption data in the CSES is collected using recall questions in the household questionnaire. Consumption data is also collected in a Diary where all expenditure transactions and consumption of own produced goods during the survey month were reported.

In this report, the monthly consumption is calculated based on the recall questions. The consumption concept used in this report differs from the calculation of consumption for poverty estimates where adjustments for price differences, rental values…etc were done, see section on Definition and World Bank report. The results in this report include a short time series; 2009 and 2010. When analysing the results one should be aware of the uncertainty in the results due to sampling errors. The sample in CSES 2010 is a sub sample on village level from CSES 2009. The amounts are presented in current price.

Monthly average consumption

In 2010, the monthly average household consumption is 1,130 thousand Riels, and per capita consumption is 268 thousand Riels for Cambodia. The average monthly household consumption increased only slightly between 2009 and 2010. The monthly consumption per capita increased by 6 percent. The consumption amount varied a lot between the different geographical domains. In Phnom Penh, the average monthly consumption amount per household and per capita was almost three times higher than in other rural areas. See Table 6.

The change between 2009 and 2010 in consumption per capita is higher than the change in household consumption per household (5 % versus 0%). The reason for this is a decrease in household size between the two years. To some extent this can be attributed to sampling errors. It should be pointed out that the changes in percent between 2009 and 2010 in table 6 are not statistically significant.

Table 6: Average monthly household and per capita consumption 2009 and 2010.

Domain	Consumption in thousand (Riels)					
	Per household			Per capita		
	CSES 2009	CSES 2010	Changes (%)	CSES 2009	CSES 2010	Changes (%)
Cambodia	1,119	1, 122	0	254	266	5
Phnom Penh	2,466	2, 496	0	538	568	6
Other urban	1,553	1, 606	3	351	377	7
Other rural	920	899	-2	212	217	2

Consumption compositions

In Table 7 the consumption per capita for different items is presented. Almost half of the total consumption was food. The share of consumption of food and non-alcoholic beverage slightly decreased from 49 percent in 2009 to 46 percent in 2010 of the total consumption for Cambodia. In contrast, the consumption on housing (including utilities such as energy, water .etc.), which is the

[7] The Canberra group, Final report and Recommendations, Ottawa 2001, p 54

second highest consumption, increased slightly from 19 percent in 2009 to 21 percent in 2010 for Cambodia.

In Phnom Penh, on the one hand, the food share of the total consumption is lower than other geographical domains, and only increased slightly from 39 percent in 2009 to 40 percent in 2010 of the total consumption. On the other hand, the housing consumption (including utilities such as energy, water…etc.), which is also a substantial part of total consumption, is higher than other geographical domains. It slightly increased from 31 percent in 2009 to 32 percent in 2010.

The trends are not different for other urban and other rural areas. Per capita food consumption slightly decreased offsetting by the increase of per capita housing consumption.

Table 7: Consumption composition, average monthly value per capita, 2009 and 2010.

Consumption composition	Value in thousand Riels		% of total	
	CSES 2009	CSES 2010	CSES 2009	CSES 2010
Cambodia				
Food and non-alcoholic beverages	124	122	49	46
Alcohol and tobacco	6	5	2	2
Clothing and footwear	7	7	3	3
Housing, water, electricity	50	57	19	21
Furnishing etc	3	2	1	1
Health	19	21	8	8
Transportation	12	14	5	5
Communication	5	5	2	2
Recreation and culture	3	3	1	1
Education	5	7	2	3
Miscellaneous goods	21	23	8	9
Total	254	266	100	100
Phnom Penh				
Food and non-alcoholic beverages	207	228	39	40
Alcohol and tobacco	5	9	1	2
Clothing and footwear	10	13	2	2
Housing, water, electricity	169	181	31	32
Furnishing etc	6	6	1	1
Health	16	13	3	2
Transportation	38	37	7	6
Communication	14	12	3	2
Recreation and culture	12	9	2	2
Education	26	24	5	4
Miscellaneous goods	35	37	6	6
Total	538	568	100	100

Table 7: Consumption composition, average monthly value per capita, 2009 and 2010. (Cont.)

Consumption composition	Value in thousand Riels		% of total	
	CSES 2009	CSES 2010	CSES 2009	CSES 2010
Other urban				
Food and non-alcoholic beverages	158	156	45	41
Alcohol and tobacco	8	8	2	2
Clothing and footwear	9	8	2	2
Housing, water, electricity	81	106	23	28
Furnishing etc	5	4	1	1
Health	19	21	5	5
Transportation	16	18	5	5
Communication	9	8	3	2
Recreation and culture	5	6	2	2
Education	10	11	3	3
Miscellaneous goods	31	32	9	9
Total	351	377	100	100
Other rural				
Food and non-alcoholic beverages	111	105	52	49
Alcohol and tobacco	6	4	3	2
Clothing and footwear	6	6	3	3
Housing, water, electricity	33	36	15	17
Furnishing etc	2	2	1	1
Health	20	22	9	10
Transportation	9	11	4	5
Communication	3	3	1	2
Recreation and culture	2	2	1	1
Education	3	4	1	2
Miscellaneous goods	18	21	9	9
Total	212	217	100	100

Table 8 shows the population divided in five equally large groups (quintile groups) by per capita consumption. Quintile group 5, which is the 20 percent of the population with the highest consumption, stood for almost half of the total per capita consumption. The quintile group 5 had a monthly average consumption per capita almost six times higher than the average consumption in the group of households with the lowest consumption (quintile group 1). The distribution is almost the same for both years.

Table 8: Quintile groups by consumption per capita, average values per month, 2009 and 2010.

Domain	Value in thousand Riels		Share in %	
Cambodia	CSES 2009	CSES 2010	CSES 2009	CSES 2010
Quintile groups				
1	97	115	8	7
2	144	171	11	11
3	192	230	15	15
4	269	340	21	21
5	570	730	45	46
Phnom Penh				
Quintile groups				
1	218	125	8	8
2	333	174	12	11
3	430	238	16	14
4	576	360	21	22
5	1,136	746	42	45
Other urban				
Quintile groups				
1	127	118	7	7
2	198	173	11	11
3	281	235	16	15
4	393	344	22	22
5	758	718	43	45
Other rural				
Quintile groups				
1	93	115	9	7
2	135	171	13	11
3	174	229	16	15
4	231	334	22	21
5	427	713	40	46

Monthly total consumption and food consumption

Table 9 shows the total monthly consumption in Cambodia in billion Riels. The table also shows the distribution of total consumption in different geographical domains. In 2010, about 80 percent of all households live in other rural areas (see chapter 2 “Demographic characteristics”), but their share of the total consumption was lower (about 64 percent). The 10 percent of Cambodians who lived in Phnom Penh accounted for about 21 percent of the total consumption. The consumption of non-food items in relation to the total consumptions seems to have increased.

Table 9: Total monthly consumption and food consumption in percent.

Domain	Total monthly household consumption				Monthly food consumption		Food share of total consumption	
	Value in billion Riels		%		Value in billion Riels		%	
	CSES 2009	CSES 2010	CSES 2009	CSES 2010	CSES 2009	CSES 2010	CSES 2009	CSES 2010
Cambodia	3,289	3,273	100	100	1,647	1,531	50	47
Phnom Penh	645	688	20	21	253	280	39	41
Other urban	442	478	13	15	204	204	46	43
Other rural	2,202	2,107	67	64	1,189	1,048	54	50

Durable goods

According to the CSES 2010, the most common durable good owned by households in Cambodia was a bicycle. Almost three quarter of all households owned a bicycle in 2010 which was a slightly larger share compared to 2009. The increase in owning bicycles is due to an increased ownership in the rural areas.

Television was the second most common durable goods owned by the Cambodian households in 2010. On the one hand, owning a television decreased by about 3 percent in both Phnom Penh and other urban. On the other hand, in other rural areas, the ownership of television increased by about 9 percent, compared to 2009.

Compared to 2009, the share of households owning a cell phone increased only slightly in Phnom Penh as households in Phnom Penh owned a lot of cell phones already. The share increased substantially in other urban and other rural areas. It increased about 30 percent in rural areas in 2010. In 2010, almost half of rural households owned a cell phone. See Table 10.

Table 10: Selected items of durable goods owned by households. Percent.

Items of durable goods	CSES 2009				CSES 2010			
	Cambodia	Phnom Penh	Other urban	Other rural	Cambodia	Phnom Penh	Other urban	Other rural
Radio	43	41	45	42	41	45	39	40
Television	60	96	80	53	64	93	78	58
Video tape recorder/ player*)	29	60	47	23	31	62	42	26
Stereo	14	40	16	10	11	35	10	8
Cell phone	44	93	70	35	53	93	78	46
Satellite dish	1	2	3	1	2	2	3	1
Bicycle	68	45	61	71	71	46	62	75
Motorcycle	49	86	67	43	53	85	69	47
Car	4	20	8	2	4	17	8	2
Jeep/Van	1	3	3	1	1	1	1	1
PC	3	25	7	1	4	27	7	1

**) VHS/DVD is included*

Methods of Consumption

See Section on Definitions and Classifications which is attached in Chapter 10 (About the Cambodia Socio-Economic Survey).

Consumption concept

The result presented in this chapter is compiled from recall data. The household questionnaire had two sets of questions, one for food expenditure/consumption and one set for non-food expenditure. The questionnaire is designed to collect data on purchase in cash, consumption of own production, consumption of items received as wages in kind. It also includes gifts, free collection and barter, and in kind expenditure. The food section comprised 20 items covering all food, including alcoholic, tobacco, and food taken away from home, and prepared meals bought outside and eaten at home. The non-food section comprised 13 items covering all non-food expenditure except housing. Expenditure on housing is collected in the Housing module. The reference period for food items was the last seven days. For non-food items the reference period varies from last month to last 12 month (see the Household questionnaire in Appendix 4).

Housing

For "Housing" charges on water, sewage, wastewater disposal, garbage collection and fuel for lighting and cooking are included as well as paid rent. For owner occupied houses the household was asked to estimate the value for rent of a similar house. Expenditure spent on maintenance and minor repairs is also included. All this data is collected in the housing module.

Food consumption

Includes all food that the household bought or consumed from own production. Food taken away from i.e. meals at work, school, restaurants etc and prepared meals bought outside and eaten at home are also included as well as non-alcoholic and alcoholic beverages.

Total consumption

Total consumption includes food non-alcoholic and alcoholic beverages, tobacco and non-food.

Food share

Food share are calculated as the share of total consumption. Food includes all food items, non-alcoholic and alcoholic beverages.

