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The "Asian Miracle"

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Asia has made excellent progress over the past 30 years and we must maintain the momentum into the new millennium

As we celebrate the dawn of the twenty-first century and the start of the new millennium, a number of development-related issues come to mind: rising poverty levels, increased income inequality, the spread of HIV/AIDS, and social, cultural and gender deprivations. The issues are of global concern and must be kept to the fore even as we take stock of some impressive development gains made since the late 1960s. Among these are the increasing global nature of social, economic and political developments.

Population trends are an integral part of our common future. On 12 October 1999, many countries observed the Day of Six Billion. It was a day to reflect on what a world population of 6 billion would mean, now and in the future — while population growth rates continue to decline, numbers are still increasing owing mainly to the effects of population momentum. It was a day to recognize that individual lives and health come first, and that poverty, food and water shortages and other problems of underdevelopment can be helped by paying close attention to population issues.

There is general agreement that we should aim to stabilize global population size and only through the one acceptable way: by widening choices. That means paying close attention to individual needs for reproductive health, including family planning and sexual health; to education, especially of girls; and to achieving equality between women and men. The International Conference on Population and Development (ICPD) in 1994 reconfirmed the vital role of population in social development strategies and stressed the dynamic relationships among population, social and economic development, poverty alleviation, the environment and the empowerment of women.

The international community met again this year for the "ICPD + 5" review, as the special session of the United Nations General Assembly was popularly called. Delegations overwhelmingly endorsed the ICPD Programme of Action agreed in 1994. Five years of experience have shown that the Programme is practical, affordable and essential for the future. Countries are committed to making it work. Nearly half have reviewed their policies in the light of the new understanding of population and development; more than one third have updated their population policies to be consistent with ICPD goals or have integrated factors relating to quality of health care, gender equality and equity and the improvement of demographic information systems into long-term development plans; two thirds have introduced policy or legislative measures to promote gender equality and equity, and empowerment of women, including in the areas of inheritance, property rights and employment, and protection from gender- based violence.

For almost three decades, the Asian and Pacific region has stood out to the rest of the world as a model of development. The region had experienced stunning economic growth accompanied by massive investments in health and education that were widely credited with contributing to reduced infant, child and maternal mortality, smaller family size, higher living standards and significant improvement of women's status. But development is not a smooth process. The financial and economic crisis that began in South-East Asia in mid-1997, and whose direct and indirect effects spread throughout Asia, has provided a grim warning that global financial turmoil can wipe out developmental gains owing to decreased social sector investment.

The crisis threw millions into poverty and deep distress, which in some countries has been compounded by the lack of social cohesion and dependable political institutions. It has caused bewilderment among young generations who, before the onset of the crisis, had no real experience of anything except continued improvements in living conditions. Specifically, the crisis increased poverty and unemployment, lowered educational participation and reduced funding for social programmes, including population and reproductive health activities.

Evidence suggests that the region's remarkable development gains since the late 1960s have been set back, and that women and children are suffering the most. School dropout rates have increased throughout the region; unemployment has risen sharply and disproportionately in the sectors in which women work; urban job losses have reversed traditional rural-to-urban migration patterns and created a new class of urban poor.

Falling real incomes and rising prices of food and other basic commodities have combined to produce increased incidence of malnutrition in babies and young children. The harsh realities of women's lives have been exacerbated and gender equality and equity remain a distant goal. Rising poverty levels have increased

pressure on women to enter the commercial sex industry; and because of a lack of accessible services, these new recruits are poorly equipped to protect themselves from sexually transmitted diseases (STDs), including HIV/AIDS.

Reproductive health programmes have suffered as budgetary priority has been given to addressing hunger, rising poverty, unemployment and social disruption. Evidence suggests that unsafe abortions have increased, while opportunities for post-abortion counselling in family planning are limited. There have been cutbacks in health promotion and medical service activities, including STD and HIV/AIDS prevention and treatment programmes. The problem of inadequate access to reproductive health services for adolescents, especially girls, has intensified.

In the first decade of the twenty-first century the challenge for Asia and the Pacific will be to resume pre-crisis growth rates, to reduce income inequalities and to spread the benefits of development. Immediate priority must be given to eliminating extreme poverty and protecting the weakest and most vulnerable sections of society. Attacking poverty both promotes social cohesion and lays a firm foundation for sustainable economic growth. Eradicating poverty necessitates an effective social safety net to cover the basic needs of the very poor.

An associated challenge will be to invest in health and education, in reproductive health and rights, and in women's empowerment, all of which are crucial for human capital formation and social development. By 2015, all countries of the region should have attained the goals and objectives set out in the ICPD Programme of Action.

