Report on the Basic Survey of Population and Development in Southeast Asian Countries

——Philippines——

MARCH 1992

The Asian Population and Development Association

← Courtesy call to the Japanese Embassy.
From the left:

Etsuro Kashiwagi	Second Secretary
Toshio Goto	Ambassador
Hiroaki Washio	Team leader
Tomomi Otsuka	Team member

At the University of Philippines →
Population Institute.
From the left:
Professor Merchedes B.
Concepcion (third)
Team leader Hiroaki
Washio (fourth) and Director,
Corazon M. Raymundo (fifth)

← At the Philippines Population
Commission.
From the right:

Tomas M. Osias	Chief, Planing and Monitoring Division
Carmen P. Garcia	Executive Director
Tomomi Otsuka	Team member
Eleanor Aura	
Osamu Kusumoto	Team member
Hiroaki Washio	Team leader

← Maternal and Child Division,
Department of Health.
In front row from the right
Emily Maramba, Program Officer,
and Hiroaki Washio, team leader.

At the Barangay Health Center in an
elementary school in Los Banos →

← Interview survey in a slum
in the Navotas

Contents

Foreword

This report presents the findings of a basic survey of population and development in Philippines. In 1991, the Asian Population and Development Association (APDA) was entrusted with the survey project, "Basic Survey of Population and Development in Southeast Asian Countries" by the Ministry of Health and Welfare and Japan International Corporation of Welfare Services. APDA selected Philippines as the country in which its field survey would be conducted. The actual survey and analysis of the resultant findings were conducted by APDA's survey committee (Chairperson, Dr. Toshio Kuroda, Director Emeritus, Nihon University, Population Research Institute).

For effective application of population policies in the Southeast Asia and other countries, population dynamics as population growth, diseases, mortality, reproduction, population distribution and internal migration, as well as static data of the population including family structure and population structure by age must be closely defined. In addition, effects of these factors on living and welfare standards, and medical care must be reviewed.

The objective of this survey was to contribute to resolving the problems related to population and development in Asian nations, by conducting a detailed survey of population dynamics, living and welfare standards and health and medical care and other aspects in the Southeast Asian countries.

The Field survey was conducted with the guidance and cooperation of Ambassador Toshio Goto and Etsuro Kashiwagi Second Secretary of the Embassy of Japan in Philippines, and Mr. Marius Diaz, Project Coordinator of Philippine Legislator's Committee on Population and Development Foundation. In Japan, members of Policy Planning & Evaluation Division, Minister's Secretariat, Ministry of Health and Welfare and Department of Policies, Economic Cooperation Bureau, Ministry of Foreign Affairs, cooperated in the planning and arrangements of the field survey. I would like to express my heart-felt gratitude to all of them.

In conclusion, I sincerely hope that this report would contribute to the further advancement of the population and development program in Philippines as well as the Japanese Government's effective cooperation with Philippines.

Furthermore, I would like to add that this report is the responsibility of APDA and does not necessarily reflect the views nor policies of the Ministry of Health and Welfare or the Japanese Government.

March, 1992
Fukusaburo Maeda
Acting Chairman
The Asian Population and
Development Association

Chapter One

Introduction:
The Dilemma of the Philippines
- Asia's Culturally Isolated Islands -

In 1565, the Philippines became a colony of Spain, and after the Spanish-American War in 1898 it became a colony of the United States. Independence came in 1946 after World War II. 333 years under Spanish rule, and 48 years, almost half a century, as a colony of the United States. It was this domination by Spain and the United States for 381 years, almost four centuries, which shaped the Philippines, "Asia's culturally isolated islands."

The forced penetration of Latin culture (Catholicism) by Spain and American culture (the English language) by the United States gave the Philippines a culture completely different from that of other Asian countries. It is not possible to understand the Philippines if we ignore this long domination of the Philippine people by the advanced cultures of Europe and America.

An unstable political situation, linked to the landowner system, a relic of colonial times, and the capitalist classes which find their basis in this system, have obstructed the modernization of the Philippines.

Another important factor hindering modernization is the high population growth rate. The existence of Roman Catholics which compose 85% of the total population delays the spread of family planning, and furthermore the birth rate is remarkably high. According to estimates of the University of the Philippines Population Institute, the total fertility rate exceeds four persons, the highest among ASEAN countries.

In addition, the per capita GNP is only US$ 630 (1988), much lower even than the levels of US$ 1940 in Malaysia and US$ 1000 in Thailand. Poverty and high birth rates in rural regions provoke a migration of the population from rural to urban areas, and as a result the percentage of new migrants in urban populations is high. As cities do not have the capacity to absorb this outflow from rural areas, poverty is simply shifted to the cities, further worsening the urban environment.

The major themes of our survey study were to investigate the situation of health and sanitation in Metro Manila, in particular the living conditions and health and medical care situation of slum dwellers and squatter populations, and to propose measures to deal with the situation.

Generally, slums and squatter areas are considered residential areas for low income classes, but there are no accurate statistics on their populations. In slums like those in Bangkok where boundaries are clear it is possible to obtain relatively accurate figures on the population. In squatter areas, however, it is extremely difficult to do so due to the nature of these areas.

According to the 1990 census, the population of Metro Manila is estimated at 7,832,000, accounting for 12% of the total population of 60,685,000. The capitals of developing countries are distinguished by the fact that they present dual structure. On one side are modern new buildings, hotels, and high class residential areas with large lawns. On the other are extremely non-modern areas such as slums. There is a double image, opposing the modern to the premodern. Metro Manila is no exception. There are no accurate statistics on the population of

slums and squatter areas. Some estimates suggest that the population of low income urban residential areas was approximately 2,400,000 in 1982, which would be 40% of the population of Metro Manila in 1980 (Toru Nakanishi: Slum Population, 1991). In Manila, the low income class is rising, due particularly to the increased influx from rural areas in the 1980s with the poor economic situation, creating a rise in the number of unemployed, and the intensification of takeover of public land by squatters after the EDOSA revolution in 1986. Considering such social and economic difficulties of the 1980s, we can guess that the population of low income residential areas now accounts for 50% of the total population of Metro Manila.

The concentration of the population in Metro Manila is on the one hand leading to a greater accumulation of the poor, and on the other hand creating an increase in the potential number of people wishing to work abroad, with Metro Manila as a port of transit.

The slow modernization of the industrial structure is forcing the poor to seek job opportunity in the informal sector. Two points which deserve special attention are the high birth rate supported by Catholic beliefs, and the resulting high population growth rate. The high birth rate in rural areas leads to a surplus population, inevitably giving way to an outflow to urban areas. The cities accept this rural population which it does not need, further paralyzing the urban administration and resulting in an accumulation of poverty. Massive slum populations never experienced by developed countries are the most distinctive feature common to many developing countries. This is a rotating movement of poverty around the axis of an abnormally high population growth rate which developed countries have never seen. Modern economic science and sociology can provide no answers. The fundamental measure for breaking the vicious circle of poverty lies in the spread of family planning. This must be done first among the rural and urban poor. The facts that the literacy rate in the Philippines is extremely high and that the rate of urbanization is highest among ASEAN countries indicates that the basic conditions for acceptance of family planning are already ready.

Chapter Two

Population

1 Population Situation in the Philippines

(1) Population growth and age composition

The total population of the Philippines has been increasing at the fast annual rate of over 2% from 7 million in 1903, reaching the 60 million level in 1989. The growth rate was only under 2% twice, in 1918 and 1948 (see Table 1). As this fact demonstrates, the age composition of the population is extremely young, and there is great vitality in the population. The average age is 23.78 years, quite low even when compared with neighboring countries. Naturally, the aged-child ratio (*1) is an extremely low 8.57, and the population is not aging.

However, this young age composition is not necessarily an advantage. It is the population of working age (15 to 64) which supports the young population (0 to 14) and aged population (65 and up). The age dependency ratio (total number) indicates the burden of support of the population of productive age (*2). As shown in Table 2, the burden of support of the population of working age (the age dependency ratio) is the highest in the Philippines. The reason is the high young population (the child dependency ratio of the Philippines is a high 70.76).

(2) Birth and death rates

Now let us look at the reason for the abrupt increase in the total population from the aspect of vital statistics (birth, death and natural increase rates). Table 3 shows the trends in the birth, death and natural increase rates for the Philippines. From this table we can see that: (1) though death rate decreased sharply from 1903 on; (2) the birth rate did not decrease so sharply, so; (3) the population increased dramatically as a result of the increase in the natural increase rate (= birth rate - death rate).

From historical experience, it is clear that the decrease in the death rate in developed countries is brought about by socioeconomic progress. For developing countries, however, the current hypothesis has it that the decrease in the death rate is caused not by socioeconomic progress, but as a result of the introduction of the advanced medical technology and medicines of developed countries (*3). It is said that this is the cause for the decrease in the death rate in the Philippines as well (*4).

The birth rate, which was high until the 1960s, decreased abruptly from 1970 to 1975, and has since been decreasing slowly (see Table 3). The major reason for this decrease in the birth rate is thought to be the National Family Planning Program. In fact, the family planning movement spread steadily from 1968 to 1978, corresponding to the period of rapid decrease of the birth rate, but this spreading stagnated thereafter (see Table 4). The rate of spread of family

planning has actually been decreasing under the Aquino government, which cannot promote family planning actively for religious reasons among others.

Thus, we can say that the major characteristics of the trends in the birth, death and natural increase rates in the Philippines are (1) they are not caused by the fruits of socioeconomic development, but rather by (2) external stimuli such as the introduction of advanced medical technology and medicines of developed countries and the government's promotion of family planning.

(3) Future population

While the death rate is decreasing steadily, family planning programs are stagnating, and the possibility of a major decline in the birth rate is low. The population of the Philippines will most likely continue to increase in the future. Table 5 shows the projected population of the Philippines in the year 2000. It should be noted that even for the lower estimate for which the decrease in the birth rate is most abrupt, the population will surpass 90 million in the year 2000, and according to the upper estimate the population will top the 100 million mark. In either case, the population pressure exerted on the Philippine society and economy by the population growth will become ever more intense in the future.

(4) Internal migration

Table 6 shows the trends in the regional distribution of population. As can be seen from this table, the population is increasing in the Manila metropolitan area, region IV, and regions IX to XI, while it is decreasing in regions I and V to VIII. The major reason for this is population mobility.

Table 7 and Figure 1 show the trends in population migration. From Table 7 we can infer three points: (1) that up until 1975, forces were drawing migrants to rural areas, and over half of all migrants consisted of those moving to rural areas; (2) that from 1975 on, the drawing force of cities has increased; and (3) rural/urban migration is a phenomenon which began relatively recently.

Two reasons given for this change in migration trends at the turning point around 1975 are: (1) the existence up to this time of movement towards outlying areas for the purpose of acquiring farmland; and (2) the dominance of movement thereafter of movement in the search of employment in the industrial sector of large cities (principally Metro Manila) (*6). Figure 1 shows recent trends in population mobility (from 1975 to 1980). We can see that migration to Metro Manila is prevalent.

This population migration results in an abrupt urbanization and unbalanced distribution of the population, and impoverishment of rural areas. Table 8 shows the trends in the urbanization of the Philippines. From 1975, the share of the urban population has increased abruptly,

while the decrease in the share of the rural population has accelerated. The result is an increasing imbalance in the population distribution. Evidence of this can be seen in the large discrepancies in the population density by region, as shown in Table 9. This situation is undesirable from the point of view of the socioeconomic development and the efficient use of land.

It should also be noted that the population density of Metro Manila is far higher than in other regions. Metro Manila is becoming a primate city to which the population is concentrating because other medium or small regional cities are not developing. This polar concentration of the population is a phenomenon commonly seen in developing countries, and creates a hotbed for various problems, including urban poverty and a deterioration of the living environment.

Of special importance on Table 9 is the age dependency ratio. As stated above, the age dependency ratio indicates the burden on the population of working age for supporting the young population and aged population. If we look at this index by region, we can see that the age dependency ratio is higher in rural areas than in urban areas. The population of working age in rural areas has a larger burden to carry than its urban counterpart.

The cause of this is rural/urban migration, as previously stated. This situation will necessarily result in the vicious circle of impoverishment of rural areas and a resulting acceleration of the outflow of the population from these areas.

(5) International migration

Migrants to cities are met with a serious unemployment problem. The unemployment situation in the Philippines is formidable, with more that 3 out of 10 workers unemployed or underemployed (see Table 10). Even more serious is the fact that the abrupt growth of the population will continue in the future (see Table 5), so the population of working age will also continue to grow. We can foresee that the unemployment situation will get even worse in the future.

