

The Demographic Situation in Cambodia *

The population of Cambodia will reach 9.0 million in 1992. It is estimated to be currently growing at a rate near 2.5 per cent per annum, or an absolute increase of about 220,000 persons a year, according to the Department of Statistics (DOS), Ministry of Planning, Government of Cambodia.

Among the population aged 18-64 years, there are only 80 males per 100 females. The deficit of males results in at least 20 per cent of adult females being single, widowed, separated or divorced. Half the population is under age 17 as a result of high fertility rates since 1980. The infant mortality rate has been estimated to equal 116 per thousand live births. A total of 170,000 persons are internally displaced, and about 350,000 are in camps along the country's western border.

The United Nations (1991) projects the mid-1992 population to be 8.6 million and expanding at an annual rate of 2.2 per cent. Although the DOS figure is only 4.5 per cent greater than the United Nations figure, the latter is influenced by the former and the impression of accuracy given by their similarity is essentially spurious.

Ministry of Health and United Nations estimates indicate that mortality is high in Cambodia, with a crude death rate of about 15 per thousand population and the infant mortality rate well over 100 per thousand live births. Fertility is relatively high, with the crude birth rate probably close to 40 per thousand. All of these figures are actually only reasonable assumptions, however, and not based on any existing data. During the period 1970-1979, statistical work came to a complete stop. Most, if not all, statistical documents were destroyed. Nonetheless, the aforementioned rates are discussed in more detail hereinafter.

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While the methodologies employed by DOS and the United Nations to estimate the past and current population should have excluded most of the population currently in camps in Thailand, it is likely that the DOS estimates do not do so entirely, as discussed below.

The Government of the-then People's Republic of Kampuchea carried out a population count in 1980. The count is described by DOS as a general population survey, but it was probably more of an administrative count, with communes reporting their population to districts, districts to provinces, and provinces to the national Government. Cambodia currently has 19 provinces and two municipalities. Each province is divided into districts, and the districts are divided into communes. Each commune has several villages. As a result of the administrative requirements and set-up of the country, a wide range of information and data is available. However, only a part of this statistical information is being collected, processed and analyzed in a systematic manner, and not all the processed and analyzed data are published and disseminated (Al-Akel, 1991).

The total population was reported to equal 6.40 million, but Muscat and Stromseth (1990) reason that the figure may well have been inflated by local officials because access to resources distributed by Phnom Penh was based partially on the population in their jurisdiction. Nonetheless, the United Nations bases its projection of the population of Cambodia on the figure of 6.48 million in 1980, with no new data since that date, but with birth and death rates that are assumed to be reasonable. The data provided by the Department of Statistics are also projections from 1980, but using a figure of 6.50 million for mid-year. DOS has projected the population to 1990 by increasing it by 2.8 per cent each year (equivalent to an exponential growth rate of 2.76 per cent a year). It has then projected the population to the year 2000 by applying annual increments of 2.5 per cent (an exponential growth rate of 2.47 per cent). The basis for the growth rate of 2.8 per cent assumed for the period 1980-1990 is a demographic survey conducted by the Ministry of Health in 1982 that showed a crude birth rate (CBR) of 45.6 and a crude death rate (CDR) of 17.6, but no documentation for these rates or the methodology of the survey had been provided to the Mission.

For comparison, in its projection for the period 1980-1985, the United Nations assumed a CBR of 45.5, a CDR of 19.7 and a growth rate of 2.59 per cent a year. For the period 1985-1990, it assumed a CBR of 41.4, a CDR of 16.6 and a growth rate of 2.48 per cent a year. It must be emphasised that these figures are merely plausible estimates, and are not based on any reported data. The reduced growth rate of 2.5 per cent assumed by DOS for its projections between 1990 and 2000 is not substantiated by any

data. The impression of a declining growth rate is derived from survey data, such as those reported for Takeo province, as follows:

Year	CBR	CDR	Growth rate (%)
1981	47	7	4.0
1984	31	7	2.4
1987	24.2	5.8	1.84
1989	21	3.8	1.72

Two observations are in order concerning these figures. First, it is not clear if the data are from a sample survey, or if they are from registration data for a sample of communes within the province. Second, the reported CBR implies that about one-third of all births were not reported (at least since 1984), and at least half of all deaths were not reported (relative to the United Nations estimates). With these levels of incomplete reporting, it is not possible to make any valid inference regarding the natural growth rate, which is the difference between the birth and death rates.