Among the key population challenges are containing the HIV/AIDS pandemic, operationalizing comprehensive integrated reproductive health services, meeting the reproductive needs of adolescents and increasing gender equity and equality.

Another policy challenge is to provide information and quality services for all, especially men. Programmes should be put in place to encourage men to undertake actions in support of women's rights and empowerment in family and public settings, in the socialization of male children, in improving women's health and in eradicating gender violence and sexual exploitation.

Close attention will need to be paid to the Asian and Pacific region's changing demographic structures. There is a marked increase in young people entering their childbearing years. Over the first decades of the next century, there will also be a gradual demographic shift towards an older population in all countries. The number of the elderly, as a proportion of the total population and overall, is rapidly increasing, with most of the world's elderly living in China, India and Japan. We need to develop policy frameworks and strengthen national capacities to address the needs of adolescents and the elderly.

The agreements reached at the international conferences of the 1990s on population, social development and women represent a global blueprint for the twenty-first century. Many of these policy options were revisited during the ICPD review and will be taken up during the reviews in 2000 of the 1995 social summit and the women's conference.

At the ICPD + 5 review, delegations recognized that, in spite of the progress made, more action is required in key areas, among them reproductive and sexual health, reduction of maternal mortality, the reproductive health needs of adolescents, reducing abortion and addressing the health consequences of unsafe abortion, prevention of HIV/AIDS, gender issues and education. They recommended setting new benchmarks and milestones in several of them, and urged strong action to meet ICPD goals in others.

To confront the challenges of the twenty-first century successfully, we must strive to promote, respect and protect all human rights: economic, social, cultural, civil and political rights. Asia has made excellent progress over the past 30 years and we must maintain the momentum into the new millennium. Remarkable progress has been made by the Asian and Pacific countries towards achieving the goals and objectives of the ICPD Programme of Action. We must now increase our efforts and forge ahead to respond to the key actions that came out of its review. National governments, and especially the donor community, must commit the necessary resources to realize the vision behind the recommendations for further action.

Asia's Demographic Miracle: 50 Years of Unprecedented Change

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Asia's reproductive revolution has undoubtedly been one of the most significant and far-reaching changes ever in human behaviour

The demographic landscape of Asia has seen unprecedented changes over the past 50 years of the post-Second World War era. A rapid and spectacular transition from high to relatively low mortality and fertility has made the eventual attainment of the stabilization of the region's population, and global population, a real possibility in the first century of the new millennium. Rapid fertility decline is not only slowing population growth but also fundamentally changing the age composition of populations.

Asia's demographic success story is, of course, associated with the stunning economic and social changes that have occurred during this period. There were big rises in real incomes and massive reductions in poverty levels as the region's economies shifted away from a nearly total reliance on agriculture to increasing emphasis on modern urban-based industries. Big social changes occurred alongside spectacular economic growth. These include, in particular, the spread of basic education and the associated rise in literacy levels. At the same time, it is hardly an exaggeration to say that the region's demographic transformation has made a real and significant contribution to what can be called the Asian miracle.

Population and health policies, and through them public sector health and family planning programmes, had a major influence in shaping the region's demographic transformation (Asian Development Bank, 1997). National family planning programmes had their birth in South Asia, starting in India with a bold initiative that launched the world's first national family planning programme in 1952, but quickly spread throughout Asia and elsewhere, encompassing China, the world's population giant, a little over a decade later. While the impetus for launching these programmes was the recognition that the size and rapid growth of their populations would have negative implications for national development, the main objective behind them was, and remains, to improve the quality of life of their people. This objective was emphatically re-emphasized 40 years later, in a much changed international climate that characterized the 1994 International Conference on Population and Development (ICPD) (United Nations, 1995).

As Asia's demographic transition gathered pace in the early 1970s, following the sharp reduction in mortality, especially of infants and children, the population growth rate peaked. Subsequently, as fertility decline gained momentum, the growth rate has almost halved, with the inertia of demographic momentum accounting for much of the current 1.3 per cent annual growth in population (table 1). This figure is also significantly lower than the current population growth rate in Africa (2.3 per cent) and even Latin America (1.5 per cent). The overall figures for Asia do, of course, conceal markedly different levels of growth in different parts of Asia. For example, the population growth rate of eastern Asia at 0.8 per cent is half that of south-central Asia (table 1). Among the most populous countries, China has come closest to attaining population stabilization. Conversely, Pakistan's current population growth rate at 2.6 per cent implies a doubling of its population of 138.7 million by around the end of the first quarter of the new century. The other Asian population giants, India and Indonesia, are currently growing at an annual rate of around 1.5 per cent. However, their growth rates are expected to decline rapidly in the early decades of the twenty-first century.

