DEMOGRAPHIC CHANGES AND CHALLENGES IN ASEAN COUNTRIES

Introduction

Global population grew from one billion to six billion between 1804 and 1999, with the highest rate of growth (2%) occurring as late as the 1960s. The world's most recent billion took only 12 years to accomplish and life expectancy at birth grew from about 30 years two centuries ago to a global average of 66 years today (United Nations, 1999; 2001; Riley, 2001). The remarkable human population growth for the past two hundred years can be, in part, attributed to the fact that more and more people survive to older ages.

All societies throughout the world; be it the more developed or the less developed, are no exception to this trend. About 62% of the population aged 60 and over in the world today are residing in the less developed regions. This figure, totaling to almost 374 million in the year 2000, is projected to increase to 1.6 billion and will constitute almost four-fifths of the world's older population in 2050 (United Nations, 2002). While the proportion of older persons is higher in the more developed countries, most of the global elderly population will come from the less developed countries. This situation is particularly significant as developing countries are becoming old before they become rich, and the phenomenon is happening very rapidly. Social infrastructures and other institution may not be ready to cope with the impending aged nation status.

This paper attempts to discuss demographic change and challenges face by ASEAN countries. The demographic change deliberation in the paper will focus on basic demographic processes and the impact of demographic changes on society, communities and the individuals. The challenges are not mutually exclusive but are interrelated; nonetheless, they will be discussed separately.

Demographic Changes

The demographic transition of human societies, beginning in the 19th and 20th century, is continuing well into the new millennium (United Nations, 2002). With the confluence of lowered fertility and mortality rates in most countries around the world, the global population is ageing at an unprecedented scale. Global total fertility rate (TFR) declined by almost half, from 5 children per woman 50 years ago to 2.7 children per woman today. Human mortality rate was also halved as the number of deaths remained constant since the 1950s - adding up to about 52 million a year, although the world populace has since doubled in the same period (UNFPA, 1999). The growth of the older population, in both absolute and proportionate terms, is historical, considering its magnitude and velocity of change are unheard of. It is estimated that the number of persons aged 60 years or over will triple again in fifty years' time, charting a rise from the 630 million today to almost two billion come 2050 (Table 1). Comparatively, the world population for the same period will only register a modest increase from 6 billion to 9 billion at an annual growth rate of 1.3%. This means that between 2000 and 2050, the proportion of older persons is expected to more than double from 10% to 21% globally (United Nations, 2002).

[Table 1]

The total population of ASEAN countries in 2005 was 558.2 million (ASEAN, 2005), making up about 8.6% of the share of the world's total population in the same year. The focus of this section is on the demographic change that is being experienced by the ASEAN member countries. The demographic situation of this region is unique in the sense that all member countries are experiencing different levels of socioeconomic development with differing socio-cultural imperatives. Nonetheless, all countries in ASEAN are experiencing demographic transition albeit at different rates and stages.

Demographic Transition

Demographic transition occurs when there is a change in the population dynamics from high birth and death rates to low birth and death rates. This transition occurs concomitantly with the socioeconomic development of the country. Basically, countries will go through four stages of demographic transitions (Figure 1). In the initial stage, both birth and death rates are high, causing only slow and steady population growth. The next stage, death rates decline but birth rates remain high, resulting in faster population growth. In stage three, the birth rates begins to decline and in the forth stage, both birth and death rates are in more or less balance. In the final stage the population stabilizes and in some countries population growth may not occur (or negative growth).

[Figure 1]

In the modern world, demographic transition goes through two different paths; a gradual transition without major medical breakthroughs (past demographic transition) and the present transition where the transition occurs more rapidly though major medical breakthroughs. This present trend of demographic transition is occurring in the less developed countries.

Fertility and Mortality rates

Table 2 depicts the crude birth, crude death, crude growth and total fertility rates among ASEAN countries for the period from 2005 to 2010, using the medium variant projection based on the UN population data sheet. From the Table, it can be said that among the ASEAN countries, the birth rates varies from a low of 8.4 in Singapore to 33.0 in Lao PDR. The average crude birth rate (CBR) for ASEAN is 19.6. Four countries namely, Indonesia, Myanmar, Thailand and Vietnam are already below the ASEAN average; while five other member countries are above the average. Most of the ASEAN countries are in the later second or third stages of demographic transition. These differences may be attributed to the different levels of socioeconomic development that impinges on the preference for smaller family size among the populations.

[Table 2]

Crude death rates (CDR) reflect the health delivery services provided by the government of its citizens and may also signal the accessibility of service to its target population. The average crude death rate for ASEAN is 6.8. Lao PDR (11.3), Cambodia (10.1), Myanmar (9.3), Thailand (7.2) and Indonesia (7.1) are above average, while all other countries are below average. The difference in birth and death rate is shown in the population growth rates of the individual member countries. There is a marked variance in the growth rates among the countries. Population growth is smallest in Singapore with just 2.9 and largest in Lao PDR with 21.9.

Within the five year period, the average total fertility rate (TFR) for ASEAN countries is 2.31. This value is only slightly higher than the replacement level of 2.1 per women where the TFR for Vietnam are projected to fall below replacement levels within the next five years, joining Singapore and Thailand. The population policy adopted by some of these countries and it's successfully implementation resulted in drastic changes of the average family size and thus affecting population growth. The fertility level has important socioeconomic implications to the countries.

A more detailed analysis of the crude birth and death rates by country are presented in Figure 2 and Figure 3. The patterns of decline in birth and death rates for ASEAN showed a gradual drop for both rates. The birth and death rates are seen to merge closer together in the period between 2045 and 2050. The average rates reflected in the figure masked the different patterns experienced by the individual countries. In Malaysia, the birth rate took a steep decline between the years 1965 to 1980 with a baby boom occurring between the years 1980 to 1985, and declining steadily after 1985. In Brunei, the pattern of birth and death rates are gradual, although there were slight growth spurts between 1980-85 and 1990-1995 periods.

[Figure 2]

More pronounced patterns of birth and death rates are noted in Cambodia, Singapore and Thailand. In Cambodia there were sharp increase and decrease in both birth and death rates. Sharp increase in death rate peaked in the mid 1970s. Similarly, there were sharp increase and decrease in birth rates reported between 1975 and1985. This may be attributed to the war and post-war experiences in the country. In Singapore, the pattern of rapid fertility decline is noted since the late 1950s till the 1970s, and another sharp fall occurred again in the 1990s to 2000s. Furthermore, the crude death rate displayed an upward trend and will surpass the crude birth rate for the period between 2025 and 2030. The confluence of death and birth rates indicate zero population growth in the island state and negative growth is expected soon after 2030. Similarly for Thailand, there was a sharp decline in fertility from the mid 1960s to 1990s. Zero population growth will occur between 2040 and 2045 and negative growth will occur thereafter. Myanmar, Indonesia and Vietnam are projected to experience small population growth between the years 2045-2050.

[Figure 3]

Crude birth and death rates may also differ amongst the different ethnic groups or by urban rural locations within the ASEAN countries; as such they age at different rates. Data is not available to deliberate on the issue for all ASEAN countries

but it is suffice to illustrate the point by using the Malaysian situation. Figure 4 demonstrate the case for Malaysia where the three major ethnic groups showed different patterns in birth and death rates. The birth rates are lowest amongst the ethnic Chinese Malaysians, followed by ethnic Indians and Malays. Sharp decline in birth rates were noted for all Malaysians after 1998. On the other hand, the trend in death rates did not generally show a significant difference between the ethnic groups.

[Figure 4]

Total Fertility Rates

The birth rates discussed above is further explored in Figure 5. ASEAN countries recorded an average of more than five children per women during the 1950's. All countries registered a decline in total fertility between 1960 and 1965 with the exception of Vietnam which reported an increase in TFR in the same period. Singapore recorded sharp decline in TFR as early as 1960's and recorded a TFR of less than 2.1 in the 1980s. The TFR showed a slight increase between 1990 and 1995 and dropped again from 1995 onwards. Cambodia showed a marked increase in TFR between 1975 and 1980, from less than 5 children per women to 6.7 children per women respectively, reversing the sharp decline during the unusual period of political turmoil. The TFR reflect the availability of children in the family and this will affect the family structure and the support the family will receive in terms of care in later life.

[Figure 5]

The socio-economic development of a nation influenced the number of marriages and age at marriage, use of contraceptives, as well as other determinants of population growth (NPFDB, 1999). Total fertility rate in the South-east Asian region is moderate, with an average number of 2.4 children being born to a woman in 2004. This is a far cry from the regional fertility rate of 5.95 recorded 50 years ago. United Nations medium variant projections estimated that the total fertility rate for the Southeast Asian region will further decrease to 1.86 for the 2045 to 2050 period (United Nations, 2002). Similarly, crude death rate fell from 23.3 deaths per thousand of population in the 1950 to 1955 period to 7.2 per thousand of population between the 2000 and 2005 period.

Life Expectancy

With the reduction in mortality rates, thanks to better health care facilities and basic sanitary practices, many Asians are living longer than before. There is, at present, a 20-year gap or more in terms of life expectancy at birth between some of the member states (e.g. Singapore vs. Lao PDR). In less developed countries such as Cambodia, and Laos PDR, a much lower life expectancy at birth for both males and females is recorded when compared to the other more developed ASEAN member states. Demographic differences within the region are mostly expected as different levels of development would yield dissimilar demographic results. In addition, past history of armed conflict (e.g. Cambodia) are useful in explaining huge movements in life expectancy at birth (Figure 6). Similar to the patterns of longevity in other regions however, is the longer life expectancy enjoyed by women when compared to men.