As Takeo is a province near Phnom Penh and should enjoy certain administrative advantages as a result, such survey results would seem to imply that population data have virtually no validity, and information about more remote provinces must be essentially non-existent.

For comparison, the United Nations assumes a CBR of 36.5, a CDR of 14.6 and a growth rate of 2.20 per cent in its medium variant for the period 1990-1995. The United Nations indicates the degree of uncertainty of these figures, however, by assuming a growth rate of 2.62 per cent for the same period in the high variant, and 2.03 per cent in the low variant.

It is possible that the estimates of both DOS and the United Nations are too high. The Cambodian demographer, Ea Meng-Try, in an article in *Population and Development Review* cited by Muscat and Stromseth (1990), placed the 1980 population at 6.1 million and estimated that the CBR was 35, the CDR was 15, and the growth rate was 2.0 per cent.

The demographic recovery in Cambodia was apparently much stronger than foreseen by Ea, however. Were the rates estimated by him maintained for five years, the proportion in the 0-4 age group could not be over 15 per cent, but UNICEF (1988) estimated that proportion to be 20.5 per cent in 1987, which would require a CBR of at least 47 per thousand.

In sum, there currently is no reliable basis for estimating the population size and growth rate, or birth and death rates in Cambodia. Assumptions about plausible figures, however, indicate that the population will reach 9.0 million in 1992, excluding about 170,000 Cambodians and their children who were in Thailand prior to the population count in 1980. Reasonable estimates would place the CBR around 40 (with a likely range from 35 to 45), the CDR near 15, and the growth rate at approximately 2.5 per cent a year. The infant mortality rate remains high; the United Nations (1991) projects it to equal 116 per thousand live births for the period 1990-1995.

In October 1991, there were 350,000 Cambodians in camps in Thailand. The number not included in the population projections for the country is estimated as follows. In 1989, the camp population equalled 285,000 and a survey by Lynch (1989) indicated that two-thirds of the adult population had arrived at the border in 1980 or before. The survey also found that 63.3 per cent, or 180,000, were age 10 and over, i.e. they were born during or before 1980. Thus, 120,000 persons in the camps had moved to the border before the population count and were presumably not included. Assuming a rate of natural increase of 3.0 per cent a year, the population not included in the projections of the Cambodian population will have expanded to 172,000 in 1992.

Sex and age composition

The population count in 1980 recorded the age of the population, but a detailed breakdown has not been made available. DOS has reported that 47 per cent of the population comprised persons less than 16 years of age. It is important to recall that in 1980 there was a considerable deficit of males, and that the proportion of the population aged 0-4 years was exceptionally low because of low fertility and high mortality rates between 1975 and 1979. Because of the high birth rate after 1980, the population under age 12 in 1992 comprises an unusually large proportion of the population and the overall sex ratio becomes more normal with each passing year.

A UNICEF (1988) assessment gave the following age distribution for 1987: ages 0-4, 20.5 per cent; ages 5-14, 24.4 per cent; and ages 15 and over, 55.1 per cent. As the post-1980 "baby boom" continues and the population ages, by 1992 the proportion under five years of age will decline slightly, and that aged 5-14 years will increase substantially. A crude approximation would be that the population aged 0-4 will equal 19 per cent, and that aged 5-14 will equal 28 per cent of the total.

Table 1: Population of Cambodia by sex and broad age group, mid-year 1992

Age group	Total	Male	Female
All ages	9,001,315	4,269,394	4,731,721
0 - 4	1,710,250	867,097	843,153
5 - 14	2,520,368	1,260,184	1,260,184
15 - 17	450,066	225,033	225,033
18 - 64	4,050,592	1,798,463	2,252,129
65+	270,039	118,817	151,222

Notes: 1. The total population is as projected by the Department of Statistics, Ministry of Planning. The total is distributed by assuming the following age distribution, then applying the following proportion female to each age group. See the text for discussion of the assumptions.

Age group	Percentage of total	Per cent female
0 - 4	19	49.3
5 - 14	28	50.0
15 - 17	50.0	
18 - 64	45	55.6
65+	3	56.0

2. Excludes approximately 170,000 of the 350,000 Cambodian population in camps in Thailand.

DOS has reported that in a survey in eight provinces, 48 per cent of the population was aged 18 years and over. The United Nations estimates that 3 per cent of the population is aged 65 years and over, thus the population aged 18-64 would equal 45 per cent of the total. The population aged 15-17 may then be calculated as a residual comprising 5 per cent of the total. These figures are shown in [table 1](#) and are applied to the total 1992 population to calculate the number in the various age categories.