Table 1. Population growth rates in Asia, by subregion and most populous countries

(per cent)

Subregion/country	1950-1955	1960-1965	1970-1975	1980-1985	1990-1995	2000
Asia	1.91	2.21	2.28	1.88	1.55	1.31
Eastern Asia	1.75	1.98	2.12	1.31	1.04	0.79
China	1.87	2.07	2.21	1.38	1.10	0.83
South-central Asia	2.03	2.38	2.35	2.30	1.94	1.67
India	2.00	2.26	2.24	2.17	1.86	1.53
Pakistan	2.24	2.69	2.58	3.42	2.68	2.64

South-eastern Asia	1.92	2.37	2.44	2.14	1.72	1.43
Indonesia	1.69	2.14	2.41	2.06	1.54	1.36
Western Asia	2.64	2.73	2.75	3.02	2.26	2.16

Source: Compiled from data contained in United Nations, 1999. World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations).

Note: The following are included in the "eastern Asia" subregion: China; Hong Kong, China; Democratic People's Republic of Korea; Japan; Macau; Mongolia; Republic of Korea. The "south-central Asia" subregion: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan; Uzbekistan. The "south-eastern Asia" subregion: Brunei Darussalam, Cambodia, East Timor, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand; Viet Nam. The "western Asia" subregion: Armenia, Azerbaijan, Bahrain, Cyprus, Gaza Strip, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates; Yemen.

#### Postponement of death

The postponement of death to ever later ages over the past half century has been as marked in Asia as in other regions of the world. During this period, the average expectation of life at birth in Asia has increased by 25 years, that is on average one half a year every year (table 2). These steep declines in mortality are one of human history's great triumphs. They came, especially in the 1950s and 1960s, as many infectious diseases such as malaria, cholera and tuberculosis were increasingly brought under control with the importation of Western medical technology, particularly antibiotics and the spread of knowledge about the factors associated with good health. Coupled with these advances were the general improvements in the socio-economic conditions of the masses, including those related to hygiene, which accompanied poverty reductions.

Table 2. Life expectancy at birth in Asia, by subregion and most populous countries

(years)

Subregion/country	1950-1955	1960-1965	1970-1975	1980-1985	1990-1995	2000
<b>Males</b>						
Asia	40.6	47.9	55.9	59.5	63.2	65.5
Eastern Asia	41.4	50.3	63.1	66.3	67.6	69.4
China	39.3	48.7	62.5	65.5	66.7	68.5
South-central Asia	39.9	46.1	50.8	54.7	59.8	62.5
India	39.4	46.2	51.2	55.1	60.3	62.9
Pakistan	40.2	45.7	50.6	55.6	60.6	63.9
South-eastern Asia	39.5	45.1	50.3	56.2	61.8	64.6
Indonesia	36.9	41.7	48.0	54.5	61.0	64.3
Western Asia	43.7	50.5	56.1	60.9	64.3	67.1
<b>Females</b>						
Asia	42.0	48.9	56.8	61.5	65.9	68.8
Eastern Asia	44.7	52.5	65.2	69.0	71.8	74.1
China	42.3	50.4	63.9	67.7	70.5	72.8
South-central Asia	38.6	45.0	49.6	55.1	60.6	63.9
India	38.0	44.7	49.3	54.8	60.5	63.9
Pakistan	37.6	44.5	50.5	56.9	62.6	66.3
South-eastern Asia	41.7	47.8	53.5	59.9	65.5	68.8
Indonesia	38.1	43.4	50.5	58.0	64.5	68.2
Western Asia	46.8	53.8	59.9	64.8	68.2	71.4

Source: Compiled from data contained in United Nations, 1999. World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations).

Note: The following are included in the "eastern Asia" subregion: China; Hong Kong, China; Democratic People's Republic of Korea; Japan; Macau; Mongolia; Republic of Korea. The "south-central Asia" subregion: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan; Uzbekistan. The "south-eastern Asia" subregion: Brunei Darussalam, Cambodia, East Timor, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand; Viet Nam. The "western Asia" subregion: Armenia, Azerbaijan, Bahrain, Cyprus, Gaza Strip, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates; Yemen.

As Asia enters the new millennium, the pattern of causes of death has come to resemble that of Western societies with diseases of the circulatory system and various forms of cancer being dominant causes. Moreover, the rapid spread of the HIV/AIDS pandemic in many parts of Asia will, if it continues unabated, make it difficult to maintain significant further increases in average survival in the decades ahead. As elsewhere in the world, the containment of HIV/AIDS will require urgent action by Asian governments and non-governmental organizations to provide an appropriate range of education and services in an effort to help to prevent further transmission.