The high unemployment rate in the capital region as compared with other regions deserves special attention. While many people stream to Metro Manila in search of work, the modern sectors (industrial sectors, etc.) of the capital are not able to provide sufficient employment. Unfortunately we were not able to obtain data, but if we consider the trends in population migration of recent years (see Table 7) and the tendency for urbanization (see Table 8), we can assume that the same phenomenon is occurring in cities other than Metro Manila as well.

As a result, the majority of those moving to cities fall into a state of unemployment or underemployment and are forced to search for work in the informal sector. As these people cannot obtain a sufficient income, they settle in slums, generating such problems as poverty, slumification, deterioration of the living environment and public health, and so on. All these problems are already becoming a reality in Metro Manila (*7).

Adding fuel to these adverse conditions is the economic situation of the Philippines. With

the impediments to economic activity, it is difficult to anticipate any major increases in employment or salary hikes from economic growth. Impoverishment is progressing in rural areas. In this impasse, the only way left to escape poverty is to find work and high pay overseas. This is the reason vast number of Filipino workers are going abroad, as shown in Table 11.

It is true that overseas workers do result in benefits. The Philippine government is aware of the economic advantages brought about by overseas contract workers (*8). It has established the world-famous Philippine Overseas Employment Administration and is putting efforts into the dispatch of workers abroad. However, various ill effects brought about by the sending of workers overseas have recently been developing into serious social issues (*9).

2 The Particular Situation of the Philippines and Its Chief Causes

(1) The particular situation of the Philippines

We have now observed the general demographic situation of the Philippines. This situation has many points in common with other developing countries. However, the demographic phenomena of the Philippines also includes an extremely interesting characteristic; that despite the high degree of socioeconomic maturity for a developing country, the birth rate is high and the natural growth rate of the population does not easily decrease.

Table 12 shows socioeconomic and demographic indices of ASEAN countries. Due in part to the rapid increase in the population, the per capita GNP for the Philippines is not very high. However, other socioeconomic indices are quite favorable in comparison to other ASEAN countries. We can say that the degree of socioeconomic maturity of the Philippines is high for a developing country. However, the birth rate is higher than in other ASEAN countries.

This phenomenon goes against demographic theory. Theoretically, socioeconomic maturation should pass through the chain of cause and effect shown in Figure 2, leading to a decrease in the birth rate. So why is the birth rate high in the Philippines? Finally, let us consider this problem.

(2) Chief causes for the particular situation of the Philippines

We can suggest that this phenomenon arose from the fact that the cause and effect chain linking socioeconomic condition to population has been severed. That is, even if the various factors shown on Figure 2 are individually favorable (see Table 12), they are not organically interlinked. In addition, the major factor severing this chain is most likely the unequal distribution of income.

Table 13 shows the income distribution structure. That is, all households are divided into five steps according to income level, and the share of the total income for each stratum is

indicated. As can be seen, households in the upper division account for approximately one half of the total income. If we add the 4th division, these two divisions account for 60% of the total income. Plainly speaking, Philippine society consists of wealthy classes and destitute classes.

The break down of social classes into two extremities generates differences in attitudes towards birth and family planning. The middle and upper classes which have a high standard of living and education limit their number of children and actively participate in family planning so that their children can receive sufficient education. On the other hand, low income classes with a low standard of living and education consider children as a working force and aspire to having many children, so they have a negative attitude towards family planning. In addition, family planning tends to permeate more easily in urban areas where many belong to middle and upper classes than in rural areas where many belong to the lower class.

In other words, Philippine society consists of both classes to which the cause and effect chain in Figure 2 applies and classes to which it does not apply. This cause and effect chain does not apply to the society of the Philippines as a whole.

(3) Explanation by income class and its consequences

We were unfortunately not able to obtain data on income classes and family planning during this survey. Thus, the above explanation concerning the particular situation of the Philippines is simply a hypothesis based on the experience of the survey. It will be necessary in the future to obtain such data and verify the validity of this hypothesis.

However, the trends in the birth rate can be explained in conformity with this hypothesis. The reason that the birth rate dropped suddenly in the 1970-1975 period was the rapid spread of family planning. The reason family planning spread so quickly was its active acceptance by the middle and upper classes. After family planning had permeated these classes, what remained were the low income classes which have a negative attitude towards family planning. As a result, family planning spread with more difficulty after 1975, so the birth rate necessarily remained at a high level.

As stated at the beginning of this chapter, the passive attitude of the government with respect to family planning has delayed the decrease in the birth rate. However, the effects of the unequal distribution of income may also be great, and should therefore not be overlooked.

The population of the Philippines will continue to grow if the birth rate does not drop (see Table 5). However, the sudden growth of the population has already brought about many problems in the Philippines (refer to chapter 1), and even now is a great burden on the Philippine economy. Because of this, further rapid increases in the population will undoubtedly make population problems in the Philippines even more acute.

Some hold the opinion that family planning should be aggressively pursued in order to deal with these problems. However, if the effects of the unequal distribution of income are great,

further dissemination of family planning will be difficult. This point deserves special attention when Japan considers cooperation in this field.

Notes

1) The aged-child ratio is the percentage of the aged population (people aged 65 and over) to the young population (people of ages 0 to 14), and indicates the extent of the aging of the population. This index is calculated from the following formula:

Aged-child ratio = aged population/young population

2) The young population (people of ages 0 to 14) and the aged population (peopled aged 65 and over) form the dependent population supported by the population of working age (people aged 15 to 64). The age dependency ratio indicates the extent of the burden on the population of working age for supporting the dependent population, and is calculated from the following formula:

Age dependency ratio = (young population + aged population) / population of working age

3) Kingsley Davis, who analyzed the sudden decrease in the death rate in developing countries after World War II, concludes that the decisive factors in the decrease in the death rate were the introduction of the inexpensive and effective medical technology and medicines of developed countries and international medical cooperation.

K. Davis, "The Amazing Decline of Mortality in Underdeveloping Areas", American Economic Review, Vol. 46, No. 2 (May, 1956), pp. 305 - 318.

4) Corazon M. Raymundo & Imelda Z. Ferantl, "States of Women and Fertility; A Report on the Intensive Study of Communities in the Philippines," mimeo.

5) The attitude of the Aquino government to curbing the population is unassertive, placing family planning as one aspect of maternal child health care, partly because of Catholic opposition.

6) Raymundo, Corazon M., et. al., Population Mobility and Development Issues: Philippines, Demographic Research and Development Foundation, 1988, pp. 31 - 34.

7) A detailed report of the situation in Manila slums is included in the following document:

F. Landa Jacano, Slum as a Way of Life, New Day Publishers, 1988.

8) These economic advantages include: (1) the acquisition of foreign currency through remittances from overseas workers and (2) the subsequent improvement of the balance of international payments; (3) the vitalization of local economies due to the consumer demand of families receiving remittances, and in the end (4) the vitalization of the national economy.

9) Such ill effects include: (1) stagnation of corporate activities and economic development due to the outflow of qualified human resources; (2) the lack of benefits to the national econ-

omy relative to the large sums spent to educate the human resources which have left the country, and; (3) the destruction of the family.

Table 1 Trends in Population, Population Growth Rate and Population Density in the Philippines

Year	Population	Growth rate (%)	Population density
1903	7,635,426	–	26
1918	10,314,310	1.92	34
1939	16,000,303	2.22	53
1948	19,234,182	1.91	64
1960	27,087,685	3.06	90
1970	36,684,486	3.01	122
1975	42,070,660	2.78	140
1980	48,098,460	2.71	160
1989	60,100,000	2.34	200

Note: Values for 1989 are estimates of the NEDA-IAC.

Source: National Statistical Office, Census Reports, Year 1903 - 1980.

Table 2 Population Indices for the Philippines and Neighboring Countries (Unit: %)

Country	Average age of population	Age dependency ratio			Aged-child ratio
		Total	Age dependency ratio	Child dependency ratio	
* Philippines (1984)	23.78	76.83	70.76	6.06	8.57
Burma (1984)	24.77	75.62	68.45	7.16	10.46
Indonesia (1984)	24.75	74.69	68.76	5.93	8.63
Thailand (1984)	25.09	65.28	59.31	5.96	10.06
China (1982)	27.11	62.61	54.63	7.98	14.61
Korea (1986)	27.72	51.65	45.12	6.53	14.46
* Japan (1987)	37.24	43.75	27.06	16.69	61.68

Source: Institute of Population Problems, Ministry of Health and Welfare, "Compilation of Population Statistics Materials", population problem research materials, March 10, 1990.

Table 3 Vital Statistics in the Philippines

Year	Crude birth rate (1/1,000)	Crude death rate (1/1,000)	Natural increase rate (%)	Total Fertility Rate
1903	49.6	39.4	1.0	–
1939	49.3	27.1	2.2	–
1948	46.8	20.0	2.7	–
1960	46.0	13.7	3.2	6.46
1965	44.5	12.6	3.2	6.30
1970	39.2	10.2	2.9	5.89
1975	34.8	9.3	2.6	5.19
1980	33.7	8.7	2.5	4.96
1984	32.2*	8.1*	2.4*	4.53
1989	–	–	–	4.31

Note: Figures for 1903 through 1980 are estimates of the University of the Philippines Population Institute. Figures marked * are estimates of the NEDA-IAC. Birth rate for 1984 according to the Contraceptive Prevalence Survey. Estimates for 1989 according to the Integrated Population and Development Program Plan, 1989-93 and the University of the Philippines Population Institute.

Table 4 Trends in Family Planning Programs (Unit: %)

	1968	1973	1978	1983	1986	1988
All methods	16	24	37	32	45.3	36.2
Modern planning methods (*1)	2	11	12	18	20.4	20.6
Other planning methods (*2)	6	8	13	9	12.9	8.8
Non-program methods (*3)	8	5	12	5	12.0	6.4

Notes: 1) "Modern planning methods" refers to the pill, IUD, sterilization, and injections.
2) "Other planning methods" refers to the rhythm method, the rhythm method used in conjunction with other methods, and condoms.
3) "Non-program methods" refers to coitus interruptus and coitus interruptus in conjunction with other methods.

Sources: USAID Trends.

Table 5 Results of Population Projections for the Philippines

Estimate level	Postulated total fertility rate in 2000	Estimated population in 2000 (in millions of people)
Lower estimate	2.1	90.0
Middle estimate	3.0	97.7
Upper estimate	3.4	105.9

Source: NEDA-IAC population estimates

Table 6 Population Distribution in the Philippines

Region	Population distribution (%)				
	1948	1960	1970	1975	1980
Philippines	100.0	100.0	100.0	100.0	100.0
Metro Manila	8.2	9.1	10.8	11.8	12.3
I	10.1	9.0	8.2	7.8	7.4
II	4.0	4.4	4.6	4.6	4.6
III	9.6	9.3	9.9	10.1	10.0
IV	10.8	11.4	12.1	12.3	12.7
V	8.7	8.7	8.1	7.6	7.2
VI	13.2	11.4	9.9	9.9	9.4
VII	11.0	9.3	8.3	8.0	7.9
VIII	9.2	7.5	6.5	6.2	5.8
IX	4.0	5.0	5.1	4.9	5.3
X	4.8	4.8	5.3	5.5	5.7
XI	3.0	5.0	5.0	6.4	7.0
XII	3.5	5.1	5.3	4.9	4.7

Source: Raymundo, Corazon M., et. al., Population Mobility and Development Issues: Philippines, Demographic Research and Development Foundation, 1988.

Table 7 Trends in Migration by Destination (urban or rural areas) (Unit: %)

Destination	Period			Rate of change	
	'65 - '70	'70 - '75	'76 - '80	'65 - '75	'75 - '80
Rural areas	54.0	53.2	42.5	−3.3	−18.3
Urban areas	45.0	47.8	67.5	+4.0	+20.3
Total	100.0	100.0	100.0	−	−

Source: Raymundo, Corazon M., et. al., Population Mobility and Development Issues: Philippines, Demographic Research and Development Foundation, 1988.

Table 8 Urbanization of the Philippine Population

(Unit: %)

Year	Urban areas	Rural areas	Total
1848*	27.0	73.0	100.0
1960*	29.8	70.2	100.0
1970	31.8	68.2	100.0
1975	33.4	66.6	100.0
1980	37.3	62.7	100.0

Note: * use the 1963 urban definition. For all other years, the 1970 definition of NSO (National Statistical Office) has followed.

Source: Raymundo, Corazon M., et. al., Population Mobility and Development Issues: Philippines, Demographic Research and Development Foundation, 1988.