The DOS population count in 1980 reported that females comprised 53.7 per cent of the population, yielding a sex ratio of 86 males per 100 females. This may be compared with the sex ratio in Viet Nam in 1979 of 94. In 1980, the sex ratio for children under 15 years of age was reported as close to 101. Thus, the sex ratio for the population aged 15 and over must have been about 75 males per 100 females. By 1992, this would have improved to about 80 as the later birth cohorts reach adult ages. It is assumed that, in 1992, the proportion of females equals 50 per cent for persons aged

5-17, and 55.6 per cent for those aged 18-64. The United Nations estimates are used for the age groups 0-4 (49.3 per cent female) and 65 and over (56.0 per cent). These proportions female are applied to the total population by age to calculate the sex distribution, as shown in [table 1](#). The proportion female in the total population in 1992 will be approximately 52.6 per cent.

The high proportion of widows and of female-headed households in Cambodia is frequently commented upon. The estimates above imply that about 20.0 per cent of the females aged 18-64 could be single or widowed from the demographic deficit of males per se. (The excess of females aged 18-64 equals 20.0 per cent of the total number of females at those ages.) If some males are away from home as migrant workers, in the military etc., at least one quarter of all households could be headed by females for temporary periods.

The dependent population in Cambodia comprises a high proportion of the total. The estimates shown in [table 1](#) indicate that the population aged 0-14 and 65 and over equal those aged 15-64. In fact, DOS estimates that 40 per cent of the total population is employed, so that there are 150 dependents for every 100 persons working.

Population distribution

The Department of Statistics estimates the urban population of Cambodia to be 1,081,000, or 12.6 per cent of the total in 1990. That estimation is much too low for Phnom Penh, however. The figure given for the capital is 478,000, but the registered population in 1990 was 620,000 and the actual total would have been over 800,000.

Phnom Penh is the only large city in the country. It is approximately 18 times as large as the second largest city of Battambang. The Popular Committee of Phnom Penh Municipality estimates that the city's population equals 800,000 in the rainy season and reaches 1.0 million in the dry season, when farmers have less work to do in rural areas. An average size of 900,000 may be assumed for 1991.

The population of Phnom Penh would reach 950,000 in 1992 if it grows at just over 5 per cent a year. In fact, with the employment generated by the rapidly growing presence of international organizations, foreign government representation and non-governmental organizations, the growth rate could be considerably higher.

Provincial cities have very little industry and offer few job opportunities. In order to project the population of the major cities other than

Table 2: Estimated and projected population of major cities in Cambodia, 1987 and 1992

City	1987	1992
Phnom Penh	590,000	590,000
Kompong Som	16,000	18,000
Battambang	45,000	51,500
Kompong Cham	33,000	38,000
Pursat	16,000	18,000
Kompong Chhang	15,000	17,000
Kompot	15,000	17,000
Kratie	14,000	16,000
Svey Rieng	14,000	16,000
Siem Reap	13,000	15,000
Kompong Thom	12,000	14,000
Prey Veng	11,000	13,000

Source: 1987: Kenneth Watts, *et al.*, *Report of the Kampuchea Needs Assessment Study*, New York: United Nations Development Programme, August 1989, p.18. The Phnom Penh population is based on an estimate of 561,000 in 1986 and a growth rate of 5 per cent.

Note: The projected population of Phnom Penh is based on its estimated size of 900,000 in 1991. The population of each other city has been projected by assuming an average annual growth rate of 2.8 per cent between 1987 and 1990, and 2.5 per cent between 1990 and 1992.

Phnom Penh, it was assumed that they are growing only as rapidly as the national population (see table 2). Such an assumption may under-represent the growth rate of the port city of Kompong Som and the regional centres of Battambang and Kompong Cham, but no estimates of the population of those cities have been made available.

Provincial offices estimate the population of their province annually by requesting village heads to report the total by sex to the commune, which reports to the district, which reports to the province. The DOS does not publish and apparently does not use these figures. DOS has prepared a time series of provincial population figures by increasing the total by 2.8 per cent each year from 1981 to 1990, and projects the figure by adding 2.5 per cent each year up to 2000. Thus, all provinces are projected by the same growth rate. This method yields a figure for Phnom Penh that is clearly too low, but the error for other provinces may not be great.

Provincial population totals were estimated for 1986 and 1992 by using independent estimates for Phnom Penh, then pro-rating the non-Phnom

Penh total to the provinces according to their totals projected by DOS (table 3). The results of this method may be compared with figures from three provinces on the next page. All figures have been adjusted to the end of 1990.