10. About the Cambodia Socio-Economic Survey (CSES)

10.1. Background and introduction

The Cambodia Socio-Economic Survey (CSES) has been conducted by the National Institute of Statistics (NIS) in 1993/94, 1996, 1997, 1999 and 2004. Since 2007 NIS conducts the CSES annually. In 2010 the CSES was conducted with a nationwide representative sample of 12,000 households. The CSES is a household survey covering many areas relating to poverty and living conditions. Questions are asked for the household and for the household members.

Poverty reduction is a major commitment by the Royal Government of Cambodia. Accurate statistical information about the living standards of the population and the extent of poverty is an essential instrument to assist the Government in diagnosing the problems, in designing effective policies for reducing poverty and in monitoring and evaluating the progress of poverty reduction. The Millennium Development Goals (MDG) has been adopted by the Royal Government of Cambodia and a National Strategic Development Plan (NSDP) has been developed. The MDGs are also incorporated into the "Rectangular Strategy of Cambodia".

Cambodia is still a predominantly rural and agricultural society. The vast majority of the population get their subsistence in households as self-employed in agriculture. The level of living is determined by the household's command over labour and resources for own-production in terms of land and livestock for agricultural activities, equipments and tools for fishing, forestry and construction activities and income-earning activities in the informal and formal sector. The CSES aims to estimate household income and consumption/expenditure as well as a number of other household and individual characteristics.

The earlier CSES rounds have all made it possible to report sets of indicators on 8 main areas of social concern

- Demographic characteristics
- Housing
- Agriculture
- Education
- Labour Force
- Health and Nutrition
- Victimization
- Household Income and Consumption

These eight areas were also covered by corresponding modules in the CSES 2010. The household questionnaire is basically the same as before. There are some changes though, mostly minor except for the questions on current economic activity. In CSES 2010 some changes have been introduced in the household questionnaire.

10.2. Objective of the survey

The main objective of the survey is to collect statistical information about living conditions of the Cambodian population and the extent of poverty. The survey can be used for identifying problems and making decisions based on statistical data.

The main user is the Royal Government of Cambodia (RGC) as the survey supports monitoring the National Strategic Development Plan (NSDP) by different socio-economic indicators. Other users are university researchers, analysts, international organizations e.g. the World Bank and NGO's. The National Accounts also uses the information from CSES in its calculations. The World Bank has

published a report on poverty profile and social indicators using CSES 2007data[8]. In this regard, the CSES 2010 also continues to serve to all stakeholders involved as essential instruments in order to assist in diagnosing the problems and designing their most effective policies.

10.3. Survey planning and organisation

NIS formed a Project Staff in the Core Group in 2006 for managing the CSES's which since then has been working with the CSES 2007, 2008, 2009 and 2010. The project staff for the CSES 2010 consisted of 23 persons including technical staff taking different responsibilities in the running CSES. The project staff was responsible for all survey planning and activities and also engaged in establishing and carrying out monitoring schemes during the fieldwork, in arranging stakeholder meeting/workshop/seminar for questionnaire designing, data analysing, dissemination of the results, and for reporting to the Statistical Advisory Committee (SAC). The project staff was responsible for the allocation and utilisation of funds and in solving logistical problems during the course of the survey.

As the most important part of the organisation of the CSES 2010, 60 enumerators and 20 supervisors were recruited in late 2009 and were subject to training for the fieldwork. Some additional enumerators and supervisors were also trained to be able to replace those who resigned during the field work.

A list of NIS survey staff in the CSES 2010 is provided in Appendix 7.

10.4. Sample design and estimation

The sample of villages for CSES 2010 is just a simple random 50 % subsample from the CSES 2009 sample of villages. Consequently, the description of the CSES 2010 sample design will by necessity begin with a description of the CSES 2009 design.

The sample is selected in three stages. In stage one a sample of villages is selected, in stage two an Enumeration Area (EA) is selected from each village selected in stage one, and in stage three a sample of households is selected from each EA selected in stage two.

Different aspects of the CSES 2009 sample design are described in sections 10.4.1 to 10.4.4. The CSES 2010 subsample and the method of calculating sampling weights is described in sections 10.4.5 and 10.4.6.

10.4.1. Target population, sample frame of villages

The target population for CSES is all "normal" households in Cambodia. The term normal is defined in the Population Census 2008 as households that are not institutional households, homeless households, boat population households or households of transient population. (Institutional households are boarding houses, military barracks, prisons, student dormitories, etc.). Preliminary data from the General Population Census 2008 was used to construct the CSES 2009 sampling frame for the first stage sampling, i.e. sampling of villages. All villages except 'special settlements' were included in the frame. In all, the first stage sampling frame of villages consisted of 14,073 villages.

10.4.2. Stratification, allocation of the sample over strata

The sampling frame of villages was stratified by province and urban and rural. In total there are 48 strata. Each stratum of villages was sorted by district, commune and village code.

[8] World Bank (2009). Poverty profile and trends in Cambodia, 2007 - Findings from the Cambodia Socio-Economic Survey (CSES). Report No. 48618-KH.

For the CSES 2009 survey it was decided to have a sample of 720 villages. The total sample size was divided into to two: one sample size for urban villages and the other for rural villages. The calculation of the sample sizes for urban and rural areas were done using the proportion of consumption in the two parts of the population. Data on consumption from the CSES 2007 survey was used. The resulting sample sizes for urban villages was 240 and for rural 480.

The allocation of urban and rural sample size over provinces was done so that each province got its proportional share (approximately) of the sample.

10.4.3. Allocation of the sample over survey months

The total sample of 720 villages was divided into 12 monthly samples of equal sizes. The monthly samples consisted of 20 urban and 40 rural villages. The division of the annual sample into monthly samples was done so that as far as possible each province would be represented in each monthly sample. Since the sample size of villages in some provinces is smaller than 12, all provinces were not included in all monthly samples. Also, the outline of the fieldwork with teams of 4 enumerators and one supervisor puts constraints on how to divide the annual sample into monthly samples. The supervisors must travel between the villages in a team and therefore the geographical distance between the villages surveyed by a team cannot be too large.

10.4.4. Sampling

The sample was selected in three stages:

Stage 1: A random sample of villages was selected from each stratum. The sampling method can be expressed in technical terms as: "*without replacement systematic sampling with probabilities proportional to size*". The size measure used was the number of households in the village according to the sampling frame. The selection of villages was done at NIS.

Stage 2: One EA was selected by Simple Random Sampling (SRS), in each village selected in stage 1.In a few large villages more than one EA was selected. The selection was done at NIS.

Stage 3: In each selected EA a sample of 10 households (urban villages) or 20 households (rural villages) was selected. The selection of households was done in the field. All households in selected EAs were listed by the enumerator. The sample of households was then selected from the list by systematic sampling with a random start (the start value controlled by NIS).

The sampling resulted in a sample of 12,000 households, 2,400 urban households and 9,600 rural households.

10.4.5. Sample design and sampling for CSES 2010

The sample design for CSES 2010 is basically the same as the CSES 2009 design. For the 2010 survey a subsample of 360 EAs (stage 2 units) was selected from the CSES 2009 sample of 720 EAs. The selection was done by simple random sampling within strata. The selection resulted in 136 urban EAs and 224 rural EAs.

Households were selected in the same way as in CSES 2009. For CSES 2010 only 10 households are selected in each rural EA, as compared to 20 households in 2009. In urban areas 10 households were selected, just as in 2009.

The sampling resulted in a sample of 3,600 households, 1,360 urban households and 2,240 rural households.

10.4.6. Sampling weights for CSES 2010

The 3,600 households in the sample did not have the same probability of being selected to the sample. Urban households had on average a 1 in 400 chance of being selected while rural households only had a 1 in 1000 chance of being selected. Urban households are over-represented in the sample as a result of this way of selection. This is not a flaw in the design but rather an intended feature of the design.

The over-representation of urban households in the sample must be compensated for in the calculations of results from the sample. Each household must be assigned a "sampling weight" that reflects the chance (probability) of the household to be selected to the sample.

The sampling weights were calculated in two steps:

Step 1, Preliminary weights: The probability of being selected to the sample was calculated for each household, giving the preliminary sampling weight as the ratio *1/probability* (=inverse of the probability).

Step 2, Final weights: The preliminary sampling weights were added over all sample households within each stratum. The sum of the weights is an estimate of the total number of households in the stratum. This estimate was compared to the number of households according to demographic projections based on the 2008 Population Census. The preliminary sampling weights were then "calibrated" so that the sum of the weights should agree with the demographic projections.

10.5. Quality of the estimates from CSES

All survey data are subject to errors from various sources. The errors may occur at any stage during the survey work. A broad fundamental distinction of errors is between sampling errors and non-sampling errors. The quality of an *estimate*, i.e. a result, from the survey is a function of both sampling and non-sampling errors.

10.5.1. Sampling errors

There is always an uncertainty in the results (estimates) from the survey due to the fact that not all households in Cambodia are included in the survey. This uncertainty is indicated by the standard error for the estimate. A large standard error implies a large uncertainty in the estimate. The uncertainty can also be expressed as a *confidence interval* ("margin of error") around the estimate. The confidence interval around the estimate is the interval obtained by subtracting two standard errors from the estimate (=lower boundary of the interval) and adding two standard errors to the estimate (=upper boundary of the interval)[9]. The confidence interval is an interval within which the true value for the population can reasonably be assumed to be. An example:

> The estimated average floor area of residential houses/dwellings for the households in Cambodia is 44.5 square meters (sqm). The standard error is 0.77 sqm. The confidence interval becomes 44.5 +/- 2*0.77 which results in the interval [43.0 - 46.0]. This interval covers the true, unknown, average floor area for <u>all</u> households in Cambodia with a high degree of confidence.

Standard errors or confidence intervals are presented for some important estimates in appendix 1. The standard errors have been calculated by the Taylor linearization method. The software used was Stata 11, survey data analysis (svy) module.

If the reader doesn´t find the standard error and confidence interval in appendix 1 it is possible to get an approximation to the standard error – provided the estimate is a percentage. In these cases it is possible to compile approximate standard errors based on the percentage and the size of the sample on which the percentage is calculated. Approximate standard errors for various percentage levels and different base populations are presented in table 1. Base population is the group for which the percentage is estimated.

Example: the net attendance rate for women in Other Urban is 91.0% (primary school). The base population is "Other Urban, all women". Go to the next to last row in the table where "Other Urban, all women" is found. Go to the third column, "10% or 90%", and find the error margin 2.6%.

[9] The theoretically correct method is to add and subtract 1.96 standard errors

The confidence interval is consequently 91.0 +/- 2.6. Another example: The proportion of households in Other Rural domain having a video player is estimated at 25.9%. To find the error margin we interpolate roughly between the columns for 20% and 30% and end up with (2.6+3.0)/2 = 2.8%. The interval becomes 25.9 +/- 2.8.