[Figure 6]

Migration

Table 3 shows the net migration rate (per 1000 population) for ASEAN countries, the difference of immigrants and emigrants in a period of time. The pattern reflected movements of international labour where countries such as Philippines, Indonesia, Vietnam, Thailand and Laos PDR have more of its people leaving the country than entering it. Border control and lack of labour mobility in Myanmar resulted in little population movement. The influx of foreign labour and professionals into Singapore and Malaysia has contributed to a positive net migration rate, especially for the former. The impact of migration on the ASEAN countries' population is mostly temporal as it is considered an economic measure to meet human resource needs. There are issues with employment security and benefits coverage due to the lack of bilateral agreements between host and home countries. However, the long term impact of migration on the population can change with more liberal immigration policies and better monitoring of international labour movement.

[Table 3]

Economically Active Population

The female labour force participation is low in most ASEAN countries and this implies a lack of involvement in the formal sectors. As a consequence, women in these countries lack income security in old age and are dependent on other family members. The increasing labour force participation rate among women in ASEAN countries will bring new changes to the family. Table 4 shows the economically active population (labour force) by five-year age groups in ASEAN countries in 2005. It is shown that the the labour force participation rate declines rapidly in the older ages after 60 and 65 years.

[Table 4]

Population Age Structure

Proportion of older persons

According to United Nations, the Southeast Asia region was projected to record a 15% hike in its proportion of older persons from 7% in 2002 to 22% in 2050 (UN, 2002). The absolute number of older persons in South-Eastern Asia had grown by almost 250% since 1950, charting a meteoric rise from 10.7 million to 37.3 million in 2000. Come 2050, the figure is expected to reach a new high of 176 million, making a further 370% increase. As stated earlier, ageing trends among ASEAN countries are not dissimilar to the aging phenomenon elsewhere as increased life expectancy and lowered fertility rates were largely responsible for the shift in population demographics. As it is, some member countries are beginning to approach or have already fallen below replacement levels of fertility. With a high projected growth for persons age 60 years and over in the coming half of the century, ASEAN countries

are ageing exponentially - raising greater demands for health care and old age security.

[Table 5]

Table 5 shows a decreasing trend of the young population is all ASEAN countries and the increasing trend of aged population. More than 50% of the population in ASEAN is comprised of the economically productive age of 15 to 64 years in 1980.

The proportion of older persons in the country is (whether of 60 years and over or 65 years and over in age) in the population is another indicator of ageing. According to Cowgill and Holmes (1970), categorization of the population as “young”, “youthful”, “mature” and “aged” is dependent on the proportion of older persons aged 65 and over in a country. Chen and Jones (1989) modified Cowgill and Holmes’s classification to arrive at an indicator for the level of population ageing among Southeast Asian countries using the proportion of older persons aged 60 years or over. A country is considered “young” when the proportion of older persons in the total population is less than 6%. Likewise, a “youthful” (6% to 10%), “mature” (11% to 14%) or “aged” (15% and over) society is determined accordingly. From Figure 7 and 8, it is evident that most of the ASEAN member countries belong to the “young” or “youthful” group. The only “mature” South-eastern Asian nation today is Singapore where 10.6% of its population is made up of the elderly. This is followed by Thailand (8.1%), Indonesia (7.6%), Vietnam (7.5%), Myanmar (6.8%) and Malaysia (6.6%). Malaysia itself will achieve "aged" nation status when its proportion of older persons (60+) reaches 15% in 2030. The lowest percentage of older persons is recorded in Cambodia at 4.4%. Currently, Singapore has the second highest proportion of elderly population in Asia after Japan (Chan, 1997).

[Figure 7]

[Figure 8]

Ageing Index

For demographers, the ageing index is a common method used to indicate the level of ageing in a given population. Population with aged-child ratios under the value of 15 is describe as “young”, population with aged ratio of over 30 is considered “old” and the value in between is described as “intermediate” (Stockwell, 1976). In Singapore, for example, there is one elderly to every two children in the Republic today. Countries like Singapore (48.3), Thailand (30.5), Indonesia (24.7), Vietnam (22.4), Myanmar (20.5) and Malaysia (19.3) have low fertility rates and this resulted in a more pronounced ageing effect among these countries. The ratio of people aged 60 years or over to children younger than 15, or the ageing index, in ASEAN is set to triple from 22.1 per hundred children in 2000 to 110.7 per hundred children in 2050 (United Nations, 2002). From Table 5, this means that there will be older persons than children in the ASEAN region for the next half of the century.

Consequently, the age structure becomes top heavy as birth rates fall and more and more countries age faster than it can replenish its young. The population

pyramids depict the distribution of the national population by sex and age group in the respective countries in 2000 and 2050. Most of the population pyramid are still considered expansive or with stable growth in the year 2000 (except Singapore and Thailand) but the trends will soon change to one that of stationary as the pyramid base gets narrower and tapering off at the older ages. It is evident that the demographic situation in the ASEAN countries is leaning towards population ageing and shrinking in terms of the younger population.

Median age

Median is an indicator that depicts the "younging" or "ageing" of the population. The median age for ASEAN countries did not vary much. Countries that recorded median age below 20 years old is considered a young. In 1980, all countries except Brunei and Singapore reported median age of more than 20 year old (Table 5). However, in 2000, only Cambodia and Loa PDR recorded below 20 years old. Countries with median age between 20-29 year old is considered as intermediate and countries with median age above 30 is considered as old. In 2000, only Singapore has an aged population.

Most of the ASEAN countries are currently in the intermediate range (20-29 years old), with the notable exception of Singapore which recorded a median age of 34.5. In 2000, the only three "young" populations in the region consist of Cambodia, Lao PDR and East Timor. Contrary in 2020, six out of 10 countries will be an aged nation. This indicates that ageing is just round the corner for ASEAN countries and preparation needs to be developed to handle the prospect of population ageing. The median age for the South-east Asian region is expected to rise from 24.0 years in 2000 to 37.9 years in 2050.

[Table 6]

Age sex ratio

The age sex ratio becomes skewed in later ages as shown in Table 7. Due to the longer life expectancy of women, there are more female elderly in ASEAN countries and this trend is expected to continue. The bigger issue is the dependency of a generation of older women who are also more likely to be widowed than older men at the same age.

[Table 7]

Dependency ratios

The total and aged dependency ratios would be able to illustrate the kind of economic strain of the new generations on the productive population. Although the older population disengages (voluntary or involuntary) from formal employment, there has to be initiatives to keep them active and productive in order to maintain a good quality of life.

Age sex pyramid

As shown by the population pyramid in Figure 9 and 10, the increase in the older population over the next 50 years is expected. Many ASEAN countries now have a triangular population distribution but some are already showing signs of a narrowing base. With lower fertility levels, many countries in the region will experience population ageing.

[Figure 9]

[Figure 10]

In summary, the demographic data presented above provided the background to current and impending challenges pose by population ageing in ASEAN countries. The difference in timing and speed of ageing, the proportion and absolute number of aged, the ethnic, gender and level of development present complex issues that makes The policies and program initiated and the reaction to population ageing depend on many factors such as social, economic, cultural as well as political leadership.

Challenges of Demographic Change

This section will discuss on the general challenges faced by ASEAN countries concomitant to the demographic change experienced by member countries. All ASEAN member countries are not welfare state countries as such the government adopts both market driven alternatives and interventionist approach in dealing with development issues. The social engineering approach has been successfully adopted in selected countries to cater for the socioeconomic development.

Approach to Impending Ageing

The demographic change experienced by the countries of the world have prompted social and economic thinkers to debate on the influence of population change on economic growth and development. Disagreements on the relationship between population changes on economic growth have resulted in three broad areas of arguments, namely population change restricts, promotes and is independent of economic growth (Bloom, Canning, and Sevilla, 2003). Further, Hermalin (2000) provided a useful perspective in thinking about population ageing in Asia due to the changes in demographic trends, the massive and concomitant socio-economic changes in the region as well as the level of awareness and determination of the policymakers. He stated that the different views on population ageing, seen either as a problem, challenge or an opportunity resulted in different presentations of the issue.

Countries that adopt ageing as a problem will handle ageing issues from using welfare based perspective. Programmes developed will be mean tested and only a minority of the aged will qualify for such programmes.

On the other hand, the Madrid International Plan of Action on Ageing adopted during the Second World Assembly on Ageing recommended three priority areas for governments to adopt, that is, older person and development, advancing health and wellbeing into old age, and ensuring enabling and supportive environments. These recommendations promote active and productive ageing.

Speed of Ageing

At present, it must be acknowledged that population ageing issues are not the priority of most ASEAN governments, with the probable exception of Singapore and Thailand. There is, for certain, a crisis to the "interim generation" of older persons in Asia and the Pacific who are caught in the Teutonic shift of societal, political, economical and environmental change (ESCAP, 2002). Like many other developing countries, the rapidity of the ageing process threatens to derail the prosperity boom of the Southeast Asian countries. Not only are the societies in the region are taking less time to make the demographic transition from "young" to "old", but it is also happening at a much lower development level than the developed nations. These countries possess fewer resources compared to their developed counterparts and in turn, will have lesser options in addressing the impacts of population ageing.

As an illustration, we can compare the GDP per capita between Malaysia and Myanmar. Both countries are ageing at more or less a fairly similar rate (Table 3). However, note that the older population in Myanmar is twice Malaysia's size, and yet the GDP per capita in Myanmar (USD 179) is only a fraction of that in Malaysia (USD 4,175). The same population ageing at lower levels of development is evident in Thailand, Vietnam and Indonesia.

Although western model of programmes and policy can be adopted, the cultural and development context differs, making it difficult to translate them into our context. Hence, we still have to need to adopt and adapt programmes that suite our cultural context and needs.

Countries are faced with distribution issues and how much should resources be allocated for all sectors of the population. Policymakers interested in aged issues must also take cognizant of issues of the young population. Investment in the human resource development in Malaysia, has improved the overall literacy rates of her population and making them employable. Another example is the healthy life style campaign that has improved the health status and thus lengthening of the life expectancy of Malaysians. This campaign is meant for all ages.