Table 9 Population Density by Region and Age Dependency Ratio for Urban and Rural Areas

Region	Population density (persons) (*1)	Dependent population index (*2) (%)	
		Urban areas	Rural areas
National	161.1	71.2	91.4
Metro Manila	9,387.3	59.0	–
I	164.3	79.8	87.3
II	61.2	79.0	88.2
III	264.8	77.3	88.5
IV	131.2	75.9	89.1
V	197.9	84.5	101.6
VI	224.2	76.2	90.5
VII	263.9	73.3	88.1
VIII	130.9	84.2	96.2
IX	136.3	89.7	92.6
X	97.9	77.4	91.0
XI	106.3	78.4	91.2
XII	97.8	83.5	95.5

Notes: 1) Population density per square kilometer in 1980.
2) Age dependency ratio in 1980.

Source: Raymundo, Corazon M., et. al., Population Mobility and Development Issues: Philippines, Demographic Research and Development Foundation, 1988.
NEDA, Philippine Yearbook 1985.

Table 10 Employment, Unemployment and Underemployment Rates by Region

Region	1980				1988			
	Population of 15 and older (1,000)	Employment rate (%)	Unemployment rate (%)	Underemployment rate (*1) (%)	Population of 15 and older (1,000)	Employment rate (%)	Unemployment rate (%)	Underemployment rate (*1) (%)
National	28,967	95.0	5.0	34.5	35,862	91.7	8.3	29.4
Metro Manila	3,862	89.5	10.5	11.3	5,005	82.8	17.2	7.7
I	2,158	97.2	2.8	36.1	2,096	92.4	7.6	32.6
II	1,316	96.1	3.9	33.0	1,409	95.0	5.0	25.1
III	2,880	94.0	6.0	27.1	3,629	90.4	9.6	19.4
IV	3,954	94.8	5.2	35.5	4,690	91.6	8.4	25.7
V	2,013	97.4	2.6	45.3	2,416	94.3	5.6	37.6
VI	2,702	95.8	4.2	34.7	3,234	92.7	7.3	36.0
VII	2,276	96.4	3.6	41.8	2,736	94.3	5.7	35.7
VIII	1,642	96.0	4.0	47.1	1,920	94.0	6.0	45.8
IX	1,496	94.4	5.6	27.8	1,811	94.8	5.2	39.0
X	1,625	94.9	5.1	39.9	2,078	92.3	7.6	28.0
XI	1,983	96.0	4.0	38.6	2,501	92.0	8.1	32.8
XII	1,324	96.1	3.9	49.5	1,661	95.3	4.7	47.1

Note: 1) The underemployment rate is the percentage of all employed workers who work for under 40 hours per week.

Source: National Statistical Coordination Board, Philippine Statistical Yearbook (1989).

Table 11 Trends in Numbers of Philippine Overseas Contract Workers

Year	Total	Land based	Sea based
1975	36,035	12,501	23,534
1976	47,835	19,221	28,614
1977	70,375	36,676	33,699
1978	88,241	50,961	37,280
1979	137,337	92,519	44,818
1980	214,590	157,394	57,196
1981	266,243	210,936	55,307
1982	314,284	250,115	64,169
1983	434,207	380,263	53,944
1984	425,081	371,065	54,016
1985	389,200	337,764	51,446
1986	414,461	357,687	56,774
1987	496,854	425,881	70,973
1988	477,764	381,892	95,872
1989	522,984	407,974	115,010

Source: Philippine Overseas Employment Administration Annual Report.

Table 12 Socioeconomic and Demographic Indices for ASEAN Countries

	GNP/ POP[1]	(*2) Industrialization	(*3) Urbanization	Ratio of (*4) students (junior high school)	(*5) Literacy rate	Infant mortality (*6)	Family planning (*7)	Birth rate (*8)	Death rate (*9)	*10) Natural increase
Indonesia	440	36	27	46	74	68	45	28	9	19
* Philippines	* 630	* 34	* 41	* 68	* 86	* 44	* 44	* 31	* 7	* 24
Thailand	1,000	35	21	28	91	30	66	22	7	15
Malaysia	1,940	25	41	59	73	23	51	30	5	25

Notes: 1) per capita GNP in dollars, 2) - 5) in units of %, 6) in units of ‰, 7) in units of %, 8) - 9) in units of ‰.

Source: World Development Report 1990.

Table 13 Income Distribution in the Philippines

(Unit: %)

Household classification	Lower division	2nd division	3rd division	4th division	Upper division	Total
Percentage of total	20 %	20 %	20 %	20 %	20 %	100 %
Income distribution	5.5 %	9.7 %	14.8 %	22.0 %	48.0 %	100 %

Source: World Development Report 1990.

Figure 1 Population Mobility in the Philippines (1975 - 1980)

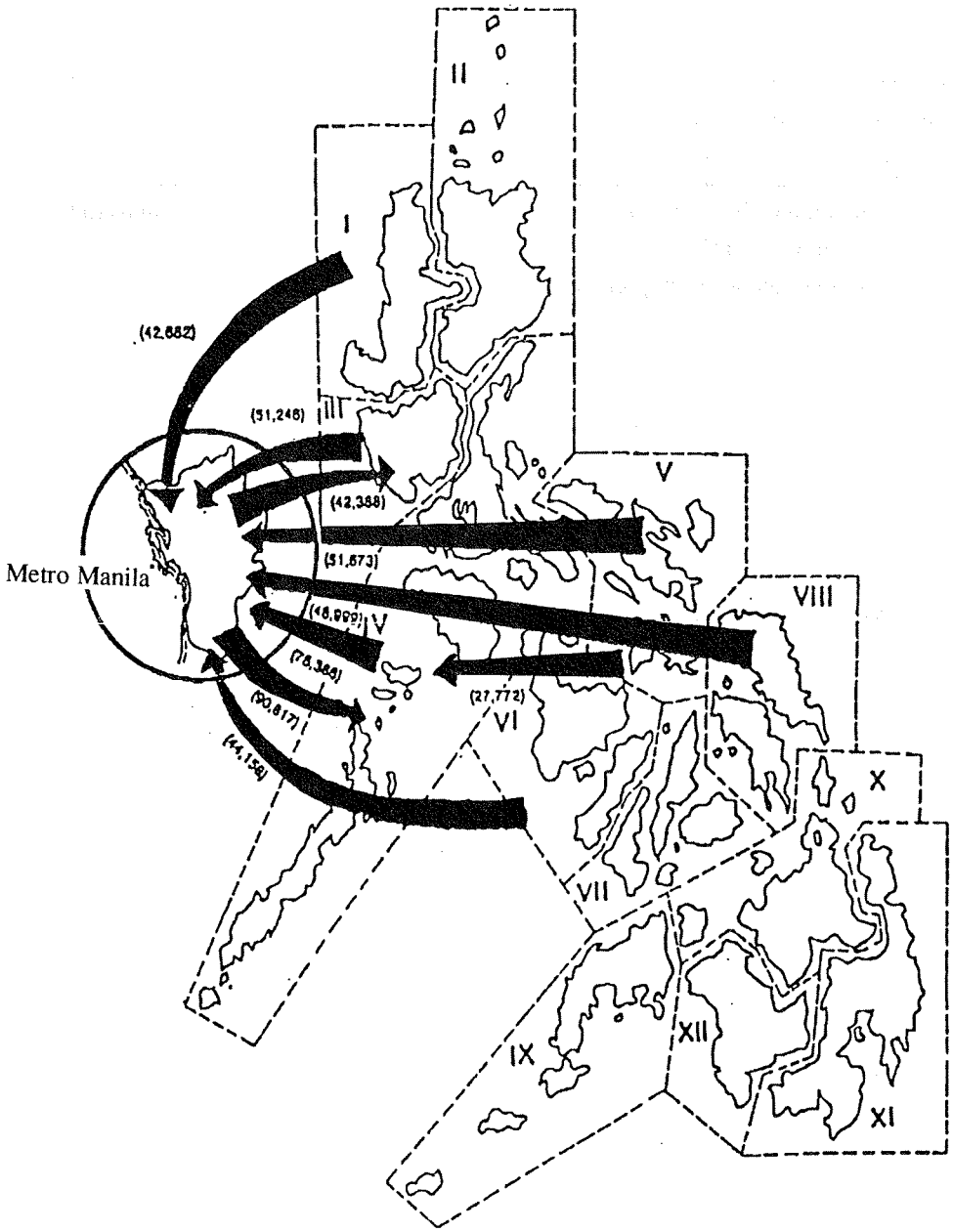
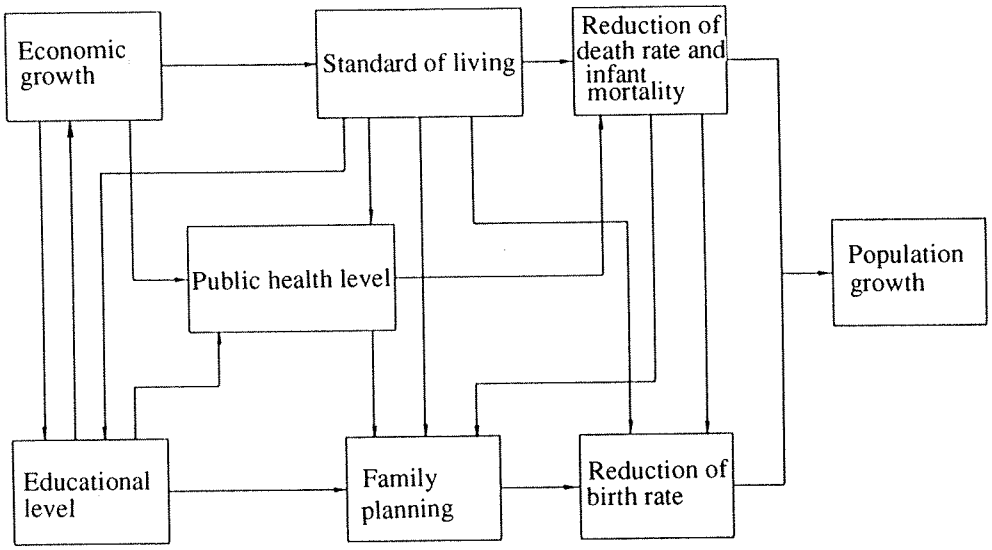


Figure 2 Causal Chain of Demographic Phenomena



Chapter Three

General Situation of Health and Medical Treatment

We do not necessarily have sufficient materials in order pass judgments on the situation of health and medical treatment in the Philippines. Based on the materials we have, however, we have attempted to draw an outline of the situation and to record as much data as possible for future comparisons.

1. Health and Medical Treatment

(1) Environmental health

① Drinking water

In 1988, 99% of the urban population and 75% of the rural population was supplied with water. With the MWSS (Metropolitan Waterworks and Sewerage System) in Manila, the water quality standards are set at roughly the same levels as in developed countries, with the level of residual chlorine at the tap set at 0.1mg/l (*1). By the end of 1990, 81% of the 10,000,000 households was supplied with clean water (up 1.72% over the previous year) (*2). In reality, however, with insufficient repairs of water leaks, etc., contaminated water is drawn into the water supply, so there are problems with the water quality. In addition, the water quality is being affected by volcanic ash resulting from the recent volcanic eruptions. However, water quality standards are being satisfied in the end (*3).

② Sewerage and toilets

In 1988, sewer systems covered 98% of urban areas and 85% of rural areas. In urban areas, 72.3% of homes have hygienic toilets (*2). In rural areas, 28% of homes have non-hygienic toilets, while 25% have no toilets at all (*1).

(2) Nutrition (*2)

① Malnutrition is a major health problem particularly for infants, pregnant women and nursing mothers. Here are 778,225 people who are suffering from malnutrition in 1990. In 1990, the rate of infants suffering from malnutrition decreased 3.07% compared with the number of malnutrished children in 1989. The supply of high calorie, high protein foods is necessary to prevent malnutrition, and distribution was 97.1% in 1990.

② Vitamin A deficiency results in the form of xerophthalmia which leads to loss of eyesight.

In 1990, vitamin A capsules were prescribed to 15.1% of the target of 1,835,000 persons (as compared to 51.9% in 1989).

③ Iron deficiency is a cause of nutritional anemia, and is apparent in 37.5% of the population. The problem is especially prominent among pre-school children, pregnant women, and nursing mothers. In 1990, iron supplements were supplied to 23.6% of the target of 2,915,000 persons (as compared to 92.49% in 1989).

④ There is a high rate of iodine deficiency disorders in the Philippines, particularly in the provinces. 12.8% of school children are afflicted, and in 1990, 77,000 (8%) of 971,000 persons were prescribed iodine supplements.