Table 1: Approximate standard errors for percentages

Estimate in %:	2% or 98%	5% or 95%	10% or 90%	15% or 85%	20% or 80%	30% or 70%	40% or 60%	50%
Base population:	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
Cambodia, all households	0.7	1.1	1.6	1.8	2.1	2.4	2.5	2.6
Phnom Penh, all households	1.6	2.5	3.4	4.1	4.5	5.2	5.6	5.7
Other urban, all households	1.7	2.7	3.7	4.4	4.9	5.6	6.0	6.1
Other rural, all households	0.9	1.4	2.0	2.4	2.6	3.0	3.2	3.3
Phnom Penh, all households	1.6	2.5	3.4	4.1	4.5	5.2	5.6	5.7
Plain, all household	1.2	1.9	2.6	3.1	3.5	4.0	4.3	4.4
Tonle Sap, all households	1.4	2.2	3.0	3.6	4.0	4.6	4.9	5.0
Coastal, all households	2.8	4.4	6.0	7.1	8.0	9.2	9.8	10.0
Plateau/Mountain, all households	2.2	3.4	4.7	5.6	6.3	7.2	7.7	7.8
Cambodia, all persons	0.4	0.6	0.8	0.9	1.1	1.2	1.3	1.3
Phnom Penh, all persons	0.8	1.2	1.7	2.0	2.3	2.6	2.8	2.8
Other urban, all persons	0.9	1.4	1.9	2.2	2.5	2.9	3.1	3.1
Other rural, all persons	0.5	0.7	1.0	1.2	1.4	1.6	1.7	1.7
Cambodia, all men	0.5	0.8	1.1	1.4	1.5	1.8	1.9	1.9
Phnom Penh, all men	1.2	1.8	2.5	2.9	3.3	3.8	4.0	4.1
Other urban, all men	1.3	2.0	2.7	3.2	3.6	4.2	4.4	4.5
Other rural, all men	0.7	1.1	1.5	1.8	2.0	2.3	2.4	2.5
Cambodia, all women	0.5	0.8	1.1	1.3	1.5	1.7	1.8	1.8
Phnom Penh, all women	1.1	1.7	2.4	2.8	3.1	3.6	3.9	3.9
Other urban, all women	1.2	1.9	2.6	3.1	3.5	4.0	4.2	4.3
Other rural, all women	0.7	1.0	1.4	1.7	1.9	2.2	2.3	2.3

10.5.2. Non-sampling errors

Non-sampling errors are mainly associated with field work and data processing procedures. The non-sampling errors in CSES are non-response errors, response errors and data processing errors. The tableau below gives an overview of the different types of error and presents an assessment of the effects of the errors on survey results.

Type of error	Description	Assessment
Non-response errors	Some of the selected households do not participate in the survey because they refuse or are not available for interview. Also partial nonresponse where the household cannot or does not want to answer a question	The non-response rate is very low; only eight households out of the selected 3,600 households are missing from the survey. Therefore, the effects of non-response errors is negligible in CSES 2010
Response errors (measurement errors)	Errors in responses from the households because the household: - doesn't understand the question correctly - doesn't know the correct answer, or	It is very difficult to assess the response errors that arise in the survey. Some response errors are found and corrected in the automatic logical checks and range checks that are done

	doesn't remember correctly - doesn't want to give the correct answer (on sensitive questions) - gets tired of the questions and doesn't want to cooperate fully during the whole interview. Errors can also be caused by the interviewer when he/she doesn't record the responses correctly	at data entry and right after data entry. Some other errors present in the survey cannot be detected unless special quality studies are carried out (re-interview studies, register studies, "data confrontation"). This has not been done. The CSES has been carried out four times prior to the present survey. Over the years errors and ambiguities in questions, definitions and concepts have been addressed and corrected. It is therefore fair to say that many sources for potential response errors have been eliminated. Still, there are errors left in the data. These errors have limited impact on most estimates but may have rather large impact on some estimates, for example estimates of expenditure on commodities with low-frequent purchases.
Data processing errors	Data entry staff make mistakes; the staff coding the answers to the open-ended questions (like occupation) put wrong codes in some cases	A large number of automatic logical checks and range checks are done at data entry and right after data entry. Also, the staffs analyzing the data carry out additional checks of outlier values and other values that are clearly inconsistent. The thorough editing of the data makes sure that most of the substantial data processing errors are detected and corrected – except for the coding errors. The coding errors can only be detected by special studies like re-coding by another coder and reconciliation of differing codes. No such study has been made but great efforts have been made to train the coders properly. This has for sure reduced the level of coding errors considerably.

10.5.3. A note on the estimates of totals in CSES 2009

The estimates of total population and total number of households for 2009 presented in the CSES 2009 report are high compared to the estimates for 2008 and 2010 and not consistent with the trend observed over previous years. A review of the estimation procedure for 2009 has therefore been made and as a result of that review the sampling weights for 2009 have been adjusted downwards.

The adjustments have an effect on all estimates of totals for 2009. All totals have been adjusted downwards compared to what was presented in the CSES 2009 report. Specifically, the estimate of the total number of households was reduced by 2.1 % and the estimate of total number of persons was reduced by 1.7%. On the other hand, means, ratios and percentages are not affected at all by the adjustments.

To conclude: the estimates of totals for 2009 presented in this report differ from (are lower than) the totals presented in the CSES 2009 report.

10.6. Questionnaire design

No pilot survey was carried out in CSES 2010, as the formats and standards of questionnaires are based on the ones used in previous CSES's with the intention to as far as possible keep the comparability between the surveys.

There were just minor changes based on the experience and evaluation of the questionnaires of previous conducted CSES's.

Four different questionnaires or forms were used in the CSES 2010:

10.6.1. Questionnaires

- **Household listing form**

  The listing of households was used for sampling households. The form also includes mapping sheets of the village/enumeration areas.

- **Village questionnaire**

  The village questionnaire was responded by the village leader or a representative of the village leader. The questions are about demographic information, economy and infrastructure, rainfall and natural disasters, education, health, retail prices (food and non-food items), employment and wages, access to common property resources during the last 5 years, sale prices of agricultural land in the village, recruitment of children for work outside the village.

- **Household questionnaire**

  The household questionnaire was responded by the head of the household, spouse of the head of the household or of another adult household member.

  The household questionnaire includes questions about housing conditions, crop production and other agricultural activities, liabilities, durable goods, construction activities and income from other sources than economic activity.

  The household questionnaire also includes questions for each household member about education and literacy, migration, housing, household economic activities, maternal and child health, health care seeking expenditure, disability, current (and usual) economic activity and employment, and victimization. Some of these questions were responded by the head of household/spouse and some were responded by each household member.

- **Diary sheet**

  - Diary for expenditure & consumption of own-production
  - Diary for household income & receipts

  These questionnaires are attached in Appendix 2-5**.**

10.7. Field operations and training

10.7.1. Enumerator and supervisor training

Prior to the start of the fieldwork the interviewer and supervisor training were carried out.

The 60 interviewers and 20 supervisors selected amongst those who were involved in CSES 2009 and were split into two groups, each consisting of 30 interviewers and 10 supervisors. The two groups alternated so that the first group did their fieldwork during odd survey months (i.e. January, March, May, July, September, and November 2010) while the second group covered the even survey months (i.e. February, April, June, August, October, and December 2010).

The training was designed with this in mind. The first group was trained in December 2009 while the second group was trained in January 2010 using premises at the NIS head office. Training of the first and second group was provided in Khmer by the appointed NIS core group and was assisted by Sida consultants. The supervisors and interviewers were jointly trained and reviewed for one week only over the 4 forms of questionnaires, because all definitions, concepts and methodologies of the survey are almost similar to CSES 2009. Training manuals are extensive and are not attached. They can however be obtained at NIS.

10.7.2. Field operations

Interviewers and supervisors were initially divided into teams consisting of four persons (one supervisor and three interviewers), making in total 20 teams for the fieldwork. Each month 10 teams were working in the field with a workload of 10 households per interviewer. The fieldwork plan was designed in order to gather information from about 30 households monthly per team. For a given month the team arrived in the village three days before the first day of the interview month to tend to preparatory tasks like discussing with village authorities, filling in the household listing form and thereafter sample those households to be interviewed. The village questionnaire was filled in by the supervisor, the household questionnaire had 17 sections that were filled in by the interviewer during the first visit to the household, and during a survey month different questions have been asked different weeks according to the following:

- Week 1. Questions about education, migration, and housing
- Week 2. Questions about economic activity, agricultural and non-agricultural business, household liabilities and other incomes.
- Week 3. Questions about construction, durable goods, maternal health, child health, health care seeking and expenditure and disability
- Week 4. Questions about current and usual economic activities, victimization and summary of presence in the household

The supervisors were responsible for checking errors in the interviewed questionnaires according to the time schedule (i.e. week by week), and when the errors were found, the interviewers were required to re-interview.

When the month ended, the team went back to the NIS headquarter in Phnom Penh. Questionnaires from the same PSU were delivered to the NIS team for editing and coding by the supervisor in a packet including all the documents used and produced in the fieldwork, such as maps, enumeration lists and questionnaires.

Appendix 7 contains an example (the first survey month) from the allocation of teams to PSU's.

Before going to the villages the teams were briefed and introduced to minor adjustments of the interviewing procedure that were made as a result of monitoring activities and feed-back from the data processing.

10.7.3. Monitoring

Any survey of the CSES dimensions needs a comprehensive system for quality management and monitoring. Only then errors can be found in time to avoid quality problems later in the data process.

The CSES management group within NIS therefore set up a monitoring scheme to be implemented from the very beginning. The monitoring team included five NIS staff. The DG of NIS has spent 2–3 days monthly while other members of NIS in the core group (3-4 staff) were in the field for two weeks on the average. At times some Sida long-term consultants of NIS participated. Inspections entailed both announced and unannounced visits. Every team was visited at least once during their fieldwork period. There were numerous purposes of these visits. One important intention was to get a disciplinary effect on supervisors and enumerators from their knowledge inspections must be expected throughout the fieldwork, including also the very end of the diary month. Important was also to give feedback and encouragement to fieldworkers as well to complement training by advice and suggestions as to sort out any problem that might be occurred in the course of fieldwork.

10.8. Data processing

The data processing was done at NIS in Phnom Penh using the SQL data management system that verifies the data entry operation. A team of data editors, data coders and data entry staff was formed. The data editors were checking the questionnaires before the data entry and also took care of errors to

ensure that entered data were consistent with the collected data in the questionnaires or diaries. Before the data entry the coders also put relevant codes in the questionnaire and diary.