Aged Labour Force

With ageing of population the labour force is also aged. The aged labour force has been given negative stereotyped. Studies in the west have reported that the aged performs at par to young workers. Retraining programme would help to maintain the older persons in the work place. Nevertheless, provision to cater for aged workers might not be available. In a survey among human resource managers in Malaysia

conducted by the institute in 2006, noted that there is no rehiring policy after the mandatory retirement age of 55. Older human resource manager held less stereotype perception of older workers than young human resource managers.

Among older persons, many perhaps are partial to working part time, but the structure for flexible work time employment and its remuneration is not well developed. In order to encourage employment among older workers such related acts and provisions need to be studied.

Old Age Income Security

It is acknowledged the current aged population grew up with little opportunity for formal education and as such had low income. In addition, many grew up in the rural areas. Many may not enjoy the benefit of formal sector employment such as pension, provident funds or insurance Hence the present aged may not have the finances to cater for the life in old age. The present aged depend on children for financial support. In the future, children may not be available as family size has shrunk and internationalization of families is occurring in many ASEAN countries. Well educated children are employed in multinational companies overseas and many settled down in that country.

Studies conducted by the Institute of Gerontology in 2005 indicated that the older persons is not just the recipient of financial support from children, they also contribute to their children. Ethnic differences were also noted in the amount and frequency of financial support of adult children. Chinese adult children give their parents higher amount compared to Malay and Indian children. In addition, Chinese adult children were more consistent in giving to their parents. Malay and Indian children gave less frequent.

The formal income source in old age such as pension, social insurance, and provident fund also may not provide enough financial resources in old age. An EPF study has noted that the lump sum payment only lasted for seven years after aged 55. With Malaysian life expectancy at 75, a member might have another 15 of life with the financial benefit and has to depend on other income sources. The financial inadequacy would be more if the individual suffers from multiple health ailments and do not have health insurance.

Social Care Services

Presently, many social and community services caters for the needy aged and not many services are available of the aged who are not eligible for welfare services and yet cannot afford private services. In the future, alternative community services need to be developed as the present services are limited. The future aged will be affluent as they have access to higher education and employment opportunities. In addition, their values and needs may differ from the present aged.

Further, the family has undergone structural changes and they may not be available to care for the aged. If available they may themselves be old to care for

and old-old person family members. The phenomenon of divorces may blur the family boundary and loyalties this may undermine the familial care expected by the older persons. Moreover, many countries including Malaysia emphasize the role of family members to care for their aged members. This is a noble call but families must be helped to perform their roles as the socioeconomic development has disrupted the support system of traditional families. New family forms have developed over the years.

Long term care services must also be in place as the need of the aged may not be able to be given by family members.

Health Care

A major concern with the growing number of older persons in the population is the health care and the cost of care. Technological advances in medicine have helped in lengthening the life expectancy of the population and a sizeable number of people in the ASEAN region recorded reaching centenarian age. The major causes of death now are from non-communicable diseases which are common among the aged. The aged is a heterogeneous population and the health needs, accessibility and affordability differ accordingly. Hence, healthy care delivery may need to develop more options for people in the different age groups and purchasing power.

Active ageing is promoted by the World Health Organizations but active ageing cannot occur in an conducive environment. Similarly WHO suggests the primary health care is the option to provide health services for the older persons. But in our qualitative study among users of primary health care service in Kajang, sponsored by WHO in early 2006 found the system is not ready to cater for the aged needs. Some of the barriers mentioned by older users were waiting, time, facilities not conducive, signage and communications.

Demographic opportunity

As mentioned earlier the reduction in fertility and mortality has created what demographers labelled as demographic opportunity (Mason, 2002), dividend or gift (Bloom et al 2003). But this opportunity is temporary and short lived. Therefore, the timing and seizing the opportunity is crucial in order to benefit from the change in the age structures before the onset of the aged nation status. From the above data, it is noted the countries experience different timing in fertility and mortality decline. Hence, the timing of opportunity would be different for different country.

In the case of Malaysia, the opportunity started in 1970's when fertility decline occurs. The decline shifted the attention from providing services for the maternal and child health to other sectors. The monetary resources could be channel to other programmes. In Malaysia, the democratization of education policy prompted growth human capital development which provided educated human capital to industries for economic. In addition, Malaysia also adopted quite an open economy that encourages investment into the country. For Malaysia, the demographic opportunity will end after 2020, when her population will aged based on the median age.

Evidence Based Policy Development

Ageing is a life long process and by nature the research has to be multidiscipline in order to understand the effects of societal phenomenon on the ageing individuals and the community. Broad base research may not get sponsorship but for policy development there is a dire need to have broad base research and longitudinal in nature. The longitudinal panel data would help to highlights the impact of societal programme implementations on the target populations. The time has come for the countries in the part of the world to embark on research agendas that would help in policy decision making. There is a need for policy-oriented research in the field of ageing. Studies conducted in academic institutions usually do not get communicated to the powers that be and may only end up in academic journals only. Effort must be made to translate research findings to policy and programmes.

Ageing is life long

The process of ageing begins from conception to death. As such it is a life long process. The cumulative experience of the individual aged will determine the well being of that individual in old age. Hence to improve the state of the aged, policy must be developed and targeted at the younger generations. As envisage by WHO, the creation of society for all ages will help ameliorate the problems of the aged, where alternative choices can be created. In addition, the images of the aged have to be changed as the present and future aged will be different. But images are embedded in the culture and image making mechanisms have role to play in correcting the myth of the aged persons. New architecture of ageing requires policies that remove the barriers and facilitate contributions of the aged in the society.

Conclusion

The unprecedented increase of the aged population, coupled with urbanization and other social economic trends, raise several fundamental issues that are affecting the society as a whole. Major issues are social security and poverty in old age, health status and care, long term care issues and research agenda relevant to policy development and evaluation. The ASEAN governments need to be convinced of the long term implications of population ageing and seek country-specific solutions to address their rapidly graying population. The demographic dividend is evident and must to harness to address the age structure change in the countries, the opportunity is temporary and must b mobilize. Models and approaches from the west are available and we must be open to new and novel ideas that can be adopted within each country's infrastructure, political environment and readiness for change.
The wellbeing of the future cohort of aged is dependent on several factors that

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Table 1: World Population Aged 60 and Over in 2002 and 2050 *

Region	Number in Thousands ('000)		Proportion of Older Persons (%)	
	2002	**2050 ***	**2002**	**2050 ***
Asia	338084	1226714	9	23
Eastern Asia	174417	511161	12	31
South Central Asia	110117	473646	7	19
South Eastern Asia	39482	175761	7	22
Western Asia	14069	66146	7	16
Africa	42221	204776	5	10
Europe	148319	221079	20	37
Latin America & the Caribbean	43678	181191	8	22
Northern America	52321	119015	16	27
Oceania	4250	10992	14	23
World	**628874**	**1963767**	**10**	**21**

Source: United Nations (2002) * Medium projections

Table 2: Projected (Medium Variant) Crude Birth Rate (CBR), Crude Death Rate (CDR) and Crude Growth Rate in ASEAN Countries, 2005 - 2010.

Country	CBR	CDR	Crude Growth Rate	Total Fertility Rate (TFR)
Brunei D.	21.5	2.8	18.7	2.29
Cambodia	30.0	10.1	19.9	3.72
Indonesia	19.2	7.1	12.1	2.20
Lao PDR	33.2	11.3	21.9	4.28
Malaysia	20.4	4.7	15.7	2.62
Myanmar	18.2	9.3	8.9	2.08
Philippines	23.1	4.8	18.3	2.84
Singapore	8.4	5.5	2.9	1.30
Thailand	15.2	7.2	8.0	1.87
Vietnam	18.9	5.8	13.1	2.14
South Eastern Asia	**19.6**	**6.8**	**12.8**	**2.31**

Source: Population Division of the Department of Economic and Social Affairs [DESA] of the United Nations Secretariat, **World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision**, http://esa.un.org/unpp, 24 August 2006.

Table 3: Net Migration Rate (per 1000 population) in ASEAN Countries, 1995 - 2000, 2005 - 2010 and 2015 - 2020.

Country	Net Migration Rate (per 1000 population)		
	1995 - 2000	2005 - 2010	2015 - 2020
Brunei Darussalam	2.2	1.8	1.5
Cambodia	1.7	-0.1	-0.1
Indonesia	-0.9	-0.8	-0.6
Lao People's Democratic Rep.	-0.3	-0.2	-0.2
Malaysia	3.6	0.8	0.3
Myanmar	0.3	0.0	0.0
Philippines	-2.5	-2.1	-1.8
Singapore	19.6	9.0	5.1
Thailand	-0.3	-0.2	-0.1
Vietnam	-0.5	-0.5	-0.4
South Eastern Asia	**-0.5**	**-0.6**	**-0.6**

Source: Population Division of the Department of Economic and Social Affairs [DESA] of the United Nations Secretariat**, World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision**, http://esa.un.org/unpp, 24 August 2006.

Table 4: Economically Active Population Estimates by Age Group in ASEAN Countries, 2005

Country	Age Groups											Total (15+)
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	
Brunei Darussalam	16.2	67.6	78.6	77.1	76.7	75.0	70.6	66.1	45.9	39.4	13.0	62.2
Cambodia	50.0	83.3	89.8	90.4	92.6	92.8	92.4	88.7	79.5	65.8	30.2	77.0
Indonesia	37.5	68.2	74.4	77.7	79.9	81.2	80.9	79.8	70.1	61.7	41.1	67.8
Lao People's Democratic Republic	43.1	71.2	78.7	79.3	80.1	82.3	78.9	74.3	68.5	50.5	35.6	67.2
Malaysia	25.5	74.6	81.2	77.5	76.1	78.5	74.1	66.8	52.0	41.6	37.7	64.3
Myanmar	53.5	73.8	85.8	87.9	87.1	87.4	86.3	82.3	79.8	75.6	53.5	77.0
Philippines	37.6	69.2	77.3	81.2	81.0	84.4	83.6	81.7	75.0	64.0	40.1	68.9
Singapore	15.1	75.3	93.1	88.8	81.8	80.2	78.4	71.4	53.7	30.8	8.5	63.4
Thailand	26.7	71.0	89.3	90.7	91.8	93.4	88.2	85.8	77.5	58.7	27.2	73.0
Vietnam	52.8	87.8	93.6	92.1	90.9	87.3	82.6	73.5	60.4	45.7	18.7	75.2
South Eastern Asia	**40.4**	**73.0**	**81.2**	**83.2**	**84.0**	**84.9**	**82.9**	**79.7**	**70.8**	**59.7**	**35.6**	**70.6**

Source: Population Division of the Department of Economic and Social Affairs [DESA] of the United Nations Secretariat**, World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision**, http://esa.un.org/unpp, 22 August 2006.