The key factor in the sharp rise in the expectation of life at birth in Asian populations has been the massive reduction in infant mortality (table 3), coupled with substantial declines in childhood mortality. Overall, the current infant mortality rate in Asia, at 54 deaths per thousand live births, is less than one third the level prevailing in the early 1950s. Even in those countries that have not been the forerunners in Asia's development, such as India and Pakistan, infant mortality rates have tumbled. The success of immunization and related health programmes, often as part of maternal and child health care programmes, coupled with continued improvements in living standards, are obvious factors in this decline. Yet, despite these impressive declines, considerable scope remains for further improvements in the coming decades, with infant mortality rates in Asia being more than five times higher than those in the developed regions of the world.

Table 3. Infant mortality rates in Asia, by subregion and most populous countries

(per 1,000 live births)

Subregion/country	1950-1955	1960-1965	1970-1975	1980-1985	1990-1995	2000
Asia	180	131	98	83	63	54
Eastern Asia	181	112	56	48	43	36
China	195	121	61	52	46	39
South-central Asia	186	154	132	107	79	69
India	190	157	132	106	78	68
Pakistan	190	155	140	115	84	70
South-eastern Asia	154	119	101	78	54	42
Indonesia	160	133	114	90	59	44
Western Asia	189	146	111	79	61	44

Source: Compiled from data contained in United Nations, 1999. World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations).

Note: The following are included in the "eastern Asia" subregion: China; Hong Kong, China; Democratic People's Republic of Korea; Japan; Macau; Mongolia; Republic of Korea. The "south-central Asia" subregion: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan; Uzbekistan. The "south-eastern Asia" subregion: Brunei Darussalam, Cambodia, East Timor, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand; Viet Nam. The "western Asia" subregion: Armenia, Azerbaijan, Bahrain, Cyprus, Gaza Strip, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates; Yemen.

#### Reduction in births

In the half century since 1950, Asia has experienced a transition from high to low fertility of a magnitude that was quite unexpected, and at a speed that was unprecedented (Leete and Alam, 1993). Fifty years ago, Asian women were marrying at young ages and having an average of six births during their lifetime and, even by the early 1970s, the corresponding figure was five births (table 4). Today, Asian women are

marrying at a significantly later age than 50 years ago and having an average of just 2.5 births, which is rapidly approaching the population replacement level.

Table 4. Total fertility rates in Asia, by subregion and most populous countries

(children per woman)

Subregion/country	1950-1955	1960-1965	1970-1975	1980-1985	1990-1995	2000
Asia	5.91	5.62	5.09	3.70	2.85	2.52
Eastern Asia	5.71	5.19	4.49	2.47	1.88	1.79
China	6.22	5.72	4.86	2.55	1.92	1.82
South-central Asia	6.08	6.01	5.72	4.92	3.79	3.17
India	5.97	5.81	5.43	4.47	3.56	2.93
Pakistan	6.50	7.00	7.00	6.50	5.51	4.76
South-eastern Asia	6.03	5.90	5.31	4.18	3.05	2.54
Indonesia	5.49	5.42	5.10	4.06	2.90	2.42
Western Asia	6.38	6.18	5.57	4.96	4.05	3.63

Source: Compiled from data contained in United Nations, 1999. World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations).

Note: The following are included in the "eastern Asia" subregion: China; Hong Kong, China; Democratic People's Republic of Korea; Japan; Macau; Mongolia; Republic of Korea. The "south-central Asia" subregion: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan; Uzbekistan. The "south-eastern Asia" subregion: Brunei Darussalam, Cambodia, East Timor, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand; Viet Nam. The "western Asia" subregion: Armenia, Azerbaijan, Bahrain, Cyprus, Gaza Strip, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates; Yemen.

It is clearly evident from a comparison of the patterns of the trends in tables 2 and 4 that mortality decline preceded and was initially much more substantial than the decline in fertility. It is also apparent that, while the timing of the decline in mortality rates was remarkably similar across the different regions of Asia, the timing and magnitude of the fertility decline were significantly more variable; for example, contrast the patterns of eastern Asia and south-central Asia in table 4. Of course, an important factor in these differing patterns of fertility decline is the extent to which contraception was adopted, itself often a function of the efficacy of government-led family planning programmes, a topic that we shall consider below.

#### The policy and programme experience of eastern and south-eastern Asia

While family planning programmes in south-central Asia began long before those in eastern Asia, those in the latter subregion were the first to gain significant momentum and show a major impact. The socio-economic and demographic situation in eastern Asia was much the same as that in south-central Asia in the 1950s and the early 1960s. Typically, the populations in both subregions were predominantly agrarian, low income and with low levels of social development. Fertility levels were generally high but death rates were declining as these subregions passed through the first stage of the demographic transition.