10.8.1. Training

In December 2009, the data processing team participated in a training course for enumerators and supervisors. The main objective of the training was to identify anomalies in the questionnaire and also discuss certain ideas raised during training sessions to avoid and reduce future mistakes. From January 2010 and onwards, the supervisor for data editing and coding took part in reviewing problems raised by instructors and enumerators encountered during fieldwork interviews.

10.8.2. Data editing and coding

The NIS team commenced their work of checking and coding in beginning of February 2010 after the first month of fieldwork was completed. Supervisors from the field delivered questionnaires to NIS. Sida project experts and NIS Survey Manager helped solving relevant matters that became apparent when reviewing questionnaires on delivery.

10.8.3. Basic instructions

All questionnaires from each PSU were delivered to editors and coders by supervisor. The editors and coders were responsible for handling the questionnaires from the brought from the field supervisor's until finishing the process of checking and coding. When checking and coding a red pen was used in the questionnaire.

10.8.4. How the workflow is organised at the office

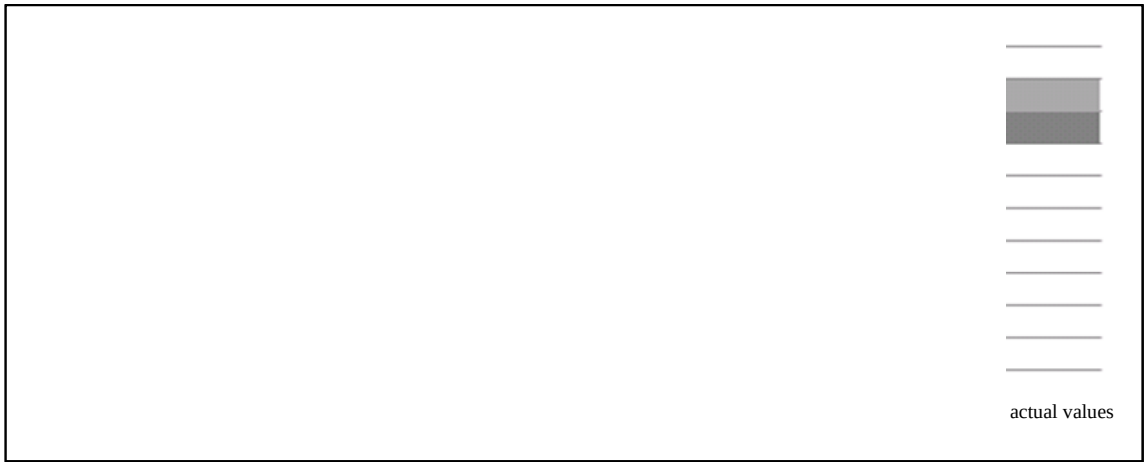
Data editing and coding is an important part of the overall data processing for CSES 2010. In brief, the data editing and coding process was similarly implemented as previous CSES (CSES 2007, 2008, and 2009) and comprises the following functions:

- When a field supervisor delivered questionnaires from a PSU the delivery contained a set of mappings, listings, village questionnaires, household questionnaires and diary forms. Editors and coders started checking each PSU including mapping information and all other forms.
- Field supervisor had to wait for editor and coder's checking. If any problem occurred, editor had to immediately ask field supervisor to correct the error. After corrections were completed, editor started the coding process. The code to be used included e.g. crop-code, occupation, industry code, income and expenditure code, and unit code.
- When editor encountered a mistake which could not be corrected directly by editor it had to be discussed with the supervisor or called back to enumerator. After checking and coding was finished, the data editor staff put all documents from the PSU into a designated box labelled with the PSU number and sent it to the data-entry operator.
- In case the data-entry operator encountered any mistakes caused by checking and coding, the operator sent the questionnaire back for re-edit and checking. Editing and coding proceeds every month and is done one week before data entry starts.
- During the tabulations, the data editing and cleaning was also done by each subject-matter staff that is responsible for each subject area in cooperation with Sida project experts (short-term/long-term consultants).

10.9. Comparability

The results from CSES 2010 are comparable with previous CSES conducted 2004, 2007, 2008 and 2009. However, changes in the questionnaire design have been made during the years which affect the comparability. E.g. the Victimization module was not included in CSES 2008 and the module concerning Current economic activity was comprehensively changed in CSES2010 compared to previous CSES. (For more details see paragraph 10.6 Questionnaire design).

When comparing CSES results between different years it is important to recognize the statistical uncertainty in the estimates. In a sample survey like CSES there will always be an inaccuracy in the estimated results as not everyone concerned is asked. The extent of the accuracy is unknown and that causes uncertainty in the estimates. This normal uncertainty is usually indicated by a so called confidence interval around the estimated result.



Comparisons of the results from the 2010 CSES with previous surveys before 2004, CSES 1993/94, 1996, 1997 and 1999, are not recommended due to differences in the survey design.

The weights initially used in the reports from CSES 2004 have been adjusted according to the 2008 Population Census ensuring comparability between CSES 2004 and onwards.

10.10. Definitions and Classifications

10.10.1. Geographical levels of disaggregation

Besides presentations for Cambodia as a whole this report contains different levels of geographical disaggregation.

The geographical disaggregation relates to the disaggregation used in the Census 2008[10]. For the2008 Census the following criteria to every commune treated as urban was applied:

- Population density exceeding 200 per km^2.
- Percentage of male employment in agriculture below 50 percent.
- Total population of the commune should exceed 2,000.

Degree of urbanisation

The most overarching decomposition next to the country as a whole is disaggregation in two parts, so to speak degree of urbanization;

- Urban
- Rural

[10] General Population Census of Cambodia 2008. National Report on Final Census Results. August 2009.

Geographical domains

The most frequent "geographical" decomposition used in this report is into geographical domains that is;

- Phnom Penh
- Other urban
- Other rural,

where Phnom Penh includes both urban and rural areas.

Zones

The third level rarely used in this report for geographical decomposition next to the country as a whole is disaggregation into zones;

- Phnom Penh Phnom Penh
- Plains Kampong Cham; Kandal; Prey Veng; Svay Rieng; Takeo
- Tonle Sap Banteay Meanchey; Battambang; Kampong Thom; Siem Reap; Kampong Chhnang/Pursat
- Coast Kampot; Other Coastal (*Sihanoukville, Kep and Koh Kong*)
- Plateau/Mountain Kampong Speu; Other Plateau/Mountain (*Kratie, Mondul Kiri, Preah Vihear, Ratanak Kiri, Stung Treng, Otdar Meanchey and Pailin*)

10.10.2. Age

Age is defined as completed solar years. It is an estimated or calculated interval of time between the date of birth for each household member and the date of initial visit to the household. The formation on age is collected by asking the date of birth of each household member regarding day, month and year.

10.10.3. Household

The survey covers private households with one or more persons. Nomadic households are included in principal. Households excluded from the survey are:

- People living in institutions such as long term hospitals, prisons, monasteries, military quarters.
- Diplomatic and UN households in the country.
- Armed forces in military bases.

A household is defined as a group of persons, or a single person, who usually live together and have a common arrangements for food, such as using a common kitchen or a common food budget. The persons may be related to each other or may be non-relatives, including servants or other employees, staying with the employer.

10.10.4. Labour Market

Working age population

In CSES 2009 the *working age population* is defined as all persons in the age of 15-64 years.

Economically active population

The *economically active population* comprises all persons who furnish the supply of labour for the production of economic goods and services as defined by the United Nations systems of national accounts and balances during a specified time-reference period. According to these systems the production of economic goods and services includes all production and processing of primary products whether for the market, for barter or for own consumption, the production of all other goods and

services for the market and, in the case of households which produce such goods and services for the market, the corresponding production for own consumption.

The international manual[11] for labour statistics uses two concepts of the economically active population.

- The *usually active population* measured in relation to a long reference period, such as one year.
- The *currently active population* or equivalently the **"**labour force", measured in relation to a short reference period of one week or one day.

In the CSESs the concept "currently active population" is used with reference period "the past seven days". In the recently published results from the Population Census 2008[12] the concept "usually active population" with reference period "the last 12 months" is used.

Economically inactive population

The *economically inactive population* comprises all persons in the working age population who were not **"**economically active", as defined above.

The persons not in the labour force, or equivalently, *population not currently active*, comprises all persons who neither were employed nor unemployed during the brief reference period and hence not currently active because of attendance at educational institutions, engagement in household duties, retirement or old age, or other reasons such as infirmity or disablement, which may be specified.

The labour force (the currently active population)

The labour force (i.e. the currently active population) comprises all persons who are *employed* or *unemployed*.

Employed

All persons who worked at least one hour during the reference period, the past seven days, or had a job/economic activity from which they were temporary absent are *employed*. Unpaid family workers are included in employed.

Status in employment

Status in employment refers to the status of an economically active person with respect to his or her employment. That is, whether he or she is an employer, own-account worker, employee, unpaid family worker or other.

Main and secondary occupation

Two occupations can be reported for the reference period in the CSES, the main occupation and the secondary occupation. In this report occupation, industrial sector and employment status are mainly based on the main occupation.

Unemployed

According to the international definition[13] the unemployed comprises all persons who during the reference period, the past seven days, were without work, were currently available for work and were actively seeking work. All three criteria must be fulfilled simultaneously.

[11] International Labour Office (1990). Surveys of economically active population, employment, unemployment and underemployment. An ILO manual on concepts and methods. ILO, Geneva, 1990. ISBN 92-2-106516-2

[12] National Institute of Statistics (2009). General Population Census of Cambodia 2008, National Report on Final Census Results, August, 2009.

[13] International Labour Office (1990). Surveys of economically active population, employment, unemployment and underemployment. An ILO manual on concepts and methods. ILO, Geneva, 1990. ISBN 92-2-106516-2

Not in the labour force (the currently inactive population)

People not belonging to the labour force (i.e. the currently inactive population) comprise all persons who are neither *employed* nor *unemployed*, i.e. do not belong to the labour force. (For example a full time student, homemakers, retired persons etc.)

Labour force participation rate

The *labour force participation rate* is defined as the labour force as a percentage of the working age population in the same age group.

Employment rate

The *employment rate* is defined as the share of the employed population in relation to the working age population.

Unemployment rate

The *unemployment rate* is defined as the share of the unemployed population in relation to the labour force.

10.10.5. Income

Income concepts

The main base to define income composition and income distribution for household has been Recommendations on Household Income Statistics from Canberra Expert Group published in 2001. The recommendations from the Canberra group have also been an essential background for other countries and organizations in their ways to try to harmonize methods and definitions for statistics on household income and distribution.