Table 5: Age Distribution, Ageing Index and Median Age in ASEAN Countries, 1980, 2000 & 2020 Projection.

Country	1980					2000					2020				
	Percent (%)			Ageing Index	Median Age	Percent (%)			Ageing Index	Median Age	Percent (%)			Ageing Index	Median Age
	<15	15-64	65+			<15	15-64	65+			<15	15-64	65+		
Brunei D.	38.6	58.6	2.9	7.51	20.4	31.3	65.8	2.9	9.27	25.1	23.9	70.3	5.8	24.27	30.0
Cambodia	40.2	56.9	2.8	6.97	19.2	40.7	56.1	3.2	7.86	18.5	32.9	62.2	5.0	15.20	24.4
Indonesia	40.4	56.1	3.5	8.66	19.6	30.2	64.9	4.9	16.23	24.8	23.1	69.6	7.3	31.60	31.8
Lao PDR	42.0	55.2	2.8	6.67	18.8	42.7	53.8	3.5	8.20	18.5	35.0	64.4	3.9	11.14	22.4
Malaysia	39.3	57.0	3.7	9.41	19.7	33.7	62.2	4.1	12.17	23.6	25.2	67.4	7.4	29.37	29.3
Myanmar	40.6	55.3	4.1	10.10	19.7	32.5	62.8	4.7	14.46	23.6	22.1	70.3	7.5	33.94	31.4
Philippines	43.1	53.7	3.2	7.42	18.1	37.5	59.0	3.5	9.33	20.9	27.9	66.3	5.8	20.79	27.0
Singapore	27.1	68.2	4.7	17.34	24.5	21.8	71.1	7.2	33.03	34.5	12.7	69.8	17.5	137.80	45.3
Thailand	39.4	57.2	3.3	8.38	19.5	25.6	68.4	6.0	23.44	28.9	20.1	68.7	11.2	55.72	35.8
Vietnam	41.7	53.3	5.0	11.99	18.6	33.5	61.1	5.4	16.12	23.1	23.5	69.8	6.7	28.51	31.2
South Eastern Asia	**40.7**	**55.6**	**3.7**	**9.09**	**19.3**	**31.9**	**66.9**	**4.8**	**15.05**	**24.1**	**24.0**	**68.6**	**7.4**	**30.83**	**31.0**

Source: LABORSTA, International Labor Organization (ILO)**, Economically Active Population Estimates and Projections (EAPEP), Data Version 5: 1980-2020**, http://laborsta.ilo.org, 23 August 2006.

Table 6: Summary of Population and Development Indicators for ASEAN Member Countries, 2004

Countries	Median Age (2000)	Ageing Index* (2000)	Annual Growth Rate	Crude Birth Rate (per 1000)	Crude Death Rate (per 1000)	Total Fertility Rate	Life Expectancy at Birth		Percentage Aged			GDP per Capita (USD) (2003)	PPP Index (2003)
							Male	Female	0 - 14	15 - 64	65+		
Brunei	25.7	16.1	2.2	22.8	2.8	2.4	74	79	30	67	3	12 971	1.2
Cambodia	17.4	9.9	2.4	33.6	10.0	4.6	55	60	41	56	3	310	5.3
Indonesia	24.6	24.7	1.2	20.2	7.2	2.3	65	69	29	66	5	972	3.5
Lao PDR	18.5	13.1	2.2	34.8	12.2	4.6	54	56	41	55	4	362	5.0
Malaysia	23.3	19.3	1.8	21.3	4.6	3.0	71	76	33	63	4	4 175	2.3
Myanmar	23.4	20.5	1.2	23.2	11.2	2.8	55	60	32	63	5	179	7.6
Philippines	20.9	14.8	1.7	24.6	5.1	3.1	68	72	36	60	4	987	4.4
Singapore	34.5	48.3	1.8	10.3	4.4	1.3	77	81	20	72	8	20 987	1.1
Thailand	27.5	30.5	0.8	14.5	6.8	1.7	68	75	23	70	7	2 291	3.2
East Timor	17.8	11.0	3.6	25.1	13.2	3.7	49	51	34	63	3	n/a	n/a
Vietnam	23.1	22.4	1.3	19.9	6.4	1.9	67	72	31	64	5	481	5.1
ASEAN	**23.9**	**22.1**	**1.3**	**20.9**	**7.1**	**2.4**	**65**	**70**	**32**	**63**	**5**	**4 042**	**3.2**

Source: United Nations Economic and Social Commission for Asia and Pacific (2004) ESCAP Population Data Sheet.
Association of South East Asian Nations (2004) Selected ASEAN Indicators, 2003. Website: http://www.aseansec.org/home.htm

Department of Statistics Malaysia (2004) Key Statistics. Website: http://www.statistics.gov.my/
Department of Statistics Singapore (2004) Latest Indicators 2003. Website: http://www.singstat.gov.sg/keystats/annual/indicators.html
United Nations (2002) World Population Ageing 1950 – 2050

* 60+ / <15 * 100; n of older person for every hundred children

Table 7: Dependency Ratio, Familial Dependency, Sex Ratio and Statutory Pensionable Age, 2000

Countries	Total Dependency Ratio <15 & >65	Old Age Dependency 65+	Parent Support Ratio 85+/50-64	Familial Dependency (per 100) 60-79/40-59	Sex Ratio (per 100 ♀) (60+)	Labor Force Participation (%) (65+)	Coverage of Pension Schemes (% of Labor Force)	Statutory Retirement / Pensionable Age (2002)		Old Age Income Support Programs		
										Private Sector		Public Sector
								Male	Female	Social Ins.	Provident F.	
Brunei	54.1	5.0	2.1	21.6	102.4	18.9	<50.0	55	55	-	ETF	Pension
Cambodia	n/a	5.2	1.1	30.2	56.1	32.8	n/a	n/a	n/a	n/a	n/a	n/a
Indonesia	55.2	7.5	1.6	40.3	84.5	39.8	15.5	55	55	-	JAMSOSTEK	TASPEN
Lao PDR	86.0	6.5	2.0	39.4	88.0	41.3	n/a	60	60	n/a	n/a	n/a
Malaysia	61.9	6.7	2.2	32.2	89.7	29.2	60.5	56	56	-	EPF	Pension
Myanmar	60.5	7.4	2.4	35.7	86.9	51.5	n/a	n/a	n/a	-	n/a	n/a
Philippines	69.7	6.0	1.7	33.6	83.0	42.5	28.3	60	60	SSS	Pag-IBIG	GSIS
Singapore	41.0	10.2	4.4	43.2	86.9	11.6	65.3	62	62	-	CPF	GESPF
Thailand	46.8	7.7	1.7	38.8	82.9	28.4	25.1	60	60	OAP	Provident F.	GPF
East Timor	n/a	4.9	0.5	n/a	96.7	48.0	n/a	n/a	n/a	n/a	n/a	n/a
Vietnam	63.2	8.7	4.0	43.5	87.6	35.1	9.1	60	55	SIS	-	PAYGO s.
ASEAN	**58.9**	**7.4**	**2.0**	**-**	**84.6**	**38.0**	**-**	**-**	**-**	**-**	**-**	**-**

Source: Social Security Administration (2003) Social Security Programs Throughout the World: Asia and the Pacific, 2002. Website: www.socialsecurity.gov/policy
United Nations Economic and Social Commission for Asia and Pacific (2004) ESCAP Population Data Sheet.

UN World Population Prospects: The 2002 Revision Population Database, Website: http://esa.un.org/unpp/
United Nations (2002) World Population Ageing 1950 – 2050
Holzmann, MacArthur & Sin (2000). Pension Systems in East Asia and the Pacific: Challenges and Opportunities, Website: http://wbln0018.worldbank.org/

Note:
1. Employee's Trust Fund, ETF
2. Jaminan Sosial Tenaga Kerja, JAMSOSTEK
3. Employees Provident Fund, EPF
4. Social Security System, SSS
5. Central Provident Fund, CPF
6. Government Pension Fund, GPF
7. Social Insurance Scheme, SIS
8. Government Service Insurance System, GSIS
9. Gov. Employee Scheme & Pension Fund, GESPF