Table 3. Estimated and projected population by province, Cambodia, 1981,1986, and 1992

Province or city	Population in thousands		
	1981	1986	1992
Total	6,682	7,672	9,001
Phnom Penh	329	561	950
Kandal	720	762	863
Kompong Cham	1,066	1,205	1,365
Svay Rieng	292	329	373
Prey Veng	672	758	858
Takeo	531	598	677
Kompong Thom	379	427	484
Siem Reap	477	538	592
Banteay Meanchey	--	--	424
Battambang	718	810	510
Pursat	175	197	224
Kompong Chhnang	221	249	282
Kompong Som City	53	59	67
Kampot	354	399	451
Koh Kong	26	29	33
Kompong Speu	340	383	434
Preah Vihear	69	78	89
Ratanakiri	45	51	58
Stung Treng	39	44	50
Mondulkiri	16	18	20
Kratie	157	177	200

Source: 1981: Data provided by the Department of Statistics (DOS), Ministry of Planning.
 1986: Phnom Penh from Kenneth Watts, *et al.*, *Report of the Kampuchea Needs Assessment Study*, New York: United Nations Development Programme, August 1989, p. 17. Others are DOS projections pro-rated to total excluding Phnom Penh.
 1992: Phnom Penh from table 2. Others calculated as for 1986.

Note: Figures may not sum to national total because of rounding.

Province	Provided by provincial officers	As projected in table 3
Prey Veng	850,000	832,000
Takeo	598,465	656,000
Kompong Speu	420,000	421,000

Thus, the projection method gives a total for Kompong Speu that is virtually identical to that provided by the provincial authorities, a total for Prey Veng that is 2.1 per cent lower, and for Takeo that is 9.6 per cent greater.

The provincial totals projected to 1992 may also be compared with those estimated for 1990 or 1991 by the Cambodian Displaced Persons Working Group and presented in table 4. All of the totals are similar, with the projected totals slightly higher, except for that of Banteay Meanchey province. Some of the population of that province is in camps in Thailand or in inaccessible areas and, therefore, not reported by local authorities.

The projected provincial totals shown in table 3 would be too low in areas with considerable in-migration, such as Kandal, Kompong Som and Koh Kong.

Table 4. Number of internally displaced people and families in Cambodia, by province, September 1991

Province	Population		Displaced persons	
	Persons	Families	Persons	Families
Nine provinces	3,279,133	598,834	169,727	33,069
Siem Reap	547,972	96,504	27,399	4,904
Banteay Meanchey	349,587	65,499	47,049	8,840
Battambang	484,890	94,174	31,859	6,452
Pursat	228,155	45,357	5,328	1,016
Kompong Chhnang	277,357	55,302	7,126	1,564
Kampot	437,822	84,094	10,725	2,006
Kompong Speu	426,955	79,974	30,779	6,311
Kompong Thom	446,395	77,930	8,329	1,537
Preah Vihear	80,000	-	1,133	439

Source: Data provided by the Cambodian Displaced Persons Working Group, Phnom Penh,

Vulnerable groups

In the first half of 1992, there will be several groups within the Cambodian population that will be especially vulnerable to economic hardship that could imperil their nutritional status and health. Those that are readily identifiable are internally displaced persons, returnees from Thailand, the disabled, and widows and separated women. The standard of living of the entire population is extremely low, with the food supply precarious and health services rudimentary. Many other people may live in pockets of poverty and be vulnerable, so that basic monitoring of the food supply and for disease outbreaks across the country should be implemented.

Internally displaced persons

People across all of the western half of Cambodia were displaced because there had been fighting near their villages or because their fields are mined and cannot be worked. Others were temporarily displaced by floods in August and September 1991, but had mostly returned to their homes by mid-November.

The Cambodian Displaced Persons Working Group estimates that as of September 1991 there were 169,727 displaced persons in nine provinces. The largest displaced populations were in Banteay Meanchey (47,049 persons), Battambang (31,859 persons) and Kompong Speu (30,779 persons) provinces (table 4).

A survey of the health situation of children in displaced persons camps was carried out in 1991 by eight non-governmental organizations (NGOs) and the United Nations Children's Fund (UNICEF), (Merciere, 1991). The researchers concluded that, while the prevalence of severe acute malnutrition is still limited, many of the camps are at the beginning of a slow but serious nutritional crisis. These conclusions were reached by the finding that the prevalence of severe acute malnutrition among children aged 6-59 months was low, exceeding 2.0 per cent in only four of 22 sites. The prevalence of moderate or severe acute malnutrition exceeded 10.0 per cent in six of the 22 sites.