Employee income

Employee income deals with wages and salaries. Most of the values are given in cash amounts but to some extent there exists payment in kind. In CSES the interviewer will ask for both cash and non-cash payments.

Income from self-employment

Income from self-employment is the largest income among the households in Cambodia. It might also be the income for which it is most difficult to get a reliable estimate. This income is divided into three components: income from agriculture, from non-agriculture and from owner occupied houses. The problems in all three components are in both estimating the revenue and the costs for the activity.

Calculation of self-employment comes from the view of unincorporated enterprises surplus or deficit from inputs and outputs. For this reason one would look upon the flows of expenditure and receipts in this business. Since there are no bookkeeping in the households one has to rely on data from the interviews of both receipts/income and expenditure/costs for the households as a business.

One of the main problems is how to get a proper value of own consumption of goods produced in own production. The quantities as well as the value/price of these quantities are very hard to estimate.

It is also a problem with expenditure for investments. There are no rules for depreciations, i.e. how to make expenditures for investments divided into several years. Thus, one will find that for several households expenditures for one year might be higher than receipts and estimated value of own consumption of own production. In these cases one can talk about deficit or negative income.

A special problem arises how to estimate income from owner-occupied dwellings and houses (imputed rent). The theory behind income from owner-occupied house is that a household who is living in a mortgage-free house has a higher level of living (financially), than an otherwise identical household who rents their accommodation. The proper way is to estimate imputed rent for a dwelling or house and from this imputed rent to withdraw expenses connected to the object. Since it is obvious that data are missing to make a fair calculation one ought to make another alternative for imputed rent less actual costs. The method that is used in CSES originates from the view that income from owner

occupied house can be treated as an investment and that one can look for an alternative investment of the capital in the owner occupied house. This alternative investment can be the long-term return from Government bonds. Income from owner-occupied dwellings and houses is calculated by subtract the remaining debt from the market value of the dwelling. This value is multiplied by the long-term interest for Government bonds. A problem with this method is that it can yield unreasonable high estimates of imputed rent in large cities with high land values. In Cambodia this is the case in Phnom Penh. To prevent unreasonable high values of imputed rent to distort the results, imputed rent is limited to a maximum 12 million Riels per year[14].

Property income

The capital market for household seems very small in Cambodia. Income less expenses from rentals has been included in property income. The guidelines from Canberra group make this as an option.

Current transfers received

In Cambodia there are very small amounts for social insurance or universal or means-tested social benefits from the government. In the interview there are questions about other transfers from private households or from non-governmental organizations (NGOs). The main source is private transfers from other households both domestic and abroad. No social insurance benefits from employers' schemes are reported.

Total income

Total income is the sum from all different primary incomes and different transfers.

Current transfers paid

Current transfers paid should include different taxes on income and regular cash transfers to private households and for charities. Most of transfers paid are reported as transfers for charities. Social insurance contributions are not reported, either from employer or from employees.

Disposable income

Disposable income is the result when transfers paid, sometimes mentioned as negative transfers, has been withdrawn from the total income.

Equalization of income

To get a fair picture on the economic well-being you must collect data for households. It is obvious that all persons don't have an income by themselves but rely on income from other people in the household. This is certainly the case for children and elderly. This is true for any country. Therefore we collect income data for the household. However, there is a problem comparing households with different size and composition as a large household in fact have a lower standard with the same income as a smaller household. The economic well-being might also be influenced by how many adults and how many children there are in each household. One can argue that children cost less than adult to maintain. Furthermore, one can argue that there ought to be some economies of scale in households. A two-person household may not pay twice the amount compared to an one-person household for their living if one takes into account that in the two-person household share some of the consumption of durable goods like TV, mopeds, cars and alike. In this report we equalize the income per capita. This means that there are no economies of scales in the household and that children will cost as much as adult to maintain.

[14] In CSES-2009 one percent of the households had an imputed rent larger than 12 million riels before the adjustment was done.

10.10.6. Method of consumption

Consumption concept

The result presented in this chapter is compiled from recall data. The household questionnaire had two sets of questions, one for food expenditure/consumption and one set for non-food expenditure. The questionnaire is designed to collect data on purchase in cash, consumption of own production, consumption of items received as wages in kind. It also includes gifts, free collection and barter, and in kind expenditure. The food section comprised 20 items covering all food, including alcoholic, tobacco, and food taken away from home, and prepared meals bought outside and eaten at home. The non-food section comprised 13 items covering all non-food expenditure except housing. Expenditure on housing is collected in the Housing module. The reference period for food items was the last seven days. For non-food items the reference period varies from last month to last 12 month (see the Household questionnaire in Appendix 4).

Housing

For "Housing" charges on water, sewage, wastewater disposal, garbage collection and fuel for lighting and cooking are included as well as paid rent. For owner occupied houses the household was asked to estimate the value for rent of a similar house. Expenditure spent on maintenance and minor repairs is also included. All this data is collected in the housing module.

Food consumption

Includes all food that the household bought or consumed from own production. Food taken away from i.e. meals at work, school, restaurants etc and prepared meals bought outside and eaten at home are also included as well as non-alcoholic and alcoholic beverages.

Total consumption

Total consumption includes food non-alcoholic and alcoholic beverages, tobacco and non-food.

Food share

Food share are calculated as the share of total consumption. Food includes all food items, non-alcoholic and alcoholic beverages.

10.10.7. Classifications

Educational attainment

Education concerns the highest level of education successfully completed aggregated to the classification of educational attainment used in the 2008 Population Census[15], i.e.

- No or only some education:
  - Pre-school/Kindergarten,
  - No class completed/Never attended school
- Primary school not completed:
  - Class one to five completed
- Primary school completed:
  - Class six to eight completed
- Lower secondary school completed:
  - Class nine to eleven completed,
  - Lower secondary school certificate

[15] National Institute of Statistics (2009). General Population Census of Cambodia 2008, National Report on Final Census Results, August 2009.

- Upper secondary school completed:
  - Class twelve completed,
  - Upper secondary school certificate,
  - Technical/vocational pre-secondary diploma/certificate
- Post-secondary education:
  - Technical/vocational post-secondary diploma/certificate,
  - College/university undergraduate,
  - Bachelor degree (B.A., BSc),
  - Masters degree (M.A., MSc),
  - Doctorate degree (PhD)
  - Other

Occupation

Occupation refers to the kind of work done during the reference period, the last seven days. Information on occupation provides a description of a person's job. To classify this information, the International Standard Classification of Occupations, ISCO-88[16], was used.

Industry

The International Standard Industrial Classification of All Economic Activities, ISIC Rev.4.0, was used in the 2009 survey. The International Standard Industrial Classification of All Economic Activities, ISIC rev. 4.0 is considerably changed compared to the former ISIC rev. 3.1. ISIC now comprises 21 sections, which are then further subdivided into a total of 88 divisions, 238 groups and 419 classes. The added detail has increased the number of these categories considerably compared with ISIC, Rev.3.1. The reason for most of these changes, however, can be roughly divided into three categories:

- the introduction of new concepts at higher levels (e.g., “information and communication” or “waste management and remediation activities”)
- necessary changes to regroup activities that are residuals of the previous type of changes
- smaller adjustments and clarifications of concepts at lower levels, typically driven by efforts to enhance comparability.

All changes and adjustments make comparability between the two classification versions almost impossible even though headings and sections seem to be alike.[17]

Industry refers to the kind of economic activity of the workplace or enterprise where a person worked during the reference period, the last seven days.

The main industries are grouped into three sectors for which results are presented:

- Agricultural sector (section A in ISIC, Rev.4) (Primary);
  - Agriculture, forestry and fishing
- Industrial sector (sections B–F in ISIC, Rev.4) (Secondary) ;
  - Mining and quarrying,
  - Manufacturing,
  - Electricity, gas, steam and air conditioning supply,
  - Water supply; sewerage, waste management and remediation activities,
  - Construction

[16] http://www.ilo.org/global/What_we_do/Statistics/classifications/lang--en/index.htm.

[17] For more detailed information please look into International Standard Industrial Classification of All Economic Activities Revision 4, Statistical papers, ST/ESA/STAT/SER.M/4/Rev.4,UNITED NATIONS PUBLICATION, ISBN: 978-92-1-161518-0, United Nations New York, 2008.

- Service sector (sections G–U in ISIC, Rev.4) (Tertiary) ,
  - Wholesale and retail trade; repair of motor vehicles etc.,
  - Transportation and storage,
  - Accommodation and food service activities,
  - Information and communication,
  - Financial and insurance activities,
  - Real estate activities,
  - Professional, scientific and technical activities,
  - Administrative and support service activities,
  - Public administration and defence; compulsory social security,
  - Education,
  - Human health and social work activities,
  - Arts, entertainment and recreation,
  - Other service activities,
  - Activities of households as employers,
  - Activities of extraterritorial organizations and bodies.

Health provider

Refers to the first provider that was consulted due to health reasons and if more than one consultation was done in the past 30 days it refers to the last/most recent provider.

Health providers are aggregated into the four following groups

- Public care:
  - National hospital (PP)
  - Provincial hospital (RH)
  - District hospital (RH)
  - Health centre
  - Health post
  - Provincial or Community based rehabilitation centre
  - Other public
- Private care:
  - Private hospital
  - Private clinic
  - Private pharmacy
- Self care:
  - Visit in Home/Office of trained health worker/nurse
  - Visit of trained health worker/nurse
  - Other private medical
  - Shop selling drugs/market
- Traditional care:
  - Kruk Khmer/Magician
  - Monk/religious leader
  - Traditional birth attendant

Crops

The NIS classification of crops, based on FAO classification, provides a grouping into 23 groups. However, to get more reliable estimates six main groups are used, namely:

- Cereals (including mainly rice and other grains),
- Tubers and leguminous plants (including tubers, roots and bulk crop, and leguminous plants mainly for grain excluding soybean and groundnut),
- Industrial temporary crops (including sugar crops, oilseed crops, spices, condiments, aromatic and medicinal plants, fibre crops, and other industrial crops),
- Vegetables (including leafy or stem vegetables, fruit-bearing vegetables, root, bulb and tuberous vegetables, leguminous vegetables harvested green, other vegetables, and special horticultural cultivation),
- Fruits and nuts (including citrus fruit, other cultivated fruits, and edible nuts)
- Industrial permanent crops (including spices and aromatic crops, rubber and tanning crops, and flower crops).