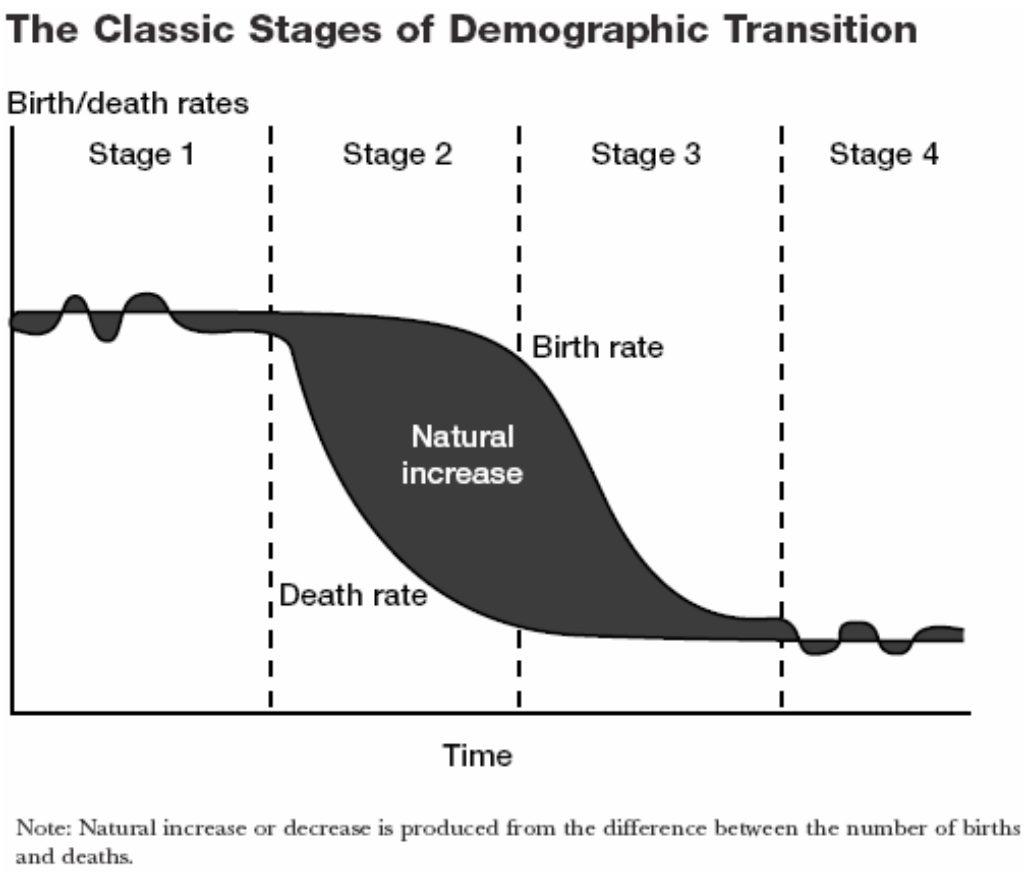

Figure 1: The Demographic Transition Model.

Source: McFalls Jr. J. A. (2003) Population: A Lively Introduction, 4th Edition. Population Bulletin, 58(4), p. 34.

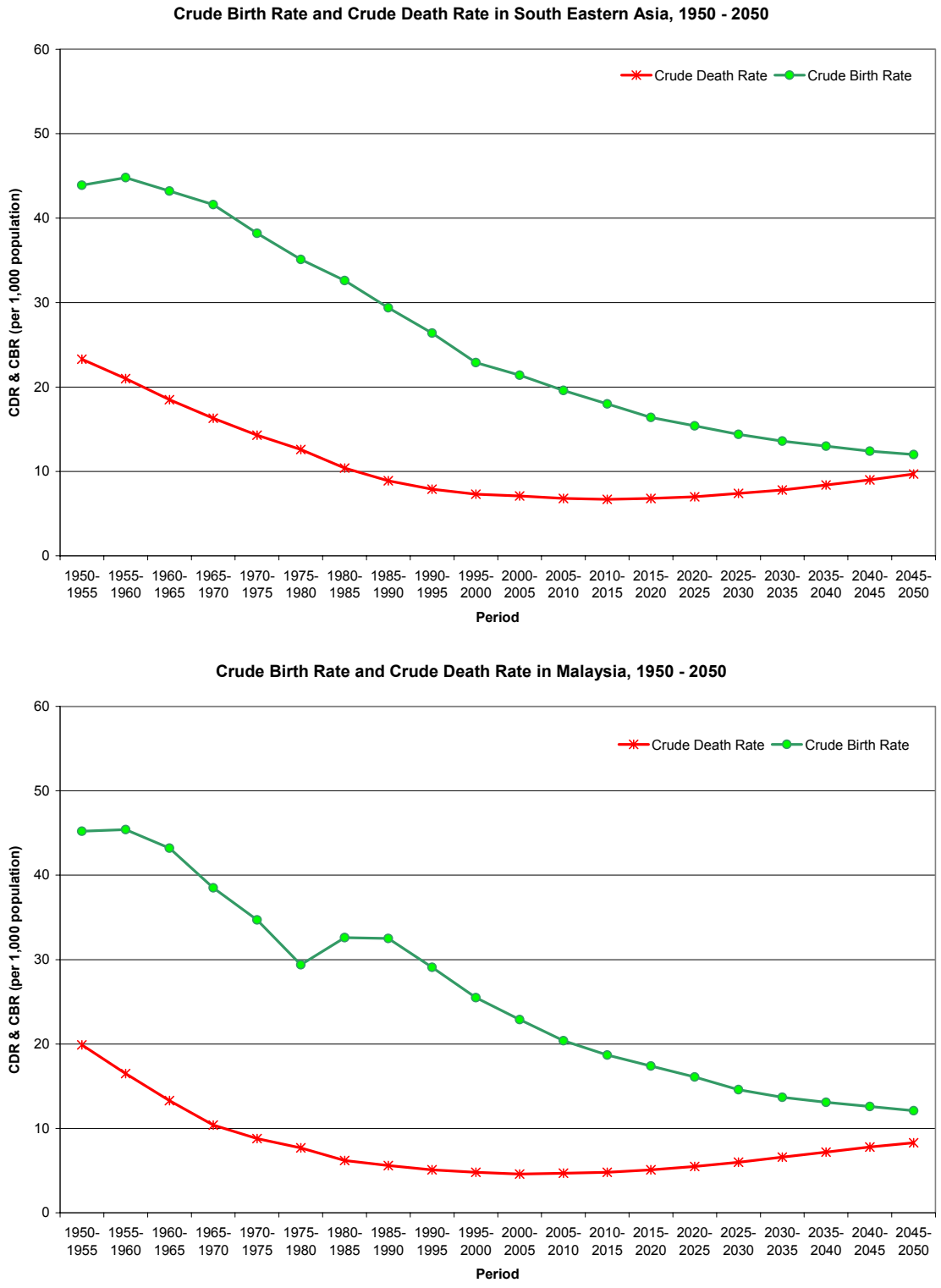

Figure 2: Crude Birth Rate (CBR) and Crude Death Rate (CDR) in South Eastern Asia and Malaysia, 1950 - 2050.

Source: Population Division of the Department of Economic and Social Affairs [DESA] of the United Nations Secretariat, **World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision**, http://esa.un.org/unpp, 24 August 2006.

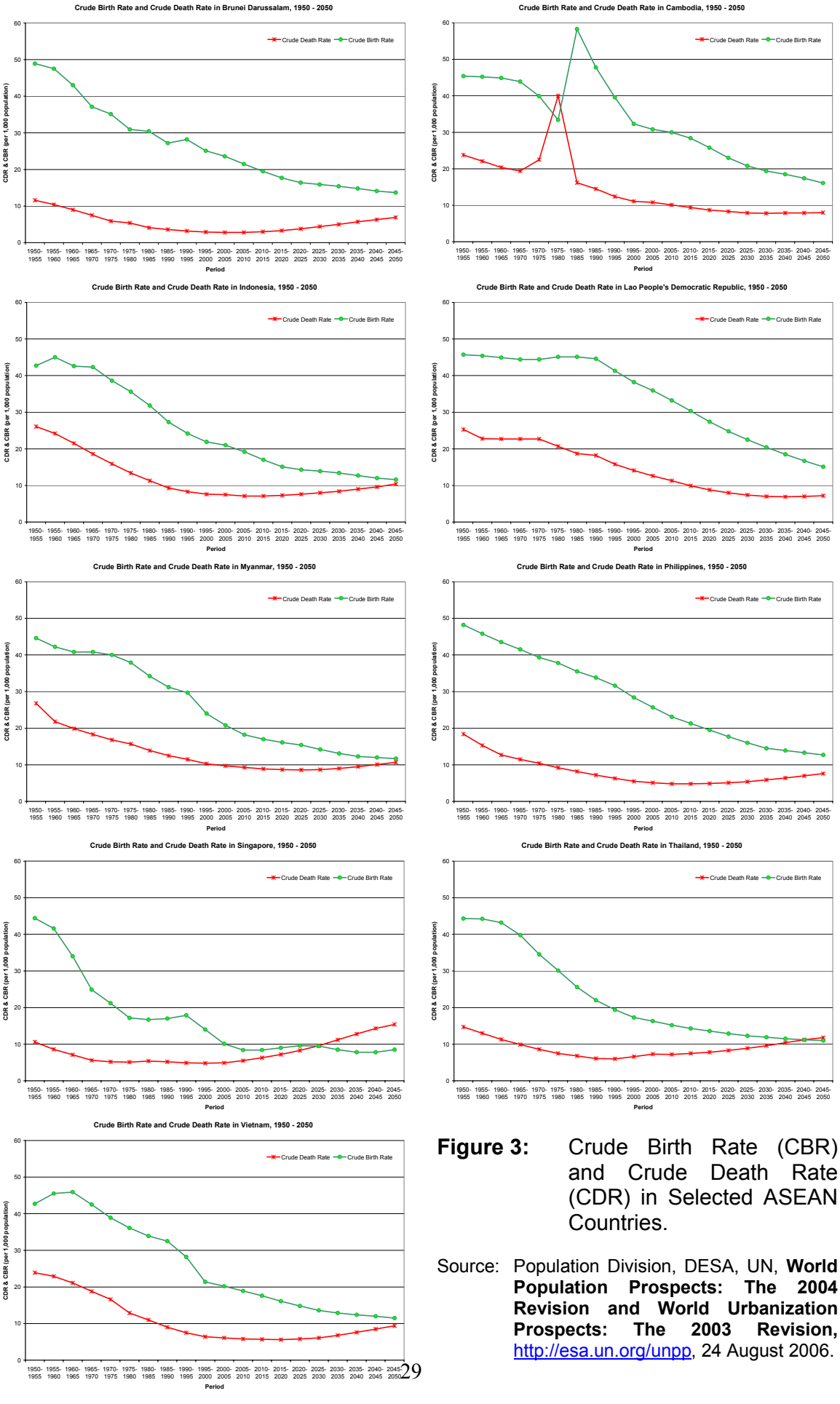

Figure 3: Crude Birth Rate (CBR) and Crude Death Rate (CDR) in Selected ASEAN Countries.