(3) Caloric intake (*4)

In 1986, the daily caloric intake was 2,308 units, with a daily intake of 66g of proteins and 43g of fats. The total caloric intake has surpassed 2,000 calories since 1965, and the highest was 2,443 in 1982. Intake of proteins was 44 calories in 1955, after which it increased yearly, but has remained at approximately the same level for the past 10 years. Daily intake of fats has been above 40g since 1973.

(4) Immunization (*2)

Infants under 1 year of age are given 6 types of vaccinations. The rates of immunization are as follows:

Tuberculosis (BCG): 97% (88.57% in 1989)
DPT (diphtheria, pertussis and tetanus): 89% (79.0% in 1989)
OPV (oral poliomyelitis vaccine): 88% (78.4% in 1989)
Measles: 85% (82.74% in 1989)
Tetanus toxoid for pregnant women: 47% (43.49% in 1989)
In addition, immunization against hepatitis B is also being planned.

(5) Oral rehydration therapy (*2)

For diarrhea among infants under the age of 5, the distribution of oral rehydration solution for conducting ORT, the training of health workers, health education and the encouragement of breast feeding are being promoted.

2. Medical treatment organizations and health personnel

Table 1 shows the numbers of physicians, dentists, nurses and midwives employed by governmental organizations from 1980 to 1989. For private organizations, we know only that the number of health personnel was 147,638 for 1987/1988 from Document 1 (*4). Table 2 shows the actual numbers of health and medical personnel for 1989 (*1). The figures in parentheses indicate equivalent numbers for Japan, but this data includes personnel of both public and private organizations, so the two cannot be compared unconditionally. Table 3 shows the number of public and private medical institutions and hospitals. The ratio of beds to population is 1:792 persons. For Japan, this ratio was 1:76.8 in 1988, 1/10 of the ratio in the Philippines. Though it is not clear whether these figures are included in Document 5 (Table 3), there are 6,785 beds in 10 mental institutions and 4,920 beds in 8 leprosy institutions.

3. Causes of Death and Disease Structure

(1) Causes of death

Table 4 shows the ten leading causes of total deaths in the Philippines. The top two causes were the same from 1981 to 1987, but diseases of the vascular system have replaced tuberculosis as the third leading cause. In addition, malignant neoplasms have gradually increased in ranking. However, of the ten, infectious diseases include pneumonias, tuberculosis, measles, and diarrheas, so improvements to nutrition including malnutrition and avitaminosis along with better environmental health, immunization and medical facilities would result in substantial improvements to the death rates. When we examine the ten leading causes of infant mortality (Table 5), we can see that six of the ten are preventable diseases. In addition, prematurity, immaturity and respiratory distress syndrome are likely preventable to a substantial extent through improved maternal and child health care.

(2) Morbidity

Table 6 shows the ten leading causes of morbidity. The top six are infectious diseases, but these have been decreasing yearly. However, there is a distinct increase in malignant neoplasms and diseases of the heart. Table 7 shows the cases of notifiable diseases and deaths. Table 8 shows the number of registered cases of diseases and deaths at 13 member hospitals of the Philippine Pediatric Society. These statistics are for individuals up to the age of 19, and the proportion of infectious diseases is high. However, the low number of deaths indicates a substantially high level of treatment.

Table 3 Number of Hospitals and Hospital Beds (1990)

Hospitals		Hospital beds	Beds per population
(1) Government institutions	566	40,791	1 : 1,508
Medical centers		3,050	
Regional	14	3,540	
Provincial	168	7,150	
District	264	9,560	
Medicare	72	1,030	
Municipal	62	620	
Sanitariums	8	4,380	
Special	4	2,388	
Specialty	4	974	
Research	2	75	
RHU and FP Centers	2	20	
Others	57	8,094	
(2) Private hospitals	1,120	36,838	1 : 1,670
Primary	631	9,669	
Secondary	350	10,360	
Tertiary	139	16,809	
Total ((1) + (2))	1,686	77,629	1 : 792

Source: Document 5

Table 4 10 Leading Causes of Mortality and Crude Death Rates (per 100,000 persons)

Causes	1981－1985年 (5-year average)	1986年	1987年
1. Pneumonias	90.7 (14.9)	91.3 (15.1)	91.9 (15.7)
2. Diseases of the heart	65.6 (10.8)	66.0 (10.9)	67.7 (11.6)
3. Tuberculosis, all forms	55.3 (9.1)	55.2 (9.1)	50.0 (8.6)
4. Diseases of the vascular system	47.6 (7.8)	49.6 (8.2)	52.1 (8.9)
5. Malignant neoplasms	33.3 (5.5)	33.4 (5.5)	35.5 (6.1)
6. Diarrheas	25.8 (4.2)	23.2 (3.8)	18.5 (3.2)
7. Accidents	16.0 (2.6)	19.1 (3.2)	20.3 (3.5)
8. Avitaminoses and other nutritional deficiencies	13.0 (2.1)	12.5 (2.1)	9.1 (1.6)
9. Measles	15.1 (2.5)	13.8 (2.3)	21.7 (3.7)
10. Nephritis, nephrotic syndrome and neprosis	9.3 (1.5)	9.4 (1.5)	9.0 (1.5)

Source: Document 4 Figures in ( ) indicate percentage of total deaths for that year.

Table 5 10 Leading Causes of Infant Mortality and Death Rates (per 1000 live births)

Causes	1981－1985 (5-year average)	1987	1988
1. Pneumonias	10.2 (24.8)	8.5 (26.3)	9.71
2. Prematurity/Immaturity	—	—	2.73
3. Diarrhea	3.6 (8.7)	2.1 (6.4)	2.06
4. Septicaemia/Sepsis neonatorum	0.6 (1.5)	0.6 (2.0)	1.53
5. Congenital anomaly/debility	1.9 (4.6)	1.4 (4.4)	1.47
6. Respiratory distress syndrome	5.5 (13.4)	4.6 (14.3)	0.56
7. Bronchitis	0.7 (1.8)	0.5 (1.5)	0.55
8. Asphyxia neonatorum	1.0 (2.8)	0.9 (2.7)	0.54
9. Avitaminosis and other nutritional deficiencies	1.7 (4.1)	1.1 (3.4)	0.53
10. Tetanus neonatorum	—	—	0.52

Source: Documents 4 (1) and 6 (2)

Figures in ( ) indicate percentage of total deaths for that year.

Table 6 Morbidity (per 100,000 persons)

	1981－1985 (average)	1986年	1987年
1. Bronchitis	798.5	1,076.4	599.8
2. Diarrheas	764.8	986.7	349.3
3. Influenza	616.9	710.2	165.9
4. Pneumonias	289.1	339.6	226.7
5. Tuberculosis, all forms	244.2	273.4	175.6
6. Malaria	141.9	221.7	0.0
7. Accidents	168.1	189.1	78.6
8. Measles	94.2	106.0	136.9
9. Malignant neoplasms	48.4	48.2	98.5
10. Heart disease	130.6	140.2	172.4
11. Varicella	—	—	25.0

Source: Document 4

Table 7 Notifiable Diseases, Number of Deaths and Death Rate Per 100,000 Persons

Diseases	1982年		1987年	
	Reported cases	Deaths	Reported cases	Deaths
1. Cholera	472	163	0	0
2. Typhoid & paratyphiod fever and other salmonella infections	5,420	697	15,290	1,121
3. Dysentery	0	0	0	0
4. Food poisoning	0	0	0	0
5. Diarrheas	230,553	15,090 (29.4)	591,858	9,468 (18.5)
6. Tuberculosis	93,152	28,580 (55.7)	163,740	28,697 (50.0)
7. Leprosy	1,058	89	1,766	63
8. Diphtheria	1,812	491	1,443	245
9. Whooping cough	14,241	72	8,856	26
10. Tetanus	2,673	941	2,910	1,026
11. Acute poliomyelitis	355	94	327	43
12. Varicella	1,665	15	6,336	15
13. Measles	37,307	9,286 (18.1)	81,896	12,431 (21.7)
14. Viral encephalitis	0	0	0	0
15. H-fever	1,684	305	1,696	243
16. Infectious hepatitis	9,183	653	16,084	817
17. Rabies	0	0	0	0
18. Malaria	45,716	1,086	121,097	1,226
19. Syphilis	102	16	62	9
20. Gonococcal infections	11,933	5	11,361	0
21. Schistosomiasis	3,319	452	13,892	288
22. Filariasis	74	5	354	0
23. Malignant neoplasms	25,838	17,997 (35.1)	27,195	20,364 (35.5)
24. Bronchitis	300,286	2,052	642,777	1,814
25. Pneumonias	123,420	48,650 (94.9)	183,143	52,700 (91.9)
26. Influenza	232,768	1,215	495,161	1,151
27. Accidents	0	0	114,445	11,630 (20.3)
28. Diseases of the heart	0	0	79,214	38,840 (67.7)

Source: Document 4 Figures in ( ) indicate deaths per 100,000 persons.

Table 8-1 Number of Registered Cases of Diseases and Deaths at 13 Member Hospitals of the Philippine Pediatric Society

(1990)

	Diseases	28-364 days	1 - 4 yrs.	5 - 9 yrs.	10-14 yrs.	15 - 19 yrs.	Total
1	Infectious						
1.	Amebiasis						
	Asymptomatic	121 (1)	49	31	12	5	218 (1)
	Intestinal	1,852 (5)	1,137 (2)	262	82	20	3,353 (7)
	Extraintestinal	24	12	6	2	1	45
2.	Bronchiolitis	1,397 (4)	527 (1)	25	14	6	1,969 (5)
3.	Cholera	22 (2)	18	10	2	—	52 (2)
4.	Dengue hemo. Fever	698 (9)	1,029 (14)	754 (2)	237	28	2,746 (25)
5.	Diphtheria	25 (1)	20 (2)	14	10	5	74 (3)
6.	Empyema	32 (2)	15 (1)	4 (1)	—	—	51 (4)
7.	Encephalitis	77 (19)	63 (12)	32 (2)	21	12	205 (33)
8.	Epiglotitis	7	5	5	2	—	19
9.	Gastroenteritis	24 (16)	93 (7)	135 (3)	84	27	363 (26)
	AcuteBloody Non-bloody Chronic	2,684 (44)	1,704 (32)	362 (16)	160 (2)	75	4,985 (94)
		—	—	—	—	—	—
10.	Hepatitis	149 (6)	114 (2)	48 (1)	131	27	469 (9)
11.	Influenza and/or influenza-like illness	764	651	485	305 (2)	92	2,297 (2)
12.	Intestinal parasitism	704	82	389	256	14	2,145
13.	Layrngotracheobronchitis	312 (6)	268 (3)	47	27	5	659 (9)
14.	Malaria	27	21	33	14	3	98
15.	Myocarditis	4	1	2	—	—	7
	Primary	16 (1)	6 (1)	2	—	—	24 (2)
	Secondary	34 (2)	21 (1)	20	8	5	88 (3)
16.	Meningitis	714 (49)	308 (34)	183 (10)	33 (2)	9	1,247 (95)
17.	Mumps	12	42	32	19	8	113
18.	Otitis media	172	218	133	75	22	620
19.	Pertussis	198	86	47	19	8	358
20.	Pneumonia	322	218	154	62	14	770
	Lobar (segmental)	842 (18)	654 (6)	342	175	27	2,040 (24)
	Broncho (disseminated)	7,521 (277)	3,990 (152)	1,058 (27)	465	10	13,044 (456)
21.	Poliomyelitis	38	18	7	4	2	69
22.	Rabies	—	—	2 (2)	1 (1)	—	3 (3)
23.	Salmonellosis 1 (non-typhoidal)	49	37	30	21	3	140
24.	Schistosomiasis	—	5	—	—	—	5
25.	Septicemia	682 (247)	128 (19)	52 (10)	28	4	894 (276)
26.	Sexually transmitted diseases	1	—	4	2	—	7
27.	Skin infection	375 (2)	254 (1)	197	65	8	899 (3)
28.	Tetanus	81	67	52	31	2	233
29.	Tonsillopharyngitis	1,578 (2)	1,927 (5)	1,059	453	45	5,062 (7)

Table 8-2 (continuation)

	Diseases	28-364 days	1 - 4 yrs.	5 - 9 yrs.	10-14 yrs.	15 - 19 yrs.	Total
30.	Tuberculosis						
	Pulmonary	598 (2)	1,218 (2)	623	243	35	2,708 (4)
	Extra pulmonary (except meningitis)	40	38	30	14	6	128
31.	Typhoid fever	202	220	349	307	90	1,168
	Paratyphoid	18	34	45	18	4	119
32.	Urinary tract infection	752	526	432	214	49	1,973
33.	Viral exanthems	—	—	—	—	—	—
	Coxsaki	46	37	29	17	5	134
	Exanthem subitum	99	22	10	2	2	135
	Measles	1,196 (29)	1,983 (127)	723 (8)	125 (2)	19	4,046 (166)
	Rubella	126	89	48	24	8	295
	Varicella	30	28	19	8	2	87
	Others	198 (5)	234 (3)	152 (4)	32	1(1)	617 (13)
II.	Non-infectious						
1.	Accidents/trauma	187 (3)	435 (1)	321 (1)	165	18	1,126 (5)
2.	Asthma	578 (6)	1,587 (4)	1,205 (2)	375	58	3,803 (12)
3.	Burns	45	36	30	14	2	127
4.	Collagen diseases	6	10	12	7	2	37
5.	Congenital malformations	287 (8)	80 (2)	47	22	—	436 (10)
6.	Diabetes mellitus	10	7	5	2	—	24
7.	Endocrine disorders	6	2	2	—	—	10
8.	Energy-protein undernutrition	1,489 (15)	1,101 (10)	297	69	14	2,970 (25)
	Vitamin deficiencies	64	138	35	2	—	239
9.	Glomerulonephritis,	32	133	247	76	4	492
	acute nephrotic syndrome	42	78	89	76	2	287
10.	Hematologic disorders	—	—	—	—	—	—
	Nutritional anemia	267 (3)	231 (1)	97	47		642 (4)
	Aplastic anemia	16	32	44	27 (2)	6	125 (2)
	Leukemia	188 (10)	209 (6)	135 (14)	37 (2)	2	571 (32)
	Hemolytic anemia	34	58	22	8	2	124
	Hemophilia	12	20	14	9 (1)	1	56 (1)
	Idio. thrombocytopic purpura	39	45	20	21	—	25
	Acquired prothrombin complex deficiency	49 (1)	22 (2)	17	6	2	96 (3)
11.	Heart disease (congenital)	441 (20)	278 (9)	97 (3)	40 (1)	5	861 (33)
	Acquired	18	24	20	10	5	77
12.	Neoplasm	68 (4)	55 (2)	26 (1)	17 (1)	22	188 (8)
13.	Poisoning	—	12 (2)	6 (1)	—	—	18 (3)
14.	Rheumatic fever	46 (3)	153 (7)	112 (2)	101 (1)	18	430 (13)
15.	Seizure disorders	992 (5)	867 (6)	346 (2)	227 —	52	2,484 (13)
16.	Surgical conditions	896 (46)	522 (5)	349 (4)	197 (2)	79	2,043 (57)

Source: Document 7

Figures in ( ) indicate number of deaths.

Chapter Four

Report on Survey

1 Medical System in the Philippines

(1) Structure of the medical system

As is widely known, administrative areas in the Philippines are divided into regions, provinces, districts and barangaeis. Public medical institutions in the Philippines are established along the lines of these administrative areas by function and purpose.

In other words, "regional hospitals" are established in regions, "provincial hospitals" in provinces, "district hospitals" in districts, and so on. Further down the line, "rural health units" in charge of primary health care and "barangay health stations" are set up in residents areas. In addition

to public health institutions, there are also many private hospitals.

The health and medical system in the Philippines consists of many types of medical institutions of varying sizes, both public and private, so it is difficult to give an overall view precisely and accurately. However, the general impression obtained during the field survey was that regional, provincial and district hospitals are facing difficulties in facilities, equipment and medicines. However, the personnel makeup and skills of medical care personnel (physicians, nurses, etc.) are quite good as compared with other developing countries.

Rural health units in charge of primary health care are small establishments generally consisting of a consultation room, treatment room, pharmaceutical room, etc. They are permanently staffed with physicians, nurses and midwifes, and the maintenance of facilities and equipment and storage conditions of medicines are relatively good. Most barangay health stations are simple establishments consisting of a consultation room and treatment room, and are managed by midwives.

(2) Strong points of the medical system

We have now given a rough description of the health and medical system of the Philippines. As can be seen, the health and medical system of the Philippines presents many strong points, briefly:

First, the large number of medical institutions. As of 1990, there were a total of 1,686 hospitals in the Philippines, including both public and private, and a total of 77,629 beds. As for their regional distribution, there is a tendency for an uneven distribution favoring urban areas. However, it is also true that there are no regions in which there are no hospitals at all. During our survey mission, we happened across private hospitals, district hospitals, rural health units and barangay health stations. This is evidence that the health administration penetrates all

areas of the country.

Secondly, the abundance of medical care personnel (physicians, nurses, etc.). The level of education in the Philippines is extremely high in comparison to other developing countries. Because of this, even establishments at the lower end of the medical system are staffed with physicians, nurses and midwives who have received the proper education. As a result, the medical system functions relatively efficiently, and the trust of the people in medical institutions is high.

Thirdly, the maintenance of facilities and equipment and storage of medicines. Perhaps because of the fact that medical institutions are staffed with medical care personnel who have received the proper education, the maintenance of facilities and equipment and storage conditions of medicines are extremely good in comparison with other developing countries, though there are problem points in the area of facilities, equipment and medicines. We can say that the health and medical system of the Philippines has extremely great potentialities.

(3) Problems faced by health and medical institutions

Thus, health and medical institutions in the Philippines present strong points listed above, but are also facing several problems. These include:

First, inadequate budgets. In interviews with residents of rural villages and slums, we were told that some rural health units and barangay health stations charge for medicines and prophylactics which should be supplied free of charge. When we questioned the Department of Health, we received a reply with a slightly different nuance: that these medicines and prophylactics are free of charge even now, but that patients are asked for donations to cover expenses for maintaining facilities and purchasing medicines. Whichever the case, there is no doubt that inadequate budgets are a major obstacle for the health administration.

Secondly, the problem of reliability. When we asked residents of rural villages and slums whether they would go to public health institutions (rural health units or barangay health stations) or private hospitals if they became ill, an overwhelming number answered private hospitals. The reason was that "even if the price is high, private hospitals have good medicines". Insufficient budgets are influencing the reliability of medical institutions.

Thirdly, the outflow of medical personnel overseas and the difficulties in replacing them. The salaries of medical care personnel (physicians, nurses, etc.) who work at public medical institutions is generally lower than at private institutions. The demand for medical personnel overseas thus creates a problem. Because of their high technical level and the fact that they speak English, there is a large demand for Filipino health care personnel in foreign countries (particularly in the U.S., Canada and Middle East countries). Because of this, the number of medical personnel moving overseas in search of higher pay has been increasing recently. As a result, some medical institutions in the countryside are having problems recruiting staff. Thus,

the adverse effects of the outflow of labor overseas are being felt even in the field of medical care. However, at least for the time being this problem is not affecting medical institutions in urban areas.

In order to deal with this problem, the Aquino government has launched a policy of having graduates of health and medical related universities and departments work in rural health and medical services for six months after graduation. At the stage of implementation of this policy, however, the decision of whether or not to work in the countryside is left up to the voluntary will of these graduates, and as a result this policy has not been effective. The fundamental solution to the problem is the improvement of the treatment of medical care personnel, but the inadequate budgets are a major impediment here, as well.

The fourth problem is the overwork of medical personnel. As stated above, there is a problem of insufficient staff at public medical institutions in the country-side. The result is that medical care personnel in the country-side are forced to work excessively with little pay and inadequate staff. The deterioration of the working environment is spurring on the outflow of personnel overseas. Thus, this vicious circle is becoming firmly anchored in the field of health and medical care as well.

(4) Summary

We can conclude the following from the above considerations. The situation of the health and medical system in the Philippines is quite good, with many qualified physicians, nurses, midwives, etc. In this sense, it has large potentialities. However, it is facing many problems, including the difficulties in securing medical care personnel in the countryside and the problems of facilities, equipment and medicine. The fundamental cause can be said to be inadequate budgets. This budgetary problem is generated by a depressed economic situation. This should be kept in mind when Japan considers cooperation in the area of health and medical care.

2 Health and the Urban Environment

(1) Accelerating concentration and sprawling of cities

The Manila area has recently been sprawling faster than ever. Phenomena of sprawling in ASEAN countries since the 1970s was due chiefly to expansion of cities as a result of relatively steady economic growth, such as the expansion of new housing developments from the center to the suburbs, increases in industrial zones, increases in automotive traffic terminals, and the subsequent expansion of commercial areas. The recent sprawling of the Manila area, however, presents aspects different from sprawling in stages accompanying economic growth. These

include on the one hand the appearance of modern new cities due to the development of a group of commercial areas centered around American-style large super markets and the extensive development of ultra-high class residential areas, and on the other hand the increase in the numbers of squatter and slum areas at about the same time as the development of suburban roads, a characteristic of the initial stages of economic development. This is as if some areas are becoming like developed countries while poverty is simultaneously increasing. For example, the Makati district where the famous Makati commercial center is located, the Mandaluyong district, the Pasig district, and the area centering around Cubao in Quezon City are typical examples of the former, while the slums and squatter areas along the South Super Highway, the North Luzon Express Way and the Don Mariano Marcos Avenue are examples of the latter.

Furthermore, the density of the population in the Metro Manila area is increasing. There appears to be two main reasons for this. First, in the large private lands owned by big business families, land which was previously crop fields or woods is being developed into shopping complexes, tall apartment buildings, residential areas called "... villages", new industrial zones, and so on, abruptly increasing the population capacity. Secondly, the number of squatters on public land is increasing rapidly. In particular, the increase in the number of squatters on public land in the capital area is accelerating due in part to the fact that after the EDOSA revolution in 1986 the Aquino government for a time adopted a policy of allowing the poor to occupy land slated for development under the Marcos government and land previously owned by Marcos cronies which the government had seized. In addition, we were informed during our stay that politicians were encouraging the influx of squatters into their voting districts, and that recommendations were issued saying that squatters who have lived for 20 years or more in Quezon City should be allowed land ownership rights free of charge. Both politically and socially, there is currently in the Philippines an atmosphere for accepting squatters, and this is a factor promoting the increase in the density of the population in the capital area.

This concentration of the population in the Manila area is greatly influenced by the economic trends in the Philippines in the 1980s. After the global problem of accumulated debts arose in 1982, the Philippine economy was faced with a great frustration in economic growth what with the slow economy of the time added to the world-wide slump in primary products. In the rural areas, with the slump in primary products, the prices of sugar, corn, bananas, pineapples, coconuts, coffee -- the Philippines' major agricultural products -- dropped, and many workers on large plantations lost their jobs. The famine which struck the island of Negros, a sugar-cane growing area, was due to the large scale unemployment of farm workers resulting from this slump. The world-wide slump in primary products is continuing at the present, and agricultural workers who have lost their jobs due to the rationalization of plantation management are moving in great numbers to urban areas, especially to the Manila area. In addition, in the Manila area, between the time the problem of accumulated debt arose (in 1982) and 1987,

large numbers of factory workers became unemployed due to the withdrawal of foreign capital, and many others lost their jobs due to the closing of the industrial offices of Marcos cronies after the EDOSA revolution. Because of this, the income of wage-earning agricultural and factory workers in the Philippines greatly declined, and poverty increased both in cities and in rural areas. Large numbers of people have migrated from the country to the Manila area, and with the increase in the numbers of unemployed wage-earning agricultural and factory workers, the numbers of slums and squatters increased rapidly.

However, reflecting the phenomenon of excess money in times of depression, some financial combines and wealthy citizens rushed to invest their money overseas or in domestic real-estate. Investment in real-estate during slumps is a characteristic of the commercial practices of overseas Chinese merchants. As a result, there was little investment in agricultural villages or country land where business chances are small and there is not much hope for good returns. Investments were concentrated in the Manila area, the only warranted business area in the Philippines. This increased the economic gap between the capital area and the provinces. In addition, in the two-year period spanning 1988 and 1989, international economic aid to the Philippines grew and large amounts of foreign capital flowed in, particularly from Taiwanese firms, resulting in an investment boom. However, this foreign capital consisted mainly of investments in the real-estate and commercial sectors of the Manila area, as well as industrial development investment in Manila and outlying areas, acting to deepen the economic gap between the Manila area and the provinces. In this way, the financial combines and wealthy classes continued to steadily accumulate wealth in the 1980s despite the problem of accumulated debt, the slump in primary products and political instability, and development was concentrated in the Manila area. The result has been that a sudden increase in the number of slums and squatters and modern urban development have proceeded simultaneously.

(2) Decrease in administrative capabilities and aggravation of health and urban problems

Ever since the problem of accumulated debt arose, the leadership powers of the Philippine government has been notably decreasing. Due to the financial difficulties, the government lacks not only funds for developmental investments but even for ordinary administrative expenses. In particular, in the political and economic confusion following the EDOSA revolution in 1986, budgets and personnel were greatly reduced and the government's administrative capabilities have decreased substantially. This decrease in administrative capabilities was further accelerated by the private activity promotion policies adopted in the framework of the conditionality of the International Monetary Fund (IMF) in relation to the problem of accumulated debt. These policies included relaxation of regulations, privatization of government enterprises, the reduction of governmental projects which could be taken over by the private

sector, and so on, thereby restraining developmental investments by the government and aggressively promoting the principle that beneficiaries should shoulder the burden for the services they receive.

This was a major blow to the increasingly severe urban problems of the Philippines and the costly problems of medical treatment and health. Urban problems are caused by the concentration of the population in the Manila area, where such problems as traffic congestion, insufficient water and sewer systems, lack of electric power, insufficient telephone lines, insufficient housing, garbage pollution, air pollution and other problems dealing with the preservation of the urban environment have reached critical proportions. The development of the urban infrastructure cannot keep up with the increasingly high population density and the sudden sprawling of Metro Manila, as described previously.

The development of large commercial areas, high-rise apartment buildings and high class residential ares by the financial combines creates a big demand for electricity, telephones, water and sewers, and requires the construction of roads leading to these areas. The facilities in these areas being developed by the financial combines, which have major political, economic and social power, make these areas affluent, advanced urban centers unlike anything seen in Japan, and these areas are given priority for the supply of electricity, telephones and city water. However, this priority for the upper classes at a time when absolute amounts on a national level are insufficient results in insufficient supply to the general citizens. A zero sum game between classes is being played with public investments and administrative services at a time of financial difficulties. Because of this, in addition to the overall decrease of the government's administrative capabilities, various aspects of the urban infrastructure and administrative services which support the standard of living of the general citizens are lacking as a result of this zero sum game in public investments and the reception of administrative services.

During this survey, we observed the increasing dilapidation of urban functions and urban facilities in already existing areas of the city, and many squatters living on the sites of construction of roads whose construction has been halted. In addition, in the Navotas district where we conducted a sample survey, the facilities and functions established when the district was originally developed are in a state of overload due to the increase of the population and lack of maintenance -- cloudy tap water, alleys which flood when it rains, the elementary school in two shifts and the middle school in three shifts for lack of teachers and facilities, ditches with poor drainage which also function as toilets, and so on. In addition, the free distribution of contraceptives for family planning has been stopped, and contraceptives must now be purchased at private clinics or pharmacies. Furthermore, the day we visited the district was four days after a typhoon and high tides had flooded the area up to the knees, but there was not even a plan for health officials to disinfect the roads, sewer ditches, the area below house floors, garbage dumps, etc.

There are limits to improving hygiene and maternal and child health care relying solely on the efforts of single individuals or families. Even if one knows that washing ones hands with a little soap before touching food or wounds can greatly improve sanitation, this is ineffective if the tap water supplied to the house is polluted. Even if condoms are used as a method to prevent pregnancy, the genitals become inflamed if they are washed with polluted water after sex. The low spread of condoms in the Philippines is due in part to the difficulty in obtaining clean water. The water supply and drainage network in the urban districts of Manila was more developed than in other southeast Asian capitals, and the same was true in provincial cities. This is because the Philippines adopted U.S. systems and sanitation standards early on. However, these systems cannot be maintained sufficiently and their original function and efficiency have declined. The health and sanitation systems in the Philippines, which were established earlier than in other Asian countries, are beginning to crumble, and the decrease in the administrative capabilities of the government is spurring this on.

(3) Problem points

① Is a high population growth rate permissible?

The population growth rate in the Philippines is currently the highest among Asian countries at 2.4% (some demographers say the rate is actually higher). With the family planning policies adopted in the 1960s and 1970s the birth rate had been steadily decreasing and showed tendencies of reaching the levels of other Asian countries. Even so, entering the 1980s the decrease in the birth rate slowed down -- this was especially clear in the latter half of the decade. As a result, the young population which requires support is increasing abruptly, and in view of the recent economic situation in the Philippines, it is clear that this is a great impediment to the rise in the standard of living and improvement of the qualities and abilities of the people. If we consider the fact that production of rice, the staple food, is becoming insufficient, it is normal to have doubts whether the population in the Philippines should be allowed to increase at the current rate.

② Does the lack of population development policies lead to improvement of the abilities of the people?

The economy of the Philippines has been in a prolonged slump ever since the problem of accumulated debts arose in 1982. In addition, the Philippines has been unstable politically since the EDOSA revolution in 1986. As a result, the government's economic development policies and population development policies are not clear, foreign companies are withdrawing from the Philippines or keeping their investments down, and the governments of developed countries are at a loss as to how to offer economic cooperation. Furthermore, reductions to the

budget due to the financial difficulties of the Philippine government have lead to cuts in personnel and administrative expenditures. With this, the welfare and public health administrations which protect the health and hygiene of the citizens have been diminished, and there is no longer a clear-cut population development policy. In addition to the reduction of the administrative services supporting the health and welfare of the citizens and the retrenchment of related public investments, the lack of a suitable population development policy is putting the health and life of weak infants and mothers in jeopardy. The poor masses which are also the economically weak are in the same position. In the past, the Philippine government implemented family planning policies which in conjunction with economic development policies were more or less successful in improving of the qualities and abilities of the people and increasing the living standards. However, conditions today are just the opposite. The frailty or non-existence of such population development policies as family planning or maternal and child health care will definitely lead to a decline in the qualities and abilities of the Philippine people with a lag of several years. The people of the Philippines have had a successful experience in this area in the past, and know that they were at an advanced level among other Asian countries. As a result, if the government and people adopt aggressive policies they can easily overcome current difficulties.

③ Is the increase in slums and squatters desirable?

The improvement of the medical care, sanitation and health of the citizens is greatly influenced by the quality of the urban environment. In the Philippines in recent years the income gap has been increasing, the disparity between the environment in upper class residential areas and areas were the general population resides is becoming extremely large, and the differences between the two are more and more prominent. The residential environment of the general public is deteriorating steadily, and it is becoming difficult for these people to receive effective services from the government. Slums and squatter areas are increasing rapidly in the Manila area, and the inadequacy of the urban infrastructure and urban facilities is serious. Despite this, some politicians are adopting the fallacious policy of encouraging squatters for the short-term purpose of increasing their electoral votes. In addition, some local self-governing bodies have been recommending the fallacious policy that long-term squatters should be granted land ownership rights. The dismantlement of squatter areas must be a part of urban environment improvement policies, such as urban development or urban redevelopment projects.

Furthermore, during this survey we learned that many common citizens feel that "politics is business", are losing their trust in the government because it is not promoting policies to improve the living environment of citizens, and are becoming alienated from the government. Though the government may be facing a difficult financial situation, placing excessive priority to commercialism, stressing only self-help and efforts by the citizens themselves, and failing to

offer administrative services will lead to a deterioration of the living environment of the masses and undermine their health. Even under difficult circumstances, the way to recover the trust of the citizens in their government and its administration is through governmental efforts to improve the welfare of the nation and appeals for the participation of the nation in population development policies.

④ Is the Philippines prepared for a new "garbage war"?

In the Manila area, the lifestyles of the people has recently becoming like that of the populations of developed countries, and consumer goods are also becoming modernized. This is symbolized by the increases in the amounts of plastic products and automobiles, as well as in the spread of electrical household appliances and furniture. All this is leading to increases in traffic accidents, traffic congestion, exhaust gases, noise and other types of automotive pollution, and large quantities of household trash and waste water. In particular, the fact that such large products as electrical household appliances and furniture are beginning to spread to the households of the general population is creating an increase in large pieces of trash, and industrial wastes are also growing markedly due to increased industrialization and the construction boom. A new garbage problem is being generated.

In the Japanese experience, increases in large pieces of garbage and industrial wastes has caused serious "garbage wars" in cities. These consist of the generation of large quantities of garbage which cannot be disposed of and outbreaks of rivalry between citizens over garbage pollution. In addition to land fills, the method of garbage disposal now being used in Manila, it is necessary to construct multi-purpose garbage incinerating factories for electrical production and with the functions of community centers, to organize systems for recycling usable garbage, thereby promoting efficient disposal of garbage and savings of resources. In addition, medium and small enterprises which tend to randomly emit such things as foul smells, noise, dusts, waste materials, and waste oils, should be removed from office districts, residential districts and commercial districts and concentrated in special industrial zones in an attempt at modernization and to prevent pollution. Improvements to the urban environment should be promoted efficiently by the early implementation of measures to deal with the approaching "garbage war".

3 Living Environment in Surveyed Slums

The field research team conducted surveys in two slums in the Manila area. One was the Navotas district located along the coast north of central Manila, the other was the Payatas district, forming the border on the Rizal Province side in the northwest of Quezon City, adja-

cent to the Philippine Parliament, the Batasan Complex.

(1) General description of surveyed districts

① Navotas district

The Navotas district is an area adjacent to the Tondo district, said to be the largest slum in Manila. A fishing town in the past, Navotas has grown with the development of related industries. In recent years it has taken on the character of a town for Manila commuters.

The distinctive feature of this slum is that it has existed for many years, and as a result infrastructure is relatively developed in various ways. Homes have electricity, gas and tap water. Therefore many families have electric rice cookers and TVs, and some even have refrigerators. In addition, though this area is basically a slum, it is not a squatter area, and housing construction is conducted under the assistance of the National Housing Authority. Another characteristic of this slum is that small business persons which can by no means be considered as part of the urban poor also live here.

For example, the marine product processing industry is thriving here, making dried fish and "pathis", a fish sauce product, and there are pathis factories in the slum, and their owners also have fine residences in the slum.

② Payatas district

The Payatas district is a community located behind the Philippine Parliament (the Batasan Complex) which has grown rapidly in recent years. Considered in terms of urban ecology, it is a slum which has grown with the sprawling of the greater Manila region.

Because of the fact that this is a slum which has grown rapidly in recent years, the social infrastructure is virtually nonexistent. For example, homes do not have electricity, so they are lit by candles or lamps, and dwellers rely on petroleum (58.0%) or firewood (20.7%) for cooking (*1).

Furthermore, there is no city water, and almost no water piping despite the fact that the slum is adjacent to La Mesa Dam, Metro Manila's source of water. Because of this, the main sources of drinking water are manually pumped wells (Poso) and sold water. In addition, the entire surveyed area is a squatter area, consisting of land donated to the church which people occupied illegally, so the inhabitants do not possess land rights.

As for the main occupations of the inhabitants of this area, 58.4% of the men are craftsmen, 22.6% are construction workers, and the remainder work in services or other areas. Working women account for only 22% (*2) of the total number of women, of which 36.5% are in service

jobs and 20.5% work in crafts (*3).

③ Geographical conditions

The Navotas district is located on low-lying land along the ocean, so water drainage is poor and roads are flooded immediately with even little amounts of rain.

In addition, most houses have no toilets -- ditches along roads serve as toilets. Because of this, the water backflows when rains are heavy, so the sanitary environment is quite poor.

The Payatas district is in a location which can only be reached by an unpaved industrial road from the main road. It is positioned on the side of a valley, at the bottom of which is the garbage dump serving Manila. Because of this, garbage salvagers have set up shops along the industrial road.

(2) Water supply in the slum areas

① Supply of water in the Navotas district

As stated above, the Navotas district has running water, and tap water can in principle be used for drinking water. In reality, however, the tap water presents problems.

When we had tap water run for us at the house of one of the persons cooperating in the survey, after a while dirty water got mixed in and the water was cloudy. As a result, though they have running water, many inhabitants actually use water sold in tanks or cans.

The inhabitants use this sold water not only because of apprehensions about the quality of the tap water but also for reasons of economy. Running water must be paid for monthly on the basis of the amount used, while sold water can be purchased in the desired quantity for small amounts of money per purchase, making it easier to pay for, and even when calculated monthly this sold water comes out cheaper than city water.

② Supply of water in the Payatas district

Drinking water in the Payatas district is basically from various types of wells, though some water is piped in. Running water accounts for only 6.7% of the drinking water, while well water in various forms is the main source of drinking water, accounting for 73% (*4).

As this district is located next to the garbage dump for Manila, the quality of the well water is getting worse each year. There is a need for improvements, and the MWSS (Metropolitan Waterworks and Sewerage System) comes to inspect the water from time to time, but there are no formal plans for improvements.

(3) Family relations in the slums

Family relations in the Philippines as a whole, not only in the slums, is slightly different from the pattern seen in other southeast Asian countries. Unlike in other Asian countries, there is no preference for male infants, and the inheritance pattern is neither paternal nor maternal but bilateral. Because of this, there is no custom of living either near the wife's family or husband's family after marriage. It is common practice to live near the parents offering the relatively better conditions. Newborns are celebrated equally, whether they are boys or girls. The wife's assets are preserved even after marriage.

Family relations in slums are distinguished by close relations with neighbors. Though these are slums, they are not simply a collection of totally unrelated people who have gathered together from various places. The Navotas survey area is one in which Tagalog is spoken, and individuals gather children to teach them Tagalog, which has no alphabet except in school education. The Payatas survey area is one consisting mostly of people from the Visayas region. As such, it is a community of people using the same language, relations with neighbors are close-knitted, and the community serves somewhat of a mutual aid function.

In the case of the Tondo district, though this did not form a part of the survey, older children look after younger children so mothers can work. In addition, one of the persons cooperating in the survey in the Navotas district has organized a football team for children.

(4) Employment situation and income in slums

What we learned from the results of the survey about the employment situation in these two slums is that over half of the people in the Navotas district are in a state of unemployment. In the Payatas district, more than 90% of males are employed, and from the results of the sample survey we learned that seven-day work weeks are prevalent.

As stated previously, 58.4% of the men are craftsmen and 22% are construction workers. In the Payatas district, women were the chief income earners in only 4.9% of the cases. Even when we include cases in which both spouses work, only approximately 20% of the women are working for an income (*5).

According to our interview method survey, the daily income per household in the Navotas district, excluding the richer households, is 70 to 150 pesos, with most households earning approximately 100 pesos daily. The average monthly income per household in the Navotas district is about 3,000 pesos.

In the Payatas district, the average monthly income per household is about 2,000 pesos (*6). The reason incomes are higher in the Navotas district despite the high unemployment is

that the average age is higher, so the population of economically active age in the family is higher. We can also speculate that as the Navotas district is relatively near to central Manila there are more occasions to earn cash in one form or another.

(5) Survey results

We will now discuss what we can deduce from the results of the sample surveys conducted in the slums.

The average household size in Navotas is 6.45 persons, generally consisting of a father, mother, and an average of 4.32 children.

The average household size in Payatas is 6.19 persons, generally consisting of a father, mother, and an average of 3.86 children.

If we compare these two slums, we discover differences due to the process by which they were established. In many ways, the Navotas district is an old, stable slum. The population density is already high, and it will be extremely difficult to increase the living space more except by building upwards. Thus, we can say that Navotas is a full-grown, fully urbanized slum.

Payatas, on the other hand, is now in the growing process, and from the point of view of its behavioral patterns, we can say that it is a slum in the process of urbanization. We can also see this from the fact that 98.8% of the people have moved here within the last four years (*7).

Approximately half of the inhabitants of the Navotas district are of the generation for which the head of the house was born in Navotas. Because of this, in the surveyed area there were more people born in Navotas than people who have moved there.

Almost all of the inhabitants of the Payatas district are people who have moved there from other regions. The core is formed by people from the Visayas region in the central Philippines.

Considering the answers we received about the close relationship between neighbors and the fact that in 90.7% of the cases it is the wife's role to watch over the children, we can see that the main members of the households in the Payatas district are of the age in which they are just forming households, so the children are still young and require much care.

In fact, young children aged 5 and under were not very conspicuous in the Navotas district. In contrast, according to Mgsr. Cristobal of the Spiritual Catholic Church which manages the Payatas district, as many as 100 children are baptized each year out of 600 households. From this, we can surmise that in the Payatas district the population is being reproduced actively.

However, simply looking at the statistics from our sample survey, the average number of children in the Navotas and Payatas districts is 4.32 and 3.86 respectively, so the difference is not substantial (*9). The number of children in the Payatas district is actually lower. If we consider that this difference is due to the fact that in one case the households consist of mature

families while in the other case they consist of families in the process of growing, the difference in these figures is eliminated.

To check this impression, we considered only the survey sheets of those aged 35 and under. The average age of parents aged 35 and under in the Navotas district was 27, with an average of 2.4 children, while in the Payatas district the average age of parents aged 35 and under was 28, with an average of approximately 3.4 children. Thus, there is a great difference in the number of children to which parents of roughly the same age give birth in the two districts. One young mother in the Navotas district expressed the opinion that one child is enough, because of high education costs and the fact that the living space is already too cramped. In fact, if we consider the population composition of the Navotas district, the population in the age groups from 0 to 4 up to 30 is relatively constant, only decreasing gradually as the age group increases.

Because of the small number of survey sheets, we cannot obtain much statistical significance from them, but these figures do concur with the difference we sensed while conducting the survey.

The question arises whether this difference is due to disparate attitudes towards family planning or to other conditions, namely that in one area, the Navotas district, natural forces are at work demanding compliance with the urban lifestyle, while in the other area, the Payatas district, the people have carried over unchanged the lifestyle they followed in the agricultural region from which they came. It is difficult to verify this question, and this dichotomy is not necessary.

However, historically speaking, family planning was introduced to the Navotas district when President Marcos was in power. The Payatas district is a slum which has developed rapidly over approximately the last four years, so from recent Philippine population policies we can assume that there is little possibility that family planning itself has been introduced. Still, regardless of whether the people have received formal training in family planning, 100% of the inhabitants of the Payatas district know about the pill and other modern methods of contraception (*10).

In addition, while the TFR for Metro Manila is 2.61, the TFR in the central Visayas region where most of the population of the Payatas district comes from is 4.27, the highest anywhere in the Philippines, and it is difficult to imagine that the people from this region could have changed their lifestyles in only four years.

Considering this, it is impossible to conclude whether the differences in these two slums are due to the presence or absence of family planning or to changes in behavioral patterns. Furthermore, the reason for these differences may be neither of these, but rather a combination of the two, with the introduction of family planning playing the role of changing behavioral patterns through the spread of knowledge. However, De Guzman (1983) has pointed out that marriage age patterns in squatter areas which develop rapidly are no different than in rural

areas (*11), and we can consider that there is a profound relationship between birth patterns and lifestyles.

Notes:

1) Imelda Zosa Fernil, Childbearing, Family Survival and Planning Among the Urban Poor: A Metro Manila Slum Survey, University of Philippines Population Institute, December 1990, p. 35. Data cited from this document is for the most part based on data obtained from a survey conducted jointly in 1990 by the University of Philippines Population Institute and ILO.
2) Same as above, p. 95.
3) Same as above, p. 67.
4) Same as above, p. 39. In addition, in a questionnaire asking what urgent improvements are needed in the community, by far the greatest answer, 76.7%, was improvements in drinking water.
5) Same as above, p. 95.
6) Same as above, p. 83.
7) Same as above, p. 35.
8) Same as above, p. 95.
9) The sample survey we conducted was a survey of heads of households in the Navotas and Payatas districts with approximately 30 survey sheets.
10) Imelda Zosa Fernil, Childbearing, Family Survival and Planning Among the Urban Poor: A Metro Manila Slum Survey, University of Philippines Population Institute, December 1990, p. 125.
11) Same as above, p. 69.

Table 1 Population and Population Composition by Age in the Navotas District

Total population	126,149
Age	Population
75 and over	719
70 -- 74	666
65 -- 69	1,392
60 -- 64	1,616
55 -- 59	2,024
50 -- 54	3,171
45 -- 49	3,890
40 -- 44	5,576
35 -- 39	6,666
30 -- 34	10,153
25 -- 29	12,514
20 -- 24	14,736
15 -- 19	12,942
10 -- 14	14,019
5 -- 9	16,081
0 -- 4	19,981

Source: Philippine Yearbook 1989, p. 176.
Data from the 1980 census. According to the 1990 census, the total population of the Navotas district is 186,642.

Chapter Five

Survey Members and Itinerary

Inquiry Committee in Japan (including members of the field research team)

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Masaaki Endo	Assistant Secretary General, Asian Population and Development Association (APDA)
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Cooperators (Survey in the Philippines : July 21 - August 3, 1991)

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Michael Wassmer	Pediatric Resident
MA. Evilin C. Ramirez	OB-Gyn Consultant
Paulita Anover Villegas	OB-Gyn Chief Resident
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Manila Catholic Center

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Ernesto V. Esguerra
Fidel Pascual

Payatas

Reynaldo D. Cristobal	Mgsr. Spiritual Cathoric Church
Bienvenido Eddie Sisante	
Fr. Reynaldo C. Sarel	

Philippine Legislators' Committee on Population and Development (PLCPD)

Benjamin D. De Leon	Executive Director, PLCPD
Marius Diaz	Editor, PLCPD

Survey Itinerary

July 21 - August 3, 1991

Date	Activities
July 21 (Sun.)	10:00 Departure from Narita 13:07 Arrival in Manila Deliberations on survey activities and itinerary with Marius Diaz, the PLCPD.
July 22 (Mon.)	Collection of materials at the National Bookstore in the Makati Area. Courtesy call to PLCPD Director Benjamin De Leon. Survey arrangements.
July 23 (Tues.)	Visit to the University of Philippines Population Institute (UPPI). Briefing on the population situation in the Philippines from Dr. Corazon M. Raymundo, Director, UPPI. Collection of materials at Ateneo de Manila University. Visit to the Population Commission (POPCOM). Briefing on the population policies of the Philippines from Executive Director Carmen P. Garcia. Visit to the Japanese Embassy. Courtesy call on Ambassador Toshio Goto. Deliberations on survey activities with Second Secretary Etsuro Kashiwagi.
July 24 (Wed.)	Visit to the Maternal Child Health Division of the Department of Health. Briefing on the medical treatment and health system in the Philippines from Ms. Emily Maramba. Visit to the Environment Health Service Division of the Department of Health. Briefing on public health conditions in the Philippines, particularly of waterworks and sewerage systems, from Dr. Linda Manaspal. Visit to the W.H.O. Philippines office. Briefing on public health conditions in the Philippines from Representative Liu Xirong.

Date	Activities
July 25 (Thurs.)	Collection of materials at the University of the Philippines Population Institute (UPPI). Visit to Metropolitan Waterworks and Sewerage System (MWSS). Briefing on Manila's water purification systems and water supply systems from Mr. Mario Fuentes. Visit to La Mesa Dam. Observation of water supply system. Briefing from Mr. Edison A. Gacula, head of the facility.
July 26 (Fri.)	Collection of materials at the National Statistics Office. Visit to the Makati Medical Center. Briefing on the activities of the Makati Medical Center (MMC) from Dr. Luis Rivella. Observation of the Pediatrics and Obstetrics - Gynecology Department, Neonatal Room, and volunteer activities at the Center. Visit to NEDA. Briefing on the economic development plans of the Philippines from Ms. Corie Veloso.
July 27 (Sat.)	Analysis of collected materials. Meeting on slum survey.
July 28 (Sun.)	Survey of Pampanga Province, cities and agricultural villages. Visits to San Fernando, Angeles, and other cities. Survey of living standards and living conditions in agricultural villages on the side of Mt. Arayat. Observation of district hospital.
July 29 (Mon.)	Observation of slums adjacent to industrial zone in Muntinlupa Area. Visit to Dr. Jose P. Rizal Memorial District Hospital. Briefing on the District Hospital from Dr. Dario F. Magiba, Hospital Chief. Briefing on regional agricultural development and the living standards and conditions of farmers from Dr. Ruben L. Villareal, Dean of the College of Agriculture of the University of Philippines at Los Banos. Visit to the waterworks bureau of Los Banos district. Briefing on water resources, management and supply from Mr. Teody Magda. Observation of pumping station site. Visit to Rural Health Unit. Briefing on medical treatment and health situation from Dr. Amparo C. Duqne, Head of the Rural Health Unit.

Date	Activities
	Visit to Population Program Unit. Briefing on family planning implementation situation from Dr. Sofia Editha Loquiao. Visit to UP Los Banos, College of Agriculture and Daily Training and Research Institute. Briefing on improvements to nutrition using milk in the Philippines from Dr. Teofilo A. Dulay, Director. Visit to the Institute of Food Science and Technology. Briefing on food hygiene management from Dr. Priscilla C. Sanchez. Visit to the Institute of Post Harvest. Briefing on food storage management from Dr. Concepcion C. Lizada, Director. Visit to Barangay Health Center in Los Banos.
July 30 (Tues.)	Visit to Manila Catholic Center. Briefing on conditions in slum areas from Rev. Fr. Toru A. Nishimoto. Briefing on educational situation in squatter areas from MA. Garcia Cruz. Briefing on urban plans and distribution of slums from Engineer Juan A. Maravillas Jr. at the Manila City Planning Office. Collection of materials at the Metropolitan Waterworks and Sewerage System.
July 31 (Wed.)	Hearing at a slum in the Navotas with the cooperation of Ernesto V. Esquera. Exchange of opinions with members of DOH and WHO after observation of Los Banos, etc. Collection of materials at NEDA.
August 1 (Thurs.)	Collection of materials on causes of death, etc., at the Philippine Pediatric Society. Observation of demolishing and dismantlement of squatter area in slum in the Payatas. Briefing on conditions in slums from Mgsr. Dr. Reynaldo D. Cristobal at a church in the Payatas. MMC staff and subsequent in-hospital statistics collection of additional data and briefings.

Date	Activities
August 2 (Fri.)	Report of survey findings to Japanese Embassy. Visit to PLCPD. Report of survey findings. General meeting (with UPPI, POPCOM, PLCPD and NEDA staff.) Visit to Manila Catholic Center. Collection of materials.
August 3 (Sat.)	Departure from Manila (15:40), arrival in Narita (19:30).

Chapter Six

Materials

- Collection of Materials and Survey Sheets -

Aurora Publication, Philippines Almanac 1990. Aurora Publication 1991.

Cooperative Foundation of Philippines Inc., A Directory of Cooperatives Self-Help Groups, Samahang Nayons, Associations and Federations, Unions in the Philippines. Cooperative Foundation of Philippines Inc. 1989.

DOH (Department of Health), DOH 1990 Sumary of Proceedings.

DOH, DOH 1990 An Over View of The Philippines Demographic Situation and Population Program Development.

DOH, DOH 1990 The Philippines Family Programing (1990−1994).

DOH, DOH 1990 The Contribution of the Department of Health to The Philippine Family Planning Program.

DOH. DOH 1990 Proposed Project to Support the Contribution of Local Government Units to the Philippine Family Planning Program.

DOH, DOH 1990 The Contribution of the other Government Agencies to the Family Planning Program.

DOH, DOH 1990 The Contribution of NGOs to the Family Program.

F. Landa Jacono, Slum as a Way of Life. New Day Publishers. 1976.

Family Planning Organization of Philippines, Annual Report 1989−1990. FPOP 1990.

National Book Store, Metro Manila Street Map. National Book Store 1990.

Jacqueline Kusan, The War Against Population, National Book Store 1991.

Jose N. Nolledo, Student Manual of the New Constiutions, National Book Store 1991.

Jose S. Arcilla S.J., An Introduction to Philippine History, Ateneo De Manila University Press 1971.

Lourdes V. Lapus, Fillipino Marriage in Crisis. New Day Press 1977.

Benedict J. Kerkvliet & Resil B. Mojares From Marcos to Aqino, Ateneo De Manila University Press 1991.

NEDA. Updates of the Philippine Development Plan 1990−1992. NEDA 1990.

NEDA. 1989 Philippine Development NEDA 1990.

NSCB (National Statistical Coordination Board). 1990 Philippine Statistical Year Book, NSCB 1991.

NSO (National Statistic Office), Philippine Year Book 1989, NSO 1991.

NSO, 1990 Census of Population and Housing, Population by City, Municipality and

Barangay, All Area.

Department of Agriculture, Analysis made in 1976 of lahare boulder from Mt. Pinatubo's previcious Mudflow gave the following Composition of the Rock.

DOH, Anual Report 1990.

DOH, Bed Population Ratio of Government and Private Hospitals, 1990.

DOH, List of Participant of Health, Philippines 1990.

DOH, List of Sanitaria Hospital 1991.

DOH, National AIDS Prevention and Control Program, 1984 to June 30, 1991.

DOH, Number of Hospital 1990.

DOH, Mental Hospital/Extention /Ward in Philippines 1991.

DOH. MOH National Standards for Drinking Water, 1978.

Makati Medical Center, MMC Hospital Statistics of 1990.

MWSS (Metro Manila Water Supply and Sewerage System), Analysis of Water Samples taken from Balora and La Mesa Treatment Plants on June 16,1991. During the Ash Fall in Metro Manila.

MWSS, Lines up integrated water development program 1991－1998.

MWSS, Water Demand and Supply Analysis 1990.

MWSS, MWSS Swerage System.

MWSS, MWSS Water Sanitation Level in Metro Manila.

MWSS, Report of Water Quality: Phisical. Chemical and Rediological Requirement.

NEDA, Philippine Population and Development Sector.

NEDA, Integration of Population and Development Planning.

Philippine Pediatric Society, Pediatric Society Registry of Diseases 1990.

WHO, Philippines Country Health Inforation Profile.

NSO, 1988 Compendium of Philippine Social Statistics, NSO 1990.

NSO, 1988 Economic and Social Indicators, NSO 1990.

NSO, 1990 Statistical Hand Book of The Phillippines, NSO 1991.

NSO, Vital Statisitics Report 1986, NSO 1988.

NSO, Occupational Data Bulletin, Third Quarter, 1980－1989. NSO 1990.

NSO, 1987 Annual Survey of Establishments. NSO 1989.

NSO, Integrated Survey of House Holds Bulletin, NSO 1988.

NSO, Philippine Energy Statistics 1988.

NSO, 1988 Family Income & Expenditure Survey Ⅰ. Ⅱ., 1990 NSO.

NSO, NSO Monthly Bulletin of Statistics, NSO 1991.

NSBI, The Civil Code of Philippines, 1989 Revied Edition, with Suppliment.

NSBI, The Family Code of Philippinses 1991, National Book Store 1991.

POPCOM (Population Commition), Population Forum 1989, 1990 Manila Mega City by the Year 2000.

POPCOM, Population Facts.

POPCOM, Philippines Population Inspests on Development, Population Reports 1989.

POPCOM, DRFD, 1990 Philippine Poulation Data Sheet.

Philippine Map Co. Ltd., Metro Manila Street Dictionary, 1990. Philippine Map Co. Ltd. 1990.

UPPI, Philippine Population Journal 1985, 1−2.

UPPI, Philippine Population Journal 1987, 1−4.

UPPI, Philippine Population Journal 1988, 1−4.

UP Los Banos, Leaflet of Institute of Food Science and Technology.

Reynaldo B. Aralan, Barangay, Reynaldo B. Aralan & Associates, 1989.

Eliseo A. De Guzman, Fertility Nuptiality and Contraceptive Parctice in Philippine, UPPI 1987.

Eliseo A. De Guzman, Fertlity and Mortality in the Philppines; Estimate from Recent Data, UPPI 1989.

Imerda Zosa Keranil, Childbearing, Family Survival and Planning Among The Urban Poor; A Metro Menila Slums Survey, UPPI, 1990.

Zelda C. Zaben, The Comparative Use Effectiveness of NFP in the Philippines. UPPI.

Department of Agriculture, Beureau of Soils and Water Management, Chemical Analysis of Ash from Mt. Pinatubo.

ALDO

c/o REY CRISTOBAL

Quezon City

ASIAN POPULATION AND DEVELOPMENT ASSOCIATION (APDA)

Questionnaire on Health Improvement

Respondent No. 31. Date: July 2. 1991

Barangay: GRP1 AREA B. IPIL-IPIL PHASE 1 Municipality: QUEZON CITY

1. Age 06 Male _____ Female ✓
   (Edad) *(Lalake)* *(Babae)*

2. Number of co-dwellers. */Bilang ng mga kasambahay.*

Age/*Edad*	Male/*Lalake*	Female/*Babae*
0 -14	4	1
15 -34	1	
35 - 49		
50 - 64		
65 over		

3. Number of blood relatives living in the same dwelling./*Bilang ng mga kamag-anak na kasambahay.*

	Male/*Lalake*	Female/*Babae*
Grandparents/ *Nuno*		
Spouse/ *Asawa*	1	
Children/ *Mga Anak*	4	1
Grandchildren/ *Mga Apo*		

4. Source of drinking water./ *Pinagkukunan ng inumin.*

A. Tap water/*Gripo*

B. Well/*Balon*

C. Retailed in cans/*Pinagbibili sa balde*

D. Retailed in bottles/*Pinagbibili nakabote*

E. Others/*Iba pa.*

5. Where do you go in case of illness or delivery/*Saan pupunta pag maysakit o manganganak.*

	Illness/*Sakit*	Delivery/*Panganganak*
A. Hospital	✓	
B. Clinic	✓	
C. Health Center	✓	
D. Others/*Iba pa*		HOUSE (MIDWIFE)

6. Place of birth./*Saan Pinanganak*

PASAY CITY NCR

A. Rural Village, Region: B. City, Region:

C. Metro-Manila D. Here/*Dito*

7. Where did you live just before coming here?/*Saan ka dating nakatira?*

A. Rural Village, Region: B. City, Region:

C. Metro-Manila D. Here, since birth./*Dito, mula't sapul.*

8. Most important needs for sanitation/*Pinaka-kailangan para sa kalinisan.*

A. H2O - NAWASA

B. GARBAGE COLLECTOR

C. HEALTH CENTER W/ MEDICINE

9. Most important needs for livelihood./*Pinaka-kailangan para sa kabuhayan.*

A. ELECTRIFICATION

B. LAND TITLE

C. FACTORY

10. How many days did you work last week?/ *Ilang araw kang nagtrabaho noong nakaraang linggo?*

7 Days/*Araw*

11. Kind of job or work./ *Uri ng trabaho.* HOUSE KEEPER

12. Please write down any other specifics about health or sanitation needs./*Mangyaring isulat lang po ang anu pa mang mahahalagang bagay na kailangan ninyo sa pang-kalusugan at pang-kalinisan.*

WATER SUPPLY, ELECTRIFICATION FACTORY AND INDUSTRY.

Tidel Pascual
Ernesto Esguerra

Navotas

ASIAN POPULATION AND DEVELOPMENT ASSOCIATION (APDA)

Questionnaire on Health Improvement

Respondent No. 2 E.E Date: JUNE 29, 1991

Barangay: SAN ROQUE Municipality: NAVOTAS

1. Age 40 Male ✓ Female _____
   (Edad) *(Lalake)* *(Babae)*

2. Number of co-dwellers. */Bilang ng mga kasambahay.*

Age/*Edad*	Male/*Lalake*	Female/*Babae*
0 -14	I	I
15 -34	I	
35 - 49	I	
50 - 64		
65 over		

3. Number of blood relatives living in the same dwelling./*Bilang ng mga kamag-anak na kasambahay.*

	Male/*Lalake*	Female/*Babae*
Grandparents/ *Nuno*		
Spouse/ *Asawa*		I
Children/ *Mga Anak*	II	I
Grandchildren/ *Mga Apo*		

4. Source of drinking water./ *Pinagkukunan ng inumin.*

A. Tap water/*Gripo*

B. Well/*Balon*

C. Retailed in cans/*Pinagbibili sa balde*

D. Retailed in bottles/*Pinagbibili nakabote*

E. Others/*Iba pa.*

5. Where do you go in case of illness or delivery/*Saan pupunta pag maysakit o manganganak.*

	Illness/*Sakit*	Delivery/*Panganganak*
A. Hospital		
B. Clinic		
C. Health Center		
D. Others/*Iba pa*	BAHAY STAY HOME	BAHAY STAY HOME

6. Place of birth./*Saan Pinanganak*

A. Rural Village, Region: B. City, Region:

C. Metro-Manila D. Here/*Dito*

7. Where did you live just before coming here?/*Saan ka dating nakatira?*

A. Rural Village, Region: B. City, Region:

C. Metro-Manila D. Here, since birth./*Dito, mula't sapul.*

8. Most important needs for sanitation/*Pinaka-kailangan para sa kalinlsan.*

A. TUBIG WATER

B. SABON SOAP

C. PANG HAKOT NG BASURA GARBAGE DISPOSAL

9. Most important needs for livelihood./*Pinaka-kailangan para sa kabuhayan.*

A. PUHUNAN CAPITAL

B. MAGKAROON NG PABRIKA FACTORY JOB

C. PAARALANG PANG TEKNOLOHIYA VOCATIONAL SCHOOL

10. How many days did you work last week?/ *Ilang araw kang nagtrabaho noong nakaraang linggo?*

3 Days/*Araw*

11. Kind of job or work./ *Uri ng trabaho.* PAGBABARYON NG PATIS FISH SAUCE DEALER

12. Please write down any other specifics about health or sanitation needs./*Mangyaring isulat lang po ang anu pa mang mahahalagang bagay na kailangan ninyo sa pang-kalusugan at pang-kalinisan.*

HOSPITAL PANBAYAN HOSPITAL

PALIKURAN PANBAYAN TOILET

PANG HAKOT NG BASURA GARBAGE COLLECTIO