Within Asia, only Japan had completed its transition from high to low fertility by the early 1960s. Japan's fertility transition was facilitated by a massive postponement of marriage and accompanied by rapid reductions in marital fertility during the 1950s. The main method of fertility control in that country was abortion which had been legalized in 1948 as a result of public pressure rather than as part of a government policy to reduce fertility.

During the late 1950s and early 1960s, the populations in the so-called city states of Hong Kong and Singapore as well as in the Republic of Korea, Taiwan Province of China and Thailand were either starting on the path towards rapid fertility decline, or at least were at a stage which would foster a reduction in fertility once contraceptive methods were made available. Several other countries followed about a decade later, notably China and Indonesia, where population policies were backed by rigorous family planning programmes, especially in China with enforcement of its one-child family policy. By the mid-1980s, most countries in eastern and south-eastern Asia had, or had nearly, completed the transition from high to low fertility.

The transition in those subregions transcended political, economic, cultural and religious boundaries. It occurred in poor agricultural settings at lower levels of development and, more predictably, in newly industrializing economies. Culture, and through it the values attached to children, also supported the fertility transition in eastern and south-eastern Asia, although some cultural settings were more conducive to fertility regulation than others.

#### Population policies and family planning programmes

Supply side factors, in particular population policy and family planning programmes, played a major part in the fertility transition of eastern and south-eastern Asia. In sharp contrast with the earlier European fertility decline was the role played by government leadership through population policy, and particularly government-led family planning programmes. The latter not only played a supportive role in helping to accelerate fertility declines but, in several countries, also brought them about. National programmes made a substantial contribution to increasing contraceptive use, lowering fertility and slowing population growth. Governments, supported by bilateral and multilateral donors and especially the United Nations Population Fund (UNFPA), took the lead in promoting and providing family planning services. This was in part because slower population growth and improved social welfare of the people were high on their development agenda, and in part because there was no alternative structure with sufficient resources to finance and administer the programmes.

However, the role and importance of policies and programmes was by no means the same throughout eastern and south-eastern Asia. Thus, in Indonesia, as in China, the government provided firm leadership in support of its family planning programme and ensured that it was promoted and encouraged at all administrative levels. Indonesia became the first predominantly Muslim society to undergo substantial fertility decline. By contrast, in Thailand, government leaders were less closely involved in actively promoting family planning, relying more on simply making the means available and thereby catering to what has been described as a "latent" demand for family planning (Knodel and others, 1987). The method, or method mix, varied widely among countries and was mainly determined by a combination of programme provision, cultural preferences and religious considerations.

In multi-ethnic Malaysia, the relatively slow fertility transition of the Malays has contrasted sharply with the rapid fertility decline among the Chinese and Indian communities. These contrasting trends have taken place in a context where the family planning programme has generally been low-key and where a pro-natalist policy has been in existence since the early 1980s (Leete, 1996).

On the demand side, the rapid decline in infant and child mortality helped to promote and reinforce the desire for smaller families. But the major factor affecting the demand for children was undoubtedly the spread and upgrading of schooling and the associated decline in levels of illiteracy among women of reproductive age. From the late 1960s onwards, governments throughout eastern and south-eastern Asia made major investments in education, particularly in primary education, as well as in health, especially rural health, programmes that also included the provision of clean water and improved sanitation.

#### The policy and programme experience of south-central Asia

Post-1950 economic and social development in south-central Asia has been much less pronounced than in eastern and south-eastern Asia, with the economic and social conditions of the people being much less favourable in general. Even today the people of south-central Asia still remain predominantly rural, and poverty levels, although well below those of 50 years ago, remain high. Rapid population growth has clearly put pressure on government budgets and lessened the ability of governments to increase social investments in education and health. Social progress has been relatively modest and substantial gender differences in schooling as well as in other spheres of life persist to a much more marked extent than in the countries and areas of eastern and south-eastern Asia. Thus, for example, in the late 1990s, only one quarter of all adult females in Bangladesh and Pakistan are literate, and just over one third are in India — proportions that are substantially lower than those for adult males in these countries (World Bank, 1998).

A strong son preference and discrimination against girls are deeply rooted in traditional agrarian modes of organization in patriarchal societies (Caldwell, 1982). Son preference tends to be strengthened where girls leave their parents' home at marriage and do not inherit land or property as is the case in much of south-central Asia. In parts of that subregion, the plight of girls may well have worsened in recent years in situations where couples feel increasingly constrained to have fewer children than in the past (Korea Institute for Health and Social Affairs and UNFPA, 1996). Thus, there has been increasing evidence in parts of south-central Asia of female sex-selective abortion following foetal sex-detection tests, as well as wilful neglect of female babies in the provision of nutrition and medical attention.

Maternal mortality remains relatively high throughout much of south-central Asia, indicating weaknesses in the coverage and quality of reproductive health services, including family planning, particularly in rural areas. Significant proportions of mothers give birth without the presence — or even having seen — a skilled birth attendant, and are out of reach of emergency care to deal with obstetric complications. The lack of services, both human and physical, results in many avoidable maternal deaths, particularly in areas of extreme poverty.

### Fertility changes

While fertility reductions in south-central Asia have been much slower than in eastern and south-eastern Asia, there have been some impressive changes. Sri Lanka is the only country in the former subregion that has completed the transition to replacement-level fertility. The decline began in the 1950s, largely as a result of a rise in the age at marriage (especially of females), and subsequently through a fall in marital fertility as a result of increased contraceptive use.

By the end of the 1990s, women in Bangladesh and India are having an average of three children, so these countries are well on the road to eventually reaching the population replacement level. However, the relatively recent, and largely unexpected, rapid fertility decline in Bangladesh since the early 1980s contrasts sharply with the much steadier change that has occurred in India. Initial scepticism about the magnitude of the fertility decline in Bangladesh, given its limited socio-economic development, has been swept aside by evidence from Demographic and Health Surveys in the 1990s showing increasing use of modern methods of contraception, with contraceptive prevalence rates above 50 per cent (Mitra and others, 1995 and 1997).

By contrast, fertility levels in Pakistan and Nepal remain high, with women bearing an average of five children during their lifetime. A key factor in the maintenance of high fertility in both countries appears to be the neglect of women's education and their general low status, together with a large unmet need for reproductive health services: a significant proportion of sexually active women want to avoid or postpone pregnancy, but do not use contraception. While the family planning programme of Pakistan has a long history, nearly as long as that of India, it has been conspicuous by its lack of impact and it contrasts sharply with the successful programme of Bangladesh, which has been able to overcome traditional barriers. The programme in Pakistan has suffered from a lack of consistent political support and policy focus, coupled with a weak social enabling environment, including insufficient resources.

Family planning programmes in south-central Asia have traditionally placed more emphasis on permanent rather than reversible methods, particularly female sterilization, but less so recently, especially in Bangladesh and Nepal. The emphasis on one-time methods is based on the consideration that they require little follow-up with acceptors, are not user-dependent for success and are logistically convenient to deliver (Caldwell and Caldwell, 1996). Serious resource limitations have constrained attempts to widen choices and improve quality of care.

### Challenges as the new millennium dawns

Asia's reproductive revolution has undoubtedly been one of the most significant and far-reaching changes in human behaviour of the second half of the twentieth century. Undoubtedly, population policy was the driving force, affecting both the magnitude and speed of changes. Within diverse socio-economic contexts, Asian cultures and religions were generally receptive to the spread of contraception. The success of family planning programmes was, of course, frequently supported by positive changes in the demand for children.

But the Asian demographic miracle cannot be taken for granted, as the initial impact of the recent financial and economic crisis has shown. The crisis, which began in mid-1997, caused an interruption and reversal of the region's remarkable development gains. The effects of the crisis differed sharply. They were most marked in Indonesia, following one of the most dramatic economic collapses of this century, and also serious in Thailand. Elsewhere, and reflecting the interdependence of countries in the global economy, even those countries not directly affected experienced indirect effects as a result of loss of trade and investment, for example. Economic downturns often tend to affect the social sectors disproportionately. Declining exchange rates and substantial reductions in government budgets curtailed reproductive health programmes, including family planning programmes, and set back efforts to tackle quality of care dimensions (UNFPA and ANU, 1998). In brief, the crisis exposed the vulnerability of the social sectors in the poorer Asian countries. Strengthening the provision of basic social services, particularly for the Asian poor, will remain a challenge into the next century.

Population problems still persist in several parts of Asia. Given that the demand factors for reducing family size are not there, governments will need to remain involved in population programmes. Numerous surveys



conducted in Asian countries show that there is considerable evidence of unmet need for family planning information and services. Substantial proportions of women with three or more living children want to stop childbearing. In order to meet this substantial unmet demand, there is a need to increase access, that is, to expand the number of facilities and trained personnel providing relevant services. Programmes should respond to the needs of individuals, promote sustainability and, much more than in the past, take into account gender perspectives, including male involvement.

Adolescent reproductive health continues to be a difficult issue for many Asian societies to address (UNFPA, 1999). Sometimes education and services for unmarried people are considered too sensitive for government agencies to tackle. The key actions for the further implementation of the ICPD Programme of Action, agreed by governments at the ICPD+5 review in mid-1999, underline the importance of providing information and services to meet the reproductive and sexual health needs of adolescents (United Nations, 1999).

At the threshold of the twenty-first century, many Asian countries have low and even sub-replacement fertility levels and, with the rapidly changing population dynamics under way, new problems associated with the ageing of populations are beginning to emerge. Because the majority of the world's older persons are living in Asia, issues relating to population ageing are now justifiably attracting increasing policy attention.

Finally, the need to monitor development progress in general, and population programmes in particular, is increasingly being recognized by all stakeholders. The establishment of goals, targets, benchmarks and milestones, including in areas such as HIV/AIDS, will help to provide an impetus for Asian countries to realize the vision of the 20-year ICPD Programme of Action.

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One aspect of the ESCAP region's unusually steep mortality decline has been the success of its fertility transition, assisted by national family planning programmes

The ESCAP region is of prime demographic interest partly because it is the home of over half the world's people. But it is also of development and demographic importance because large parts of the region have been unusually successful over the last half century in economic growth, the control of fertility and the reduction of mortality. Clearly, these phenomena are interrelated, but they probably all also owe something to the stability over this period of most of the constituent nation states and to the quality of the national leadership.

This was not always so. In the period 1950-1955/ all ESCAP subregions, except for the countries Australia and New Zealand, exhibited life expectancies at birth around 20 years below those of Latin America, while the mortality situation in the Melanesian area of the Pacific subregion closely resembled that of Africa (see table 2). By the period 1995-2000, Melanesia's life expectancy was 10 years longer than Africa's, while those of eastern Asia, and Polynesia and Micronesia in the Pacific subregion were above those of Latin America. Indeed, by this time, Australia and New Zealand exhibited the world's highest regional life expectancy, while eastern Asia, Polynesia and Micronesia were approaching the life expectancy of Europe. This had been achieved against considerable economic odds, for eastern Asia's per capita income was still only one third that of Europe (and Polynesia's and Micronesia's were one seventh), while only eastern Asia and Australia/New Zealand were richer than Latin America. This article will chart this historic change, but will first examine an earlier period in the region's history.

#### The ESCAP region before 1950

Drawing on an increasing volume of Asian demographic history (cf. Liu, forthcoming, and especially its summary, Caldwell, forthcoming a), it appears that life expectancy in China and India was probably around 25 years in the nineteenth century, and, even in Japan, under 30 years until about 1875. This compares with a rise in England from around 35 years in the 1730s to 40 years in the 1830s (Wrigley and Schofield, 1981:230-231). One reason was the great population densities of China, India and Japan, which facilitated the rise and spread of epidemic diseases. Indeed, the most devastating epidemics in Europe had always originated in Asia. The other reason was poverty. A comparison (in standard US dollars) shows that, although per capita income in Japan in 1820 was around half that of Britain, the United States and Australia at that time, it dropped behind in the course of the century to about one quarter of their level in 1900 where it still remained in 1950 (Maddison, 1995).

One measure of Asia's emergence from the era of high mortality is provided by the attainment of a life expectancy of 50 years, which was certainly regarded at the beginning of the twentieth century as "good health for all". Table 1 shows that among the only three countries in the world to have attained that level of mortality before the end of the nineteenth century, two of them, Australia and New Zealand, were ESCAP countries. The table also shows that a life expectancy of 50 years was attained in Japan in 1945, followed, after a gap of another decade, by a succession of ESCAP countries. More importantly, Asian countries usually achieved low mortality at unusually low per capita income levels. After 1960, this benchmark was reached in Asia, with annual per capita incomes (in 1990 US dollars) below \$1,000, and as low as \$620 in Bangladesh, compared with higher income levels in many Latin American and African countries.

Table 1. Impact of real per capita GDP on the attainment of a life expectancy of 50 years

Country	Life expectancy of 50 years	
	Date achieved <sup>a</sup>	Per capita GDP (in 1990 Us dollars) <sup>b</sup>
New Zealand	1881	3,800
Sweden	1895	2,200
Australia	1898	4,000
United States	1900	4,100
Netherlands	1902	3,500
United Kingdom	1905	4,500
France	1908	3,400
Japan	1945	2,000
Chile	1945	3,600
Brazil	1950	1,600

Mexico	1952	2,200
Republic of Korea	1955	1,200
Thailand	1958	950
Turkey	1960	1,800
China	1963	770
Egypt	1967	870
Morocco	1969	1,800
India	1970	880
Kenya	1970	900
Ghana	1973	1,260
United Republic of Tanzania	1978	690
Bangladesh	1983	620
Nigeria	1995	1,100

a Nathan Keyfitz and Wilhelm Fileger, 1968. *World Population: An Analysis of Vital Data* (Chicago, Chicago University Press); United Nations, 1999. *World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables* (New York, United Nations); and Ian Pool, 1985. "Mortality Trends and differentials" in *Population of New Zealand, Country Monograph 12* (New York, United Nations), vol. 1, p. 242.

b Angus Maddison, 1995. *Monitoring the World Economy, 1821-1992* (Paris, Development Centre, OECD).

Note: Table derived from John C. Caldwell, "Pushing back the frontiers of death", Academy of the Social Sciences in Australia Cunningham Lecture for 1999.

Evidence of what caused the high death rates of the nineteenth and early twentieth centuries has been summarized in many of the ESCAP Country Monograph series (ESCAP, 1974 and later dates). In New Zealand, in 1876 when life expectancy was around 50 years, diarrhoea accounted for 11 per cent of deaths, tuberculosis for 9 per cent, other respiratory diseases for 11 per cent, and all other infectious diseases for 17 per cent (ESCAP, 1985:227-229). Together, these four categories explained 48 per cent of all deaths, compared with 13 per cent for degenerative diseases (e.g. cancer and heart disease) and 9 per cent for accidents and violence. The proportion of deaths from infections and contagious sources fell to 13 per cent by 1945 and 10 per cent by 1976. By the latter date, deaths from tuberculosis, diarrhoea and other infections had almost disappeared and only the other respiratory diseases were significant causes of death. What remained was mostly degenerative disease, rising from 13 per cent in 1876 to 66 per cent in 1945 and 72 per cent in 1976. Accidents and violence continued to account for about one death in twelve. The Australian statistics are similar and enable an examination by age (ESCAP, 1982:167-170). In 1870, degenerative and respiratory diseases were particularly important among the old; diarrhoea and diphtheria among the young; and violence and accidents among young to middle-aged adults. By 1920, tuberculosis was a major killer of adolescents and young adults, accounting for almost one quarter of deaths in the 15-44 age range.

In Sri Lanka, neonatal and maternal deaths, caused by tetanus and poor midwifery respectively, were major causes of death in the later nineteenth century (ESCAP, 1976:138). In 1945, infectious and parasitic diseases, tuberculosis and other respiratory diseases, together with diarrhoea and dysentery, still accounted for 37 per cent of deaths, but fell to 19 per cent by 1965 (ESCAP, 1976:145). Deaths from malaria fell from 6 per cent to negligible levels. In Korea, infectious diseases accounted for 51 per cent of deaths in 1933, 53 per cent in the period 1935-1937, but, in 1966 in the Republic of Korea, for only 30 per cent of deaths (ESCAP, 1975:180). In Hong Kong, in 1946 when war-induced conditions in the new shanty towns probably presented a picture of health conditions early in the century, the major causes of death were, in order, pneumonia, tuberculosis, beri-beri, smallpox and diarrhoea (ESCAP, 1974:75). In 1951, infectious, parasitic, respiratory and intestinal diseases still accounted for 66 per cent of deaths (tuberculosis alone for 17 per cent), but these causes declined to 52 per cent in 1956 and 28 per cent in 1970. At the same time, deaths from degenerative diseases rose from 10 per cent in 1951 to 44 per cent in 1970. In Japan, tuberculosis, other respiratory and intestinal causes of death fell from 31 per cent in 1935 to 6 per cent in 1979, while degenerative diseases rose from 19 to 58 per cent (ESCAP, 1984:53). Between 1946 and 1972, in the Philippines, infectious diseases, as a cause of death, fell from almost 60 to 26 per cent (ESCAP, 1978:106). In the 1950s, in Cook Islands in the Pacific, tuberculosis, diarrhoea and dysentery were the major causes of death (ESCAP, 1983:112). Everywhere tuberculosis was a major killer but nearly everywhere it has been defeated, partly by rising living standards.

The overall picture is clear. In most of Asia, mortality has been falling throughout this century as a result of the conquest of infectious diseases. Ever greater proportions of those born have consequently survived to old age when, still largely protected from infectious disease, most people inevitably succumb to degenerative disease. The earliest successes were not achieved by medical "magic bullets" but by the ability of modern transport to alleviate famine by getting food to the affected areas and by sanitary engineering and strong administration. In the late 1890s, the Japanese military administration in Formosa (now Taiwan Province of China) conquered plague through deep burial, house burning and rat catching (Liu and Liu, forthcoming). Similar systematic methods were