Source: Population Division, DESA, UN, **World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision,** http://esa.un.org/unpp, 24 August 2006.

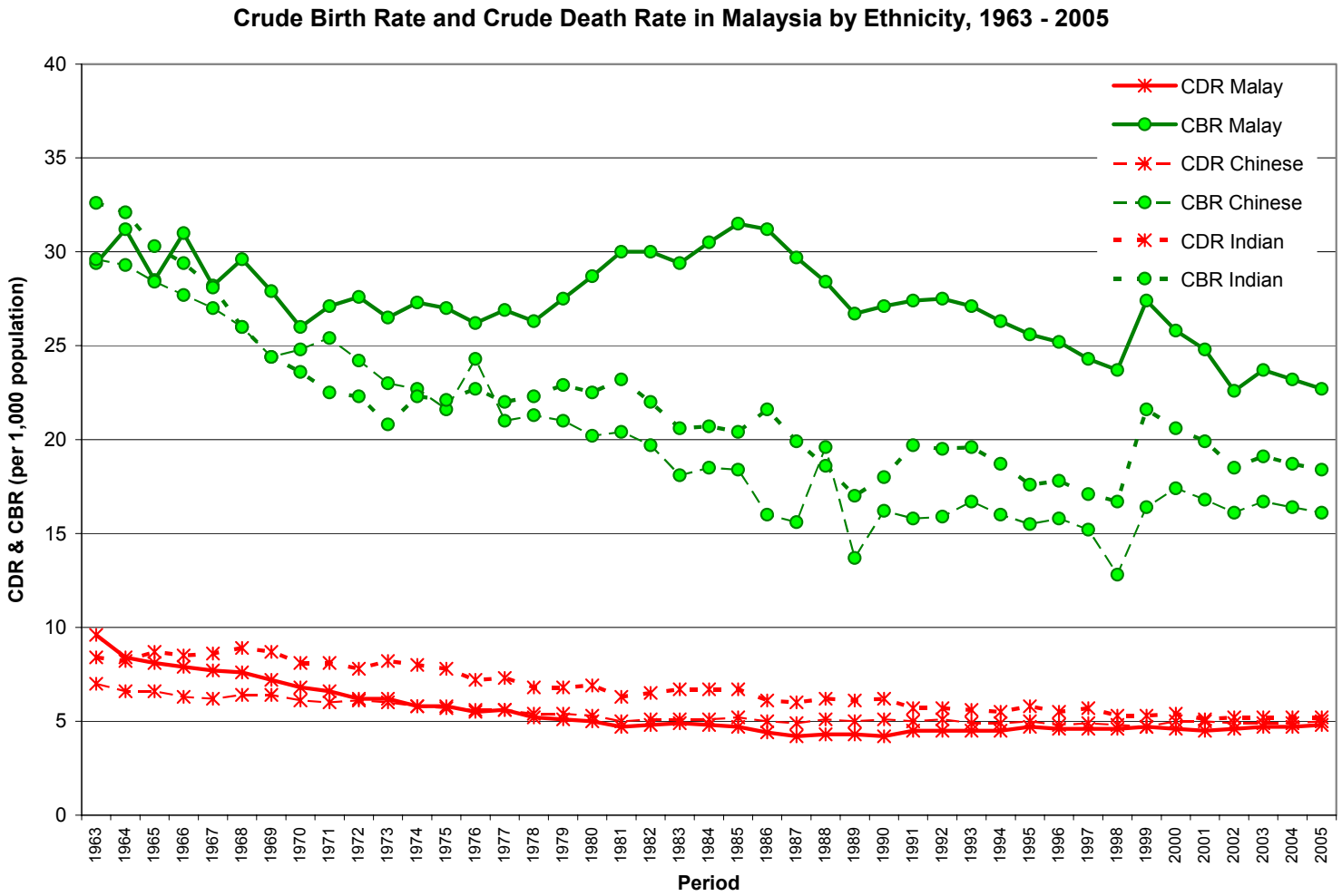

Figure 4: Crude Birth Rate (CBR) and Crude Death Rate (CDR) in Malaysia by Ethnicity, 1963 - 2005.

Source: Department of Statistics, Malaysia (2001). **Vital Statistics Time Series, 1963-1998**. Putrajaya: DOSM.
Department of Statistics, Malaysia (2002). **Yearbook Statistics of Malaysia, 2002**. Putrajaya: DOSM.
Department of Statistics, Malaysia (2005). **Yearbook Statistics of Malaysia, 2005**. Putrajaya: DOSM.

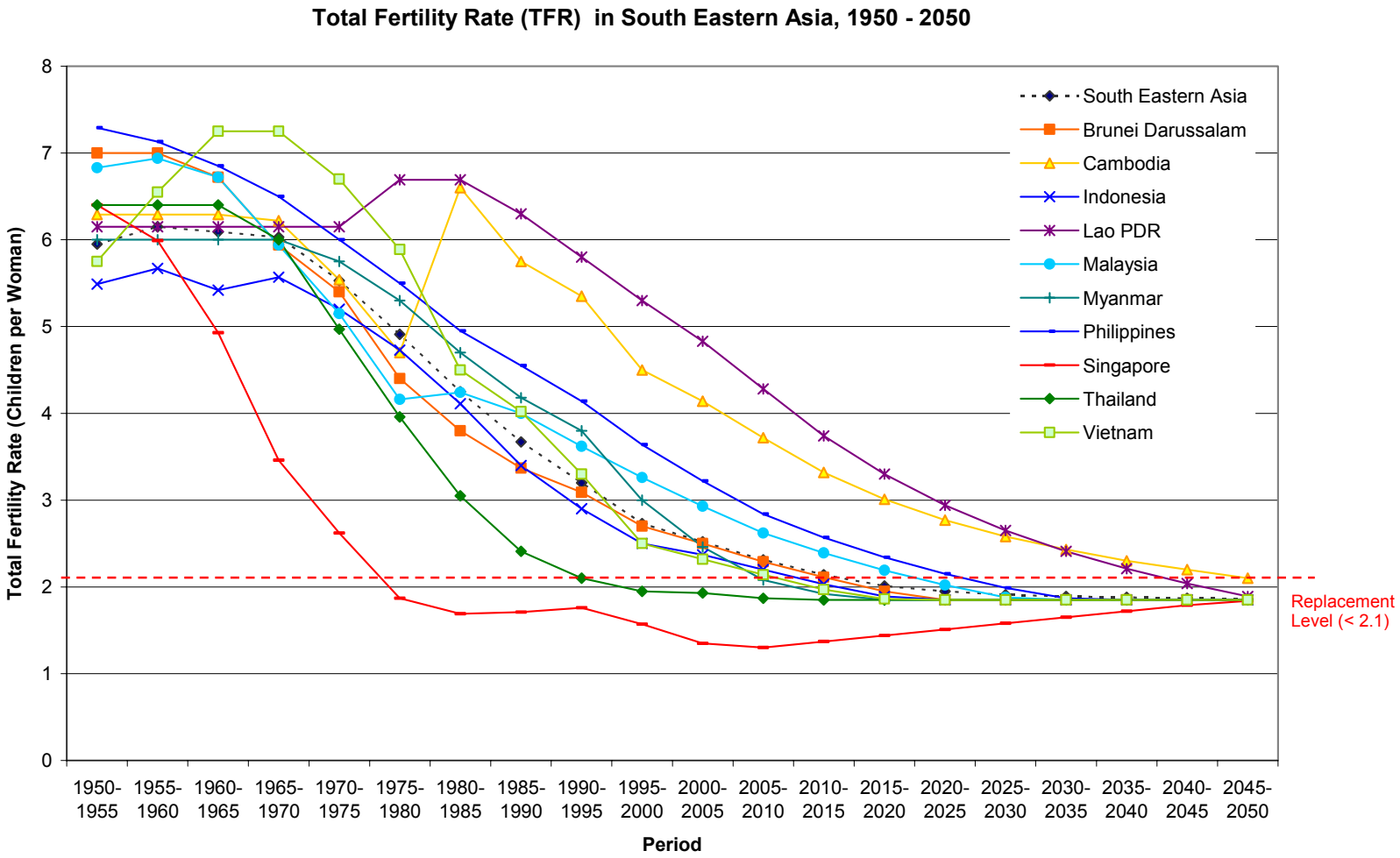

Figure 5: Total Fertility Rate (Children per Woman) in South Eastern Asia, 1950 - 2050.

Source: Population Division of the Department of Economic and Social Affairs [DESA] of the United Nations Secretariat**, World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision**, http://esa.un.org/unpp, 24 August 2006.