Appendix 1. Standard errors and confidence intervals for selected estimates

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
Chapter 2. Demographic characteristics						
Cambodia	All households	Avearge number of persons per hh	4.6	0.0	4.5	4.7
Phnom Penh			4.7	0.1	4.6	4.9
Other urban			4.6	0.1	4.4	4.8
Other rural			4.6	0.0	4.5	4.6
Cambodia	All persons 15+	Percent married/living together	56.6	0.6	55.6	57.7
		Percent divorced/separated	2.3	0.2	2.0	2.7
		Percent widowed	8.7	0.3	8.1	9.3
		Percent never married or lived with a partner	32.4	0.5	31.5	33.3
	Men 15+	Percent married/living together	60.2	0.6	58.9	61.4
		Percent divorced/separated	0.8	0.2	0.6	1.2
		Percent widowed	2.5	0.2	2.1	3.1
		Percent never married or lived with a partner	36.5	0.7	35.2	37.8
	Women 15+	Percent married/living together	53.5	0.7	52.1	54.8
		Percent divorced/separated	3.6	0.3	3.1	4.2
		Percent widowed	14.2	0.5	13.3	15.3
		Percent never married or lived with a partner	28.7	0.6	27.6	29.8
Phnom Penh	All persons 15+	Percent married/living together	50.1	1.2	47.7	52.5
		Percent divorced/separated	2.0	0.3	1.4	2.8
		Percent widowed	8.0	0.6	6.9	9.2
		Percent never married or lived with a partner	40.0	1.0	37.9	42.0
Other urban	All persons 15+	Percent married/living together	53.3	1.4	50.6	56.0
		Percent divorced/separated	3.8	0.7	2.7	5.4
		Percent widowed	8.1	0.7	6.9	9.6
		Percent never married or lived with a partner	34.7	1.2	32.3	37.2
Other rural	All persons 15+	Percent married/living together	58	0.7	56.7	59.3
		Percent divorced/separated	2.1	0.2	1.8	2.6
		Percent widowed	8.8	0.4	8.1	9.6
		Percent never married or lived with a partner	31.0	0.6	29.9	32.2
Cambodia	All persons 5+	Percent moved within same province	27.1	0.9	25.4	28.9
		Percent moved in from other province	14.0	0.7	12.7	15.5
		Percent moved in from abroad	0.7	0.3	0.3	1.4
		Percent migrants	42.1	1.0	40.1	44.1
	Men 5+	Percent moved within same province	26.4	0.9	24.7	28.2
		Percent moved in from other province	14.5	0.8	13.0	16.2
		Percent moved in from abroad	0.7	0.3	0.4	1.5
		Percent migrants	42.0	1.1	39.9	44.1

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
	Women 5+	Percent moved within same province	27.7	1.0	25.8	29.7
		Percent moved in from other province	13.5	0.7	12.1	15.1
		Percent moved in from abroad	0.6	0.3	0.3	1.4
		Percent migrants	42.2	1.1	40.0	44.3
Phnom Penh	All persons 5+	Percent moved within same province	42.5	3.3	36.1	49.1
		Percent moved in from other province	29.7	2.1	25.7	34.1
		Percent moved in from abroad	0.6	0.3	0.2	1.5
		Percent migrants	72.8	1.9	68.8	76.5
Other urban	All persons 5+	Percent moved within same province	26.6	2.0	22.9	30.8
		Percent moved in from other province	26.3	1.9	22.7	30.2
		Percent moved in from abroad	0.5	0.2	0.2	1.1
		Percent migrants	53.6	2.4	48.8	58.4
Other rural	All persons 5+	Percent moved within same province	25.2	1.0	23.3	27.3
		Percent moved in from other province	10.5	0.8	8.9	12.2
		Percent moved in from abroad	0.7	0.3	0.3	1.7
		Percent migrants	36.7	1.2	34.4	39.1
Chapter 3. Housing						
Cambodia	All households	Percent with roof of hard/permanent	86.0	1.0	84.1	87.9
Phnom Penh		material	99.7	0.2	99.4	100.1
Other urban			96.4	0.9	94.6	98.2
Other rural			83.1	1.2	80.7	85.5
Cambodia	All households	Percent with walls of hard/permanent	68.3	1.4	65.7	71.0
Phnom Penh		material	98.5	0.5	97.5	99.4
Other urban			87.0	2.2	82.7	91.2
Other rural			62.4	1.7	59.1	65.7
Cambodia	All households	Percent with floor of hard/permanent	18.9	0.9	17.2	20.7
Phnom Penh		material	81.1	2.5	76.1	86.1
Other urban			38.3	3.1	32.3	44.4
Other rural			9.1	1.0	7.2	11.1
Cambodia	All households	Avearge number of persons per room	3.2	0.1	3.1	3.3
Phnom Penh			2.2	0.1	2.1	2.3
Other urban			2.6	0.1	2.3	2.9
Other rural			3.5	0.1	3.4	3.7
Cambodia	All households	Avearge number of rooms	1.4	0.0	1.4	1.5
Phnom Penh		per household	2.2	0.1	2.0	2.3
Other urban			1.8	0.1	1.6	2.0
Other rural			1.3	0.0	1.2	1.3

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
Chapter 4. Agriculture						
Cambodia	All households	Agricultural land in thousand hect.	3158	179	2807	3510
Phnom Penh			25	5	15	34
Pain			1093	79	938	1247
Tonle sap			1178	115	950	1405
Coastal			237	45	149	326
Plateau/mount			626	104	421	831
Cambodia	Male head of hh	Agricultural land in thousand hect.	2674	151	2376	2971
	Female head of hh		485	91	305	664
Phnom Penh	Male head of hh	Agricultural land in thousand hect.	23	5	13	32
	Female head of hh		2	1	0	3
Pain	Male head of hh	Agricultural land in thousand hect.	946	74	800	1092
	Female head of hh		147	18	111	183
Tonle sap	Male head of hh	Agricultural land in thousand hect.	923	73	780	1066
	Female head of hh		255	88	82	427
Coastal	Male head of hh	Agricultural land in thousand hect.	207	42	124	290
	Female head of hh		31	8	16	45
Plateau/mount	Male head of hh	Agricultural land in thousand hect.	575	103	372	777
	Female head of hh		51	14	24	78
Cambodia	All households	Number of cattle (thousands)	3052	154	2748	3356
Phnom Penh			5	5	0	16
Pain			1291	88	1117	1464
Tonle sap			838	80	680	997
Coastal			270	41	188	351
Plateau/moun			648	91	469	827
Cambodia	All households	Number of buffaloes (thousands)	669	74	524	815
Phnom Penh			0	0		
Pain			303	44	216	390
Tonle sap			210	37	138	282
Coastal			48	32	0	112
Plateau/mount			108	34	42	174
Cambodia	All households	Number of horses. ponies	24	9	6	41
Phnom Penh		(thousands)	0	0	0	0
Pain			17	8	1	33
Tonle sap			2	1	0	4
Coastal			2	2	0	7
Plateau/mount			3	3	0	9
Cambodia	All households	Number of pigs (thousands)	1435	130	1179	1691
Phnom Penh			9	6	0	20
Pain			750	101	552	949
Tonle sap			334	50	235	432
Coastal			173	55	65	282
Plateau/mount			169	35	101	237

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
Cambodia	All households	Number of sheep (thousands)	5	5	0	14
Phnom Penh			0	0		
Pain			5	5	0	14
Tonle sap			0	0		
Coastal			0	0		
Plateau/mount			0	0	0	1
Cambodia	All households	Number of goats (thousands)	35	22	0	79
Phnom Penh			0	0		
Pain			31	22	0	74
Tonle sap			1	1	0	3
Coastal			0	0		
Plateau/mountain			3	3	0	10
Cambodia	All households	Number of chicken (thousands)	23100	956	21300	25000
Phnom Penh			79	9	62	97
Pain			9657	602	8470	10800
Tonle sap			7189	516	6172	8206
Coastal			3227	441	2359	4095
Plateau/mountain			2986	338	2320	3653
Cambodia	All households	Number of ducks (thousands)	4618	1439	1784	7451
Phnom Penh			6	4	0	14
Pain			2016	742	554	3478
Tonle sap			2102	1225	0	4515
Coastal			225	93	42	408
Plateau/mount			269	99	75	464
Cambodia	All households	Number of quail (thousands)	164	119	0	399
Phnom Penh			0	0		
Pain			0	0		
Tonle sap			0	0		
Coastal			102	102	0	302
Plateau/mount			62	62	0	185
Cambodia	All households	Number of other livestock	5	4	0	12
Phnom Penh		(thousands)	2	2	0	5
Pain			3	3	0	10
Tonle sap			0	0		
Coastal			0	0		
Plateau/mount			0	0		

Chapter 5. Education

Cambodia	All persons 15+	Adult literacy rate	76.7	0.9	74.9	78.5
	Men 15+		85.1	1.0	83.2	87.1
	Women 15+		69.1	1.0	67.1	71.1
Phnom Penh	All persons 15+	Adult literacy rate	92.9	0.7	91.5	94.3
	Men 15+		97.4	0.6	96.3	98.6
	Women 15+		88.7	1.2	86.3	91.1

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
Other urban	All persons 15+	Adult literacy rate	86.6	1.2	84.2	89.0
	Men 15+		92.5	1.2	90.1	94.8
	Women 15+		81.7	1.6	78.6	84.8
Other rural	All persons 15+	Adult literacy rate	73.1	1.1	70.9	75.3
	Men 15+		82.4	1.2	80.0	84.8
	Women 15+		64.6	1.3	62.1	67.1
Cambodia	All persons 7+	Percent never attended school	16.3	0.7	14.9	17.7
	Men 7+		11.0	0.9	9.2	12.7
	Women 7+		21.3	0.8	19.8	22.8
Phnom Penh	All persons 7+	Percent never attended school	5.5	0.5	4.5	6.5
	Men 7+		2.3	0.4	1.4	3.1
	Women 7+		8.5	0.9	6.6	10.4
Other urban	All persons 7+	Percent never attended school	8.8	0.8	7.2	10.3
	Men 7+		4.5	0.7	3.0	6.0
	Women 7+		12.6	1.1	10.4	14.8
Other rural	All persons 7+	Percent never attended school	18.7	0.9	16.9	20.5
	Men 7+		12.9	1.1	10.8	15.0
	Women 7+		24.1	1.0	22.2	26.0
Cambodia	All persons 6-24	Percent currently attending school	57.9	0.9	56.0	59.7
	Men 6-24		59.2	1.3	56.6	61.7
	Women 6-24		56.5	1.0	54.5	58.5
Phnom Penh	All persons 6-24	Percent currently attending school	66.2	1.6	63.0	69.4
	Men 6-24		72.3	2.0	68.3	76.2
	Women 6-24		60.3	2.2	56.0	64.6
Other urban	All persons 6-24	Percent currently attending school	63.6	1.8	60.1	67.1
	Men 6-24		68.5	2.2	64.3	72.8
	Women 6-24		58.6	2.4	53.9	63.2
Other rural	All persons 6-24	Percent currently attending school	56.2	1.1	54.1	58.4
	Men 6-24		56.6	1.5	53.7	59.6
	Women 6-24		55.8	1.2	53.5	58.1
Cambodia	All persons 6-11	Net attendance rate. primary school	85.6	1.0	83.6	87.6
	Men 6-11		83.4	1.6	80.2	86.6
	Women 6-11		87.9	1.2	85.6	90.1
Phnom Penh	All persons 6-11	Net attendance rate. primary school	89.3	2.2	84.9	93.8
	Men 6-11		92.4	2.6	87.3	97.5
	Women 6-11		86.3	3.1	80.1	92.5
Other urban	All persons 6-11	Net attendance rate. primary school	90.2	1.7	86.8	93.6
	Men 6-11		89.6	2.3	85.1	94.0
	Women 6-11		91.0	2.3	86.4	95.5
Other rural	All persons 6-11	Net attendance rate. primary school	84.8	1.2	82.4	87.1
	Men 6-11		81.9	1.9	78.1	85.7
	Women 6-11		87.7	1.3	85.1	90.3

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
Cambodia	All persons	Average expenses. persons	384	20	345	424
	Men	in school (annual. thousand Riel)	425	29	369	482
	Women		339	18	304	374
Phnom Penh	All persons	Average expenses. persons	1218	99	1023	1412
Other urban		in school (annual. thousand Riel)	598	69	462	734
Other rural			238	18	203	274
Chapter 6. Labour force						
Cambodia	All pers. 15-64	Labour force participation rate	87.0	0.5	86.0	88.0
	Men 15-64	(percent)	90.0	0.6	88.9	91.2
	Women 15-64		84.2	0.7	82.8	85.7
Cambodia	Persons 15-19	Labour force participation rate	73.7	1.5	70.7	76.7
	Persons 20-24	(percent)	84.9	1.1	82.7	87.1
	Persons 25-34		92.2	0.7	90.9	93.5
	Persons 35-44		94.5	0.5	93.5	95.5
	Persons 45-54		92.2	0.8	90.7	93.7
	Persons 55-64		81.4	1.6	78.3	84.5
	Men 15-19	Labour force participation rate	74.2	2.0	70.3	78.1
	Men 20-24	(percent)	86.4	1.4	83.7	89.1
	Men 25-34		97.1	0.6	96.0	98.2
	Men 35-44		98.2	0.5	97.2	99.2
	Men 45-54		96.7	0.7	95.3	98.1
	Men 55-64		87.4	1.8	83.8	91.1
	Women 15-19	Labour force participation rate	73.2	1.8	69.7	76.7
	Women 20-24	(percent)	83.3	1.6	80.3	86.4
	Women 25-34		87.4	1.2	85.1	89.8
	Women 35-44		91.2	0.9	89.5	93.0
	Women 45-54		88.7	1.2	86.2	91.1
	Women 55-64		77.2	2.0	73.2	81.2
Phnom Penh	All pers. 15-64	Labour force participation rate	70.7	1.1	68.5	72.9
Other urban	All pers. 15-64	(percent)	82.0	1.5	79.1	85.0
Other rural	All pers. 15-64		90.0	0.6	88.8	91.2
Phnom Penh	Men 15-64	Labour force participation rate	76.9	1.4	74.1	79.7
Other urban	Men 15-64	(percent)	85.3	1.8	81.6	88.9
Other rural	Men 15-64		92.5	0.7	91.2	93.8
Phnom Penh	Women 15-64	Labour force participation rate	64.8	1.6	61.7	68.0
Other urban	Women 15-64	(percent)	79.3	1.9	75.6	82.9
Other rural	Women 15-64		87.6	0.9	85.9	89.4
Cambodia	Employed 15-64	Paid employee	29.8	1.0	27.9	31.9
		Employer	0.2	0.1	0.1	0.3
		Own account worker	50.5	0.9	48.7	52.3
		Unpaid family worker	19.4	0.7	18.1	20.9
		Other/don´t know	0.0	0.0	0.0	0.1

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
Cambodia	Empl. men 15-64	Paid employee	35.5	1.3	33.0	38.0
		Employer	0.2	0.1	0.1	0.4
		Own account worker	44.8	1.1	42.6	47.1
		Unpaid family worker	19.6	0.9	17.9	21.4
		Other/don´t know	0.0	0.0	0.0	0.2
Cambodia	Emp. wom.15-64	Paid employee	24.3	1.1	22.3	26.5
		Employer	0.2	0.1	0.1	0.4
		Own account worker	56.2	1.0	54.2	58.1
		Unpaid family worker	19.3	0.8	17.8	20.9
		Other/don´t know	0.0	0.0	0.0	0.2
Phnom Penh	Employed 15-64	Paid employee	58.9	2.0	54.9	62.9
		Employer	0.1	0.1	0.0	0.4
		Own account worker	28.7	1.4	26.0	31.6
		Unpaid family worker	12.3	1.3	10.0	15.1
		Other/don´t know	0.0	0.0	0.0	0.0
Other urban	Employed 15-64	Paid employee	40.1	2.2	35.7	44.6
		Employer	0.0	0.0	0.0	0.0
		Own account worker	44.2	1.7	40.7	47.6
		Unpaid family worker	15.8	1.4	13.2	18.7
		Other/don´t know	0.0	0.0	0.0	0.0
Other rural	Employed 15-64	Paid employee	25.3	1.2	23.0	27.8
		Employer	0.2	0.1	0.1	0.4
		Own account worker	53.8	1.1	51.5	56.0
		Unpaid family worker	20.7	0.9	19.1	22.4
		Other/don´t know	0.0	0.0	0.0	0.1
Chapter 7. Health						
Cambodia	All persons	Percent with illness. injury	19.1	0.9	17.4	20.9
	Men	last 30 days	16.8	0.9	15.0	18.7
	Women		21.3	1.0	19.3	23.3
Phnom Penh	All persons	Percent with illness. injury	16.7	2.0	12.7	20.7
Other urban		last 30 days	16.5	1.7	13.0	19.9
Other rural			19.8	1.1	17.7	21.9
Phnom Penh	Men	Percent with illness. injury	13.7	1.9	10.0	17.4
	Women	last 30 days	19.6	2.5	14.6	24.5
Other urban	Men		14.6	1.8	11.1	18.2
	Women		18.2	1.9	14.3	22.0
Other rural	Men		17.5	1.1	15.3	19.7
	Women		21.9	1.2	19.6	24.2
Cambodia	All pers. seeking	Percent seeking public care	16.9	1.3	14.4	19.6
	care	Percent seeking private care	32.7	2.6	27.8	38.1
		Percent using selfcare	48.1	2.8	42.7	53.5
		Percent seeking traditional acre	2.4	0.4	1.7	3.3

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
	Men seeking care	Percent seeking public care	15.4	1.9	12.0	19.5
		Percent seeking private care	32.2	2.9	26.8	38.1
		Percent using selfcare	50.0	3.3	43.6	56.4
		Percent seeking traditional acre	2.4	0.5	1.6	3.7
	Women seeking care	Percent seeking public care	18.0	1.5	15.3	21.0
		Percent seeking private care	33.1	2.8	27.8	38.8
		Percent using selfcare	46.7	2.8	41.3	52.1
		Percent seeking traditional acre	2.3	0.4	1.6	3.3
Phnom Penh	All pers. seeking care	Percent seeking public care	12.6	3.7	6.9	21.9
		Percent seeking private care	77.3	4.7	66.6	85.3
		Percent using selfcare	10.0	3.0	5.4	17.8
		Percent seeking traditional acre	0.2	0.2	0.0	1.3
Other urban	All pers. seeking care	Percent seeking public care	11.8	2.2	8.0	17.1
		Percent seeking private care	51.0	5.1	40.8	61.0
		Percent using selfcare	35.4	5.4	25.3	46.9
		Percent seeking traditional acre	1.9	1.1	0.6	6.2
Other rural	All pers. seeking care	Percent seeking public care	17.8	1.5	15.0	21.1
		Percent seeking private care	26.2	3.1	20.6	32.6
		Percent using selfcare	53.4	3.2	47.0	59.6
		Percent seeking traditional acre	2.7	0.5	1.9	3.8
Chapter 8. Victimization						
Cambodia	All persons	Percent victims of violence that caused injury	0.4	0.1	0.2	0.5
	Men		0.4	0.1	0.2	0.6
	Women		0.3	0.1	0.2	0.5
Urban	All persons	Percent victims of violence that caused injury	0.2	0.1	0.1	0.4
	Men		0.3	0.1	0.1	0.5
	Women		0.2	0.1	0.0	0.3
Rural	All persons	Percent victims of violence that caused injury	0.4	0.1	0.2	0.6
	Men		0.4	0.1	0.2	0.6
	Women		0.4	0.1	0.2	0.6
Cambodia	All persons	% victims. persons married or living together	0.5	0.1	0.3	0.7
		% victims. divorced/sep. persons	0.7	0.7	0.0	2.0
		% victims. widowed persons	0.2	0.2	0.0	0.5
		% victims. never married or lived with a partner	0.2	0.1	0.0	0.3
Cambodia	Men	% victims. persons married or living together	0.4	0.1	0.1	0.6
		% victims. divorced/sep. persons	2.0	2.0	0.0	6.0
		% victims. widowed persons	0.9	0.9	0.0	2.7
		% victims. never married or lived with a partner	0.2	0.1	0.0	0.4

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
Cambodia	Women	% victims. persons married or living together	0.6	0.2	0.3	1.0
		% victims. divorced/sep. persons	0.4	0.4	0.0	1.2
		% victims. widowed persons	0.1	0.1	0.0	0.3
		% victims. never married or lived with a partner	0.1	0.1	0.0	0.2
Chapter 9. Household income and consumption						
Cambodia	All households	Monthly consumption per capita (thousand Riels)				
		Food and non-alc. beverages	122	2	118	126
		Alcohol and tobacco	5	0	5	6
		Clothing and footwear	7	0	6	7
		Housing. water. electricity	57	2	53	62
		Furnishing etc	2	0	2	3
		Health	21	2	17	25
		Transportation	14	1	12	16
		Communication	5	0	4	5
		Recreation and culture	3	0	3	3
		Education	7	0	6	8
		Miscellaneous goods	23	1	22	25
		Total	266	6	255	278
Phnom Penh	All households	Monthly consumption per capita (thousand Riels)				
		Food and non-alc. beverages	228	8	212	243
		Alcohol and tobacco	9	1	7	12
		Clothing and footwear	13	1	11	14
		Housing. water. electricity	181	13	156	206
		Furnishing etc	6	1	4	8
		Health	13	3	7	18
		Transportation	37	3	31	42
		Communication	12	1	11	13
		Recreation and culture	9	1	7	10
		Education	24	2	20	28
		Miscellaneous goods	37	2	32	41
		Total	568	24	520	616
Other urban	All households	Monthly consumption per capita (thousand Riels)				
		Food and non-alc. beverages	156	6	144	168
		Alcohol and tobacco	8	1	6	10
		Clothing and footwear	8	0	7	9
		Housing. water. electricity	106	14	77	134
		Furnishing etc	4	0	3	4
		Health	21	3	15	26
		Transportation	18	2	15	21
		Communication	8	1	7	9
		Recreation and culture	6	1	4	7

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
		Education	11	1	8	13
		Miscellaneous goods	32	2	28	36
		Total	377	22	333	421
Other rural	All households	Monthly consumption per capita (thousand Riels)				
		Food and non-alc. beverages	105	2	102	109
		Alcohol and tobacco	4	0	4	5
		Clothing and footwear	6	0	6	6
		Housing. water. electricity	36	1	34	39
		Furnishing etc	2	0	2	2
		Health	22	3	17	27
		Transportation	11	1	8	14
		Communication	3	0	3	4
		Recreation and culture	2	0	2	2
		Education	4	0	4	5
		Miscellaneous goods	21	1	19	22
		Total	217	6	205	229
Cambodia	All households	Percent households owning durable:				
		Radio	40	1	38	43
		Television	63	1	61	66
		Video recorder/ player	31	1	29	33
		Stereo	11	1	9	13
		Cell phone	53	1	51	56
		Satellite dish	2	0	1	2
		Bicycle	71	1	69	74
		Motorcycle	53	1	51	56
		Car	4	0	3	5
		Jeep/Van	1	0	0	1
		PC	4	0	3	4
Phnom Penh	All households	Percent households owning durable:				
		Radio	45	3	38	51
		Television	93	1	91	96
		Video recorder/ player	62	2	57	67
		Stereo	35	3	28	41
		Cell phone	93	2	90	96
		Satellite dish	2	1	0	4
		Bicycle	46	2	41	50
		Motorcycle	85	2	81	88
		Car	17	2	13	22
		Jeep/Van	1	0	0	2
		PC	27	2	22	32
Other urban	All households	Percent households owning durable:				
		Radio	39	3	34	45
		Television	78	3	73	82
		Video recorder/ player	42	3	36	49

Domain	Subgroup	Variable	Estimate	Stand. error	Confid. interval Lower	Upper
		Stereo	10	2	7	13
		Cell phone	78	3	72	84
		Satellite dish	3	1	2	4
		Bicycle	62	3	57	67
		Motorcycle	69	3	63	74
		Car	7	1	5	10
		Jeep/Van	1	0	0	2
		PC	7	1	4	10
Other rural	All households	Percent households owning durable:				
		Radio	40	1	37	43
		Television	58	2	55	61
		Video recorder/ player	26	1	23	29
		Stereo	8	1	7	10
		Cell phone	46	2	43	49
		Satellite dish	1	0	1	2
		Bicycle	75	2	72	78
		Motorcycle	47	1	44	50
		Car	2	0	1	2
		Jeep/Van	1	0	0	1
		PC	1	0	0	1

Appendix 2. Listing form of households in the village

Appendix 3. Village questionnaire

Appendix 4. Household questionnaire

Appendix 5. Diary sheets

Appendix 6.
Distribution of sample villages by province and month of January 2010

Appendix 7. List of staff members in the CSES 2010

1. Project staff

No.	Name	Designation
1	Mr. Mich Kanthul	Project Manager
2	Mr. Tith Vong	Deputy Project Manager
3	Mr. Lay Chhan	Chief of HRD and coordination
4	Mr. Oukchay Panhara	Chief of ICT
5	Ms. Tong Chhay Rine	Chief of data coding and data entry
6	Mr. Try Socheat	Survey assistant
7	Mr. Ham Sokunth	Administrative assistant
8	Mr. Yip Thavrin	Database Manager
9	Mr. Mak Sovichea	Data processing coordination
10	Mr. Sam Sok Sotheavuth	Software support and trouble shooting
11	Mr. Khieu Khemarin	Infrastructure and IT security
12	Ms. Bou Sreylun	Website development
13	Ms. Suy Sotheara	Coordination
14	Ms. Nong Sokuntheavy	Coordination
15	Ms. Rin Sitha	Human resource development
16	Ms. So Sovanchakriya	Methodology
17	Mr. Kim Chantharith	Methodology
18	Mr. Chea Sovan	Methodology
19	Mr. Sim Ly	CPI
20	Mr. Bou Noch	CPI
21	Mr. Nor Vandy	National Account
22	Mr. Kong Seng	National Account
23	Mr. Nhem Solyvan	Report writing

2. Data processing staff

No.	Name	Designation
1	Ms. Mak Chantanary	Data editor
2	Mr. Nim Saomony	Data editor
3	Mr. Lenh Heang	Data editor
4	Ms. Chim Sayoth	Data editor
5	Mr. Bun Tha	Data entry operator
6	Ms. Hang Chakriya	Data entry operator
7	Ms. Ouk Morokat	Data entry operator
8	Ms. Chuon Sokunthea	Data entry operator
9	Ms. Mao Vannoeun	Data entry operator
10	Ms. Mey Sokhantey	Data entry operator

3. Field workers

No.	Name	Designation
1	Mr. Yan Kong	Supervisor
2	Mr. Din Dila	Enumerator
3	Mr. Sam Lin	Enumerator
4	Mr. Tieng Vantha	Enumerator
5	Mr. Ke Chantra	Supervisor
6	Mr. Tong Kin	Enumerator
7	Mr. Tom Roeun	Enumerator
8	Mr. Khem Sovann	Enumerator
9	Mr. Ros Sarith	Supervisor
10	Mr. Nheb Phirun	Enumerator
11	Mr. Vern Thy	Enumerator
12	Mr. So Somol	Enumerator
13	Mr. Seung Van	Supervisor
14	Mr. Phay Piseth	Enumerator
15	Mr. Pov Sam Ol	Enumerator
16	Mr. Meas Chantevea	Enumerator
17	Mr. Moeung Sam	Supervisor
18	Mr. Nget Ketya	Enumerator
19	Mr. Sum Neang	Enumerator
20	Ms. Im Sothea	Enumerator
21	Mr. Sing Kea	Supervisor
22	Ms. Soeung Chantha	Enumerator
23	Ms. Oum Phany	Enumerator
24	Ms. Nay Sey Ha	Enumerator
25	Mr. Ouk Ty	Supervisor
26	Mr. Nguon Nor	Enumerator
27	Mr. Em Sambong	Enumerator
28	Mr. Sa Chivan	Enumerator
29	Ms. Ky Boreth	Supervisor
30	Mr. Ros Punlork	Enumerator
31	Mr. Min Sameth	Enumerator
32	Mr. Net Visal	Enumerator
33	Mr. Moeung Rado	Supervisor
34	Mr. Yim Mony	Enumerator
35	Mss. Sek Noeun	Enumerator
36	Mr. Ros Vantry	Enumerator
37	Mr. Chin Dina	Supervisor
38	Mr. Yi Dany	Enumerator
39	Mr. Van Khan	Enumerator
40	Mr. Seng Sovanang	Enumerator
41	Mr. Nuth Chea	Supervisor
42	Mr. Sorn Rathana	Enumerator
43	Mr. Phann Sokha	Enumerator
44	Mr. Thoeu Thok	Enumerator
45	Mr. Vat Sophan	Supervisor
46	Mr. Mon Rathdoungchivy	Enumerator
47	Mr. Det Chamnan	Enumerator
48	Mr. Yan Chumnit	Enumerator
49	Mr. Sok Sovannarong	Supervisor
50	Mr. Em Boroth	Enumerator
51	Mr. Nop Sopheak	Enumerator

No.	Name	Designation
52	Mr. Ouch Chamnap	Enumerator
53	Ms. Sok Chanthet	Supervisor
54	Mr. San Sophat	Enumerator
55	Ms. Chun Phally	Enumerator
56	Mr. Mon Chandara	Enumerator
57	Mr. Tith Polin	Supervisor
58	Mr. Tim Bunthan	Enumerator
59	Mr. Mak Phirum	Enumerator
60	Ms. Net Sophy	Enumerator
61	Mr. Men Nirintivorn	Supervisor
62	Mr. Eam Hour	Enumerator
63	Mr. Moeung Tha	Enumerator
64	Mr. Heou Kiny	Enumerator
65	Mr. Chea Sothy	Supervisor
66	Ms. Som Sariem	Enumerator
67	Mr. Hou Nhim	Enumerator
68	Mr Chea Phengly	Enumerator
69	Mr. Tes Phuoth	Supervisor
70	Mr. Tan Sopheak	Enumerator
71	Mr. Touch Minear	Enumerator
72	Mr. Sann Varthanak	Enumerator
73	Mr. Yim Oeun	Supervisor
74	Mr. Tin Bunthoeun	Enumerator
75	Mr. Sam Rith Samon	Enumerator
76	Ms. Sao Kimhy	Enumerator
77	Mr. Bin Chanthea	Supervisor
78	Mr. Sok Sarith	Enumerator
79	Mr. Ly Chheang Ky	Enumerator
80	Mr. Ou Sarin	Enumerator
81	Mr. Ou Thavin	Reserved
82	Mr. Bet Nara	Reserved
83	Mr. Sous Say	Reserved
84	Ms. Ouch Voleak	Reserved
85	Ms. Ngeth Rey	Reserved
86	Mr. Yay Sophen	Reserved
87	Mr. Mek Sopheak	Reserved
88	Ms. Khun Sreynith	Reserved
89	Mr. Nhek Vuthy	Reserved
90	Mr. Vong Vanthy	Reserved
91	Mr. Liv Touchvesna	Reserved
92	Mr. Sos Vanny	Reserved
93	Mr. So Thearith	Reserved
94	Ms. Nhoung Kunthea	Reserved
95	Mr. Tep Channary	Reserved
96	Mr. Mann Rathkunthak Muny	Reserved
97	Ms. Leng Vannak	Reserved
98	Mr. Hok Pherun	Reserved
99	Mrs. Tan Chakrya	Reserved
100	Mr. Duong Samon	Reserved
101	Mr. Ouch Seng	Reserved

4. Drivers

No.	Name
1	Mr. Song Lok
2	Mr. Mich Kimsoern