Among the more vulnerable age group of 6-29 months, however, the prevalence of severe acute malnutrition exceeded 2.0 per cent in six of 24 sites. The prevalence of moderate or severe acute malnutrition exceeded 10.0 per cent in 13 of the 24 camps, with the highest rates equalling 34 and 24 per cent of children aged 5-29 months. The health of displaced persons is imperiled by an unsanitary environment and the erratic supply of food assistance.

Returns

As of November 1991, there are approximately 350,000 Cambodians in camps in Thailand who may begin returning in early 1992. A complete registration is being conducted to determine the province and district to which people want to return. In the interim, it is possible to estimate the approximate number that will return to each province.

Lynch (1989) carried out a survey covering 15,525 persons in three border camps, in which the respondents indicated the province and district to which they preferred to return. The percentages by province from the Lynch survey were applied to the current camp population of 350,000 and the results are presented in [table 5](#). The composition of some provinces and the names of many districts have changed since the Lynch survey, and the percentages have been adjusted to the current provincial structure as accurately as possible from the available information.

[Table 5](#) indicates that 43 per cent of the Cambodians in Thailand, or 151,000 persons, may be expected to return to Battambang province, and 69,000 to Banteay Meanchey province. At least 18,000 may also be expected to return to each of three cities: Phnom Penh Siem Reap and Pursat.

Widowed and separated women

No data on the marital status of the population were made available, but the estimates shown in [table 1](#), which are based on the 1980 population count, indicate that the excess of females aged 18-64 is 450,000. That represents 20.0 per cent of the women of those ages who are necessarily single, widowed, separated or divorced. As discussed above, it is reasonable to assume that one quarter of households are female-headed at least for temporary periods because men are away from home as migrant workers or in the military.

In his survey of Cambodians in camps in Thailand, Lynch (1989) found that only 79.0 per cent of the women aged 15 years and over were married, whereas 95.7 per cent of the men in this age group were. Among the women, 19.8 per cent were widows, and only 1.2 per cent were single or divorced. The proportion widowed would be expected to be somewhat larger among the refugee population than the population in general, lending support to the figures in [table 1](#). A larger percentage of women may have been widowed in their life-time and many could have remarried, but no data on remarriage are available.

Table 5: Estimated number of returnees by province

Province or city	Number	Per cent
Total	350,000	100.00
Phnom Penh	18,374	5.25
Kandal	10,438	2.98
Kompong Cham	8,116	2.32
Svay Rieng	2,660	0.76
Prey Veng	5,478	1.57
Takeo	13,166	3.76
Kompong Thom	4,171	1.19
Siem Reap	22,499	6.43
Banteay Meanchey	68,918	19.69
Battambang	150,821	43.09
Pursat	18,937	5.41
Kompong Chhnang	4,847	1.38
Kompong Som City	519	0.15
Kampot	5,411	1.55
Koh Kong	609	0.17
Kompong Speu	5,681	1.62
Preah Vihear	654	0.19
Ratanakiri	45	0.01
Stung Treng	45	0.01
Mondulkiri	0	0.00
Kratie	744	0.21
Undecided	7,868	2.25

Note: The percentage distribution is from James F. Lynch, *Border Khmer: A Demographic Study of the Residents of Site 2, Site B, and Site 8*. Bangkok, November 1989. The percentages from that survey have been applied to an estimated total of 350,000 returnees. The composition of some provinces has changed since the Lynch survey was carried out and the necessary adjustments by district have been made.

Disabled persons

The Department of Statistics provided data on the disabled population based on the population count conducted in 1980. The total disabled, 44,317, comprise 0.67 per cent of the population of Cambodia; 19,646 are males and 24,671 are female. However, the data could be questioned on three points. First, the figures seem low for a country that had, by 1980, experienced a decade of internal hostilities. Second, the percentage disabled in Battambang province (including the present Banteay Meanchey province), i.e. 0.34 per cent or 2,425 persons, is the fourth lowest in the country, yet much fighting had taken place there. Third, the percentage of disabled in most provinces is higher among females than males, again unlikely following protracted fighting.

Since 1980, the number of persons disabled has certainly increased, although the percentage disabled may not have because of the high population growth rate resulting from high levels of fertility.

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