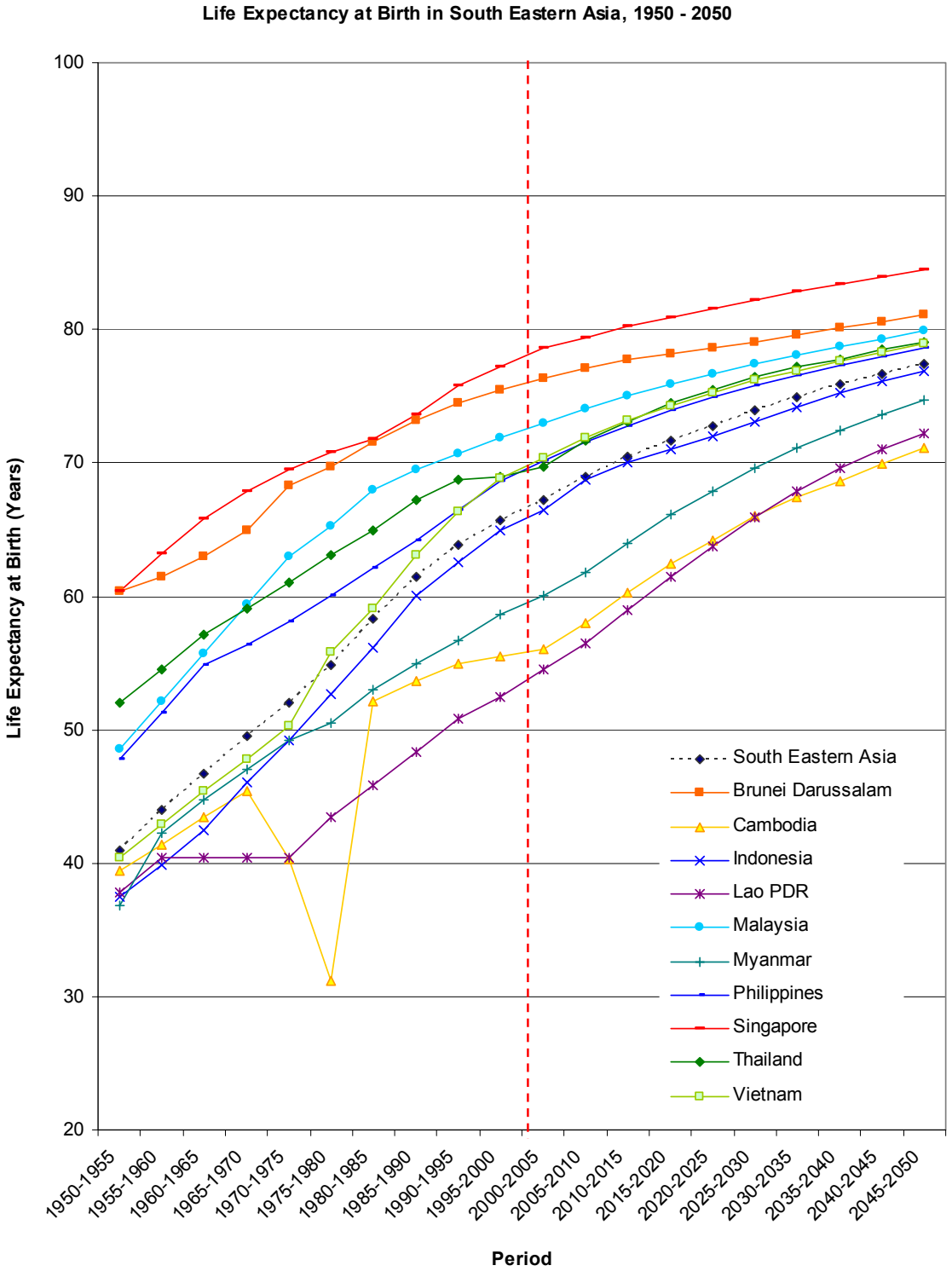

Figure 6: Life Expectancy at Birth in ASEAN Countries, 1950 - 2050.

Source: Population Division of the Department of Economic and Social Affairs [DESA] of the United Nations Secretariat, **World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision**, http://esa.un.org/unpp, 24 August 2006.

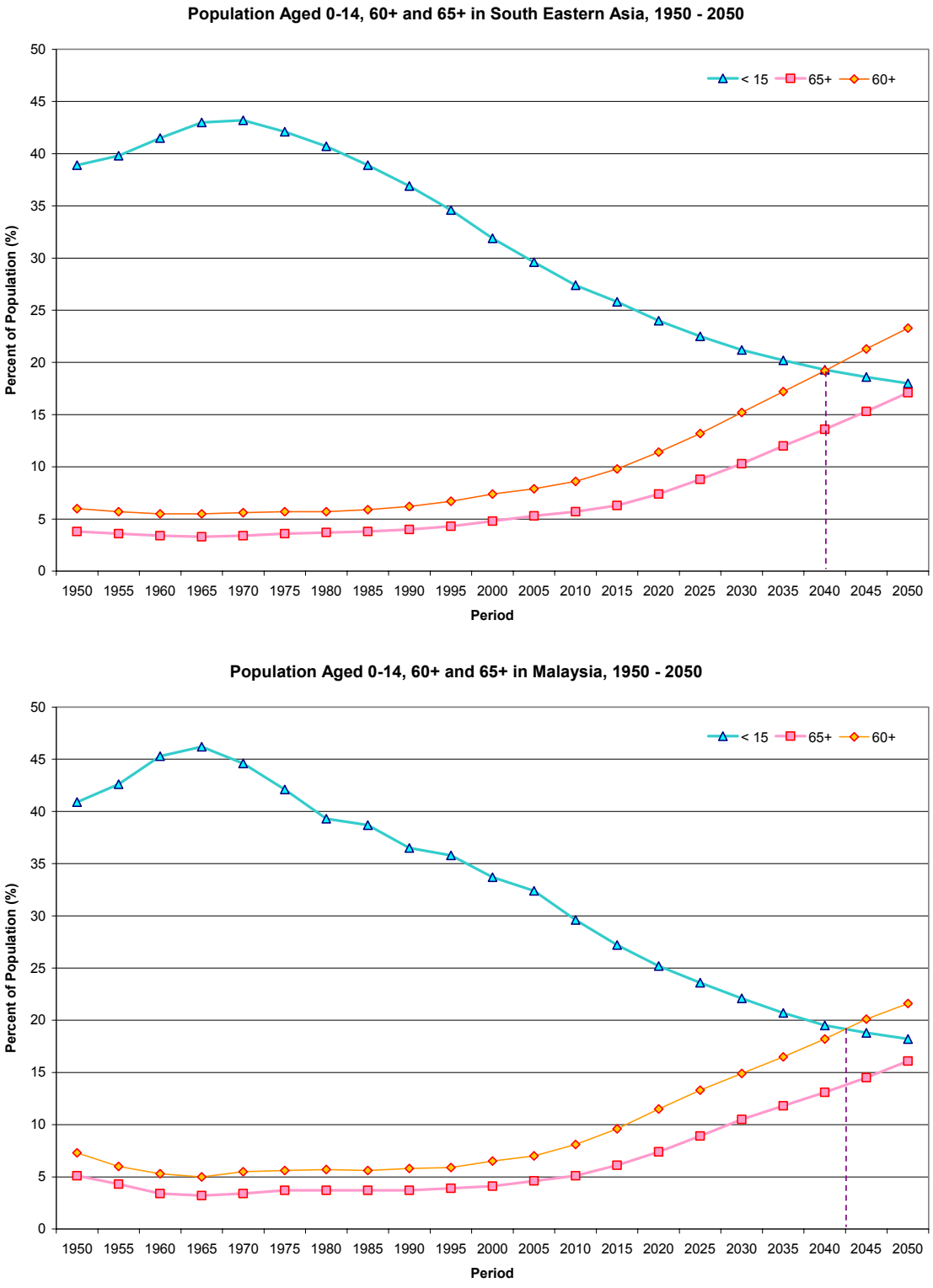

Figure 7: Percentage of Population Aged 0-14, 60+ and 65+ in South Eastern Asia and Malaysia, 1950 - 2050.

Source: Population Division of the Department of Economic and Social Affairs [DESA] of the United Nations Secretariat, **World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision**, http://esa.un.org/unpp, 22 August 2006.

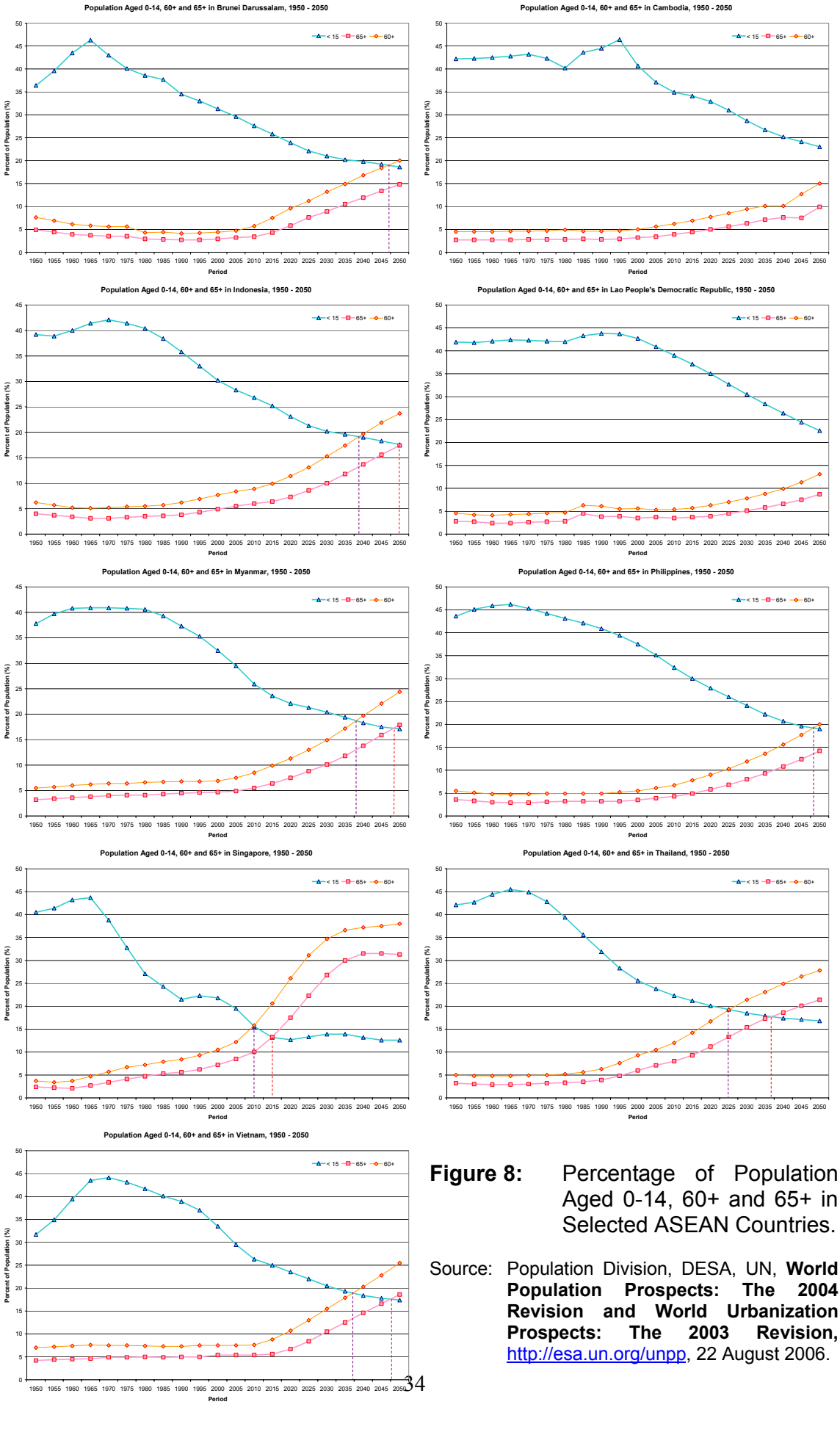

Figure 8: Percentage of Population Aged 0-14, 60+ and 65+ in Selected ASEAN Countries.

Source: Population Division, DESA, UN, **World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision,** http://esa.un.org/unpp, 22 August 2006.

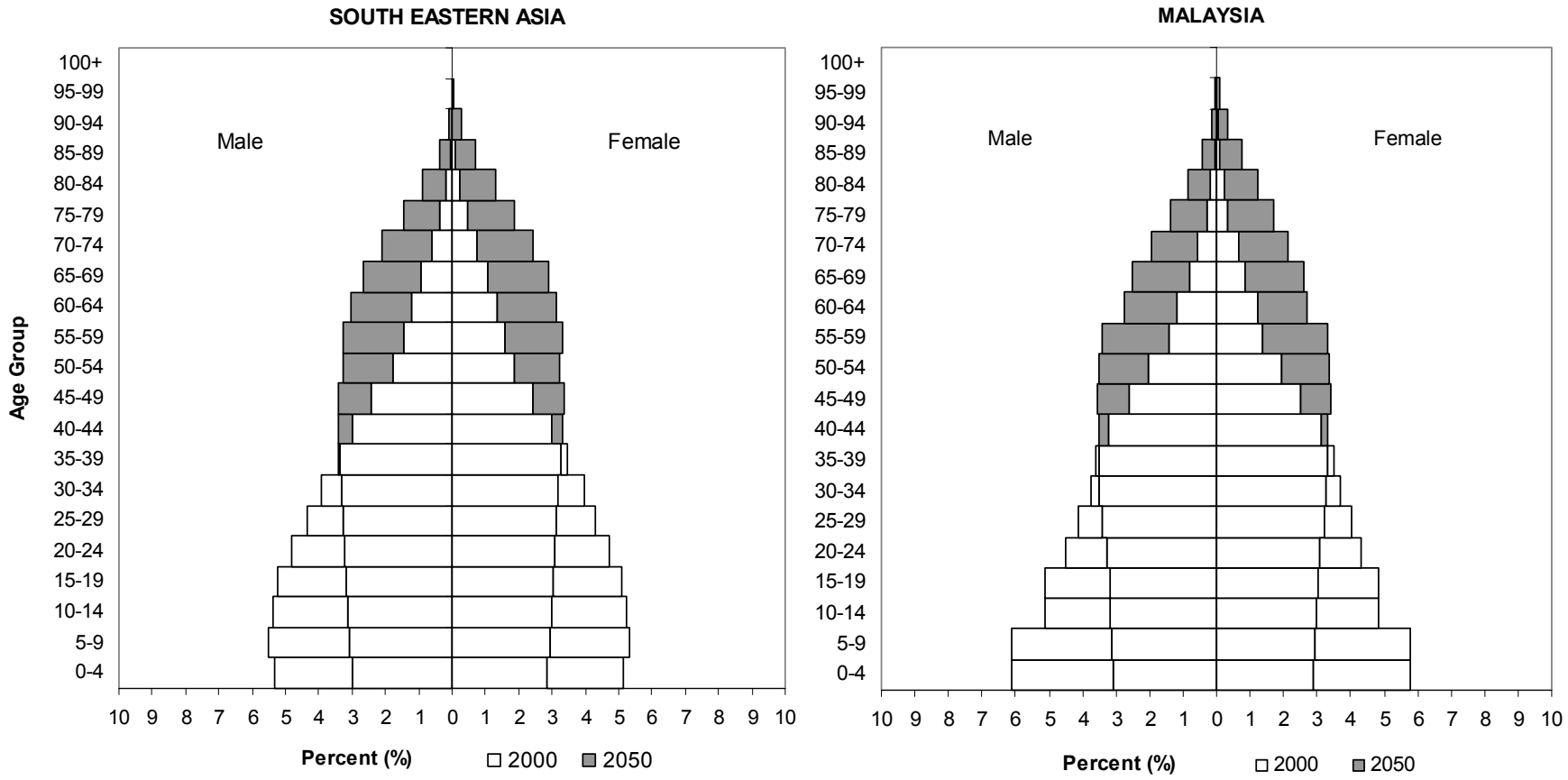

Figure 9: Age-sex Structure in South Eastern Asia and Malaysia, 2000 & 2050.

Source: Population Division of the Department of Economic and Social Affairs [DESA] of the United Nations Secretariat**, World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision**, http://esa.un.org/unpp, 22 August 2006.

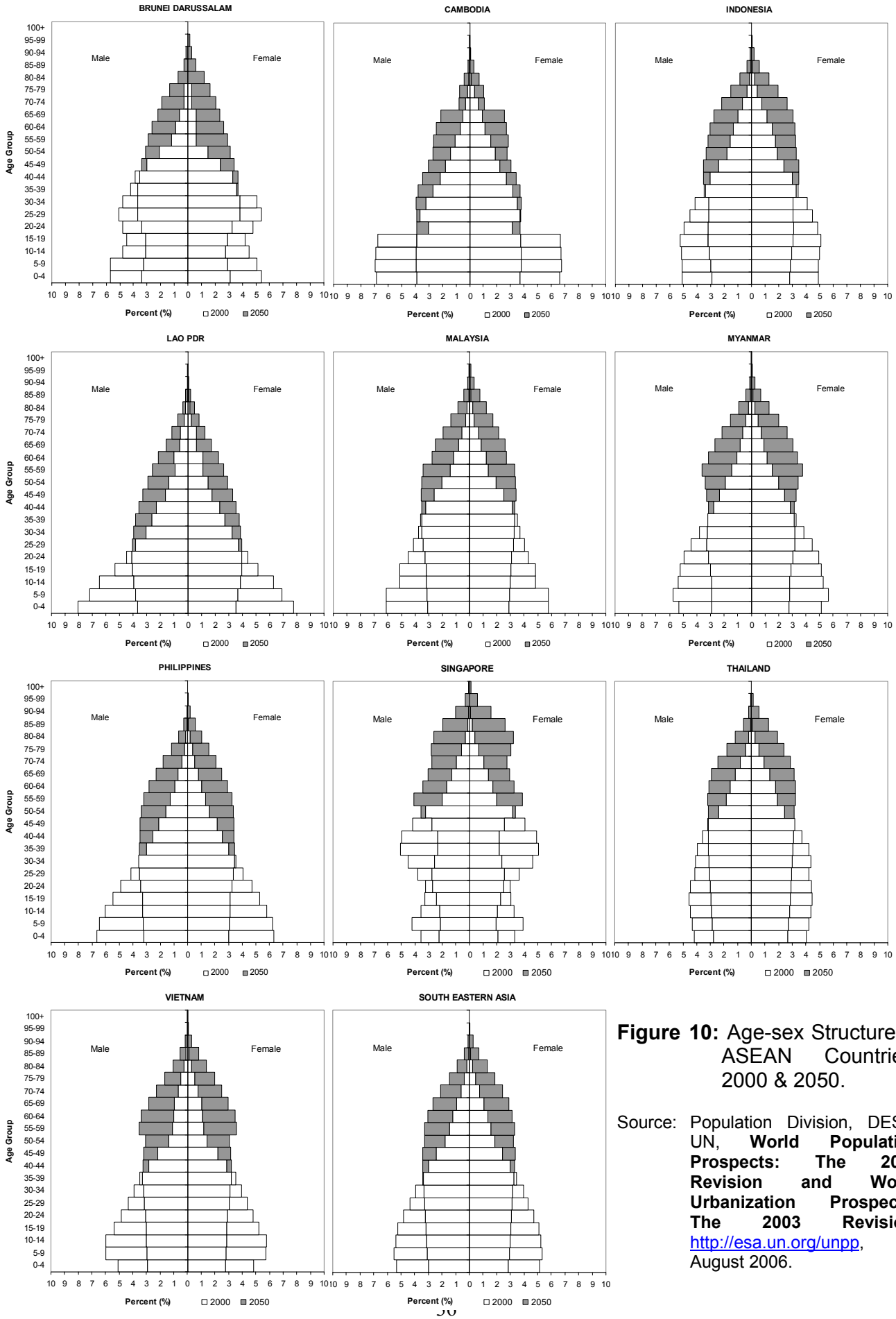

Figure 10: Age-sex Structure in ASEAN Countries, 2000 & 2050.

Source: Population Division, DESA, UN, **World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision,** http://esa.un.org/unpp, 22 August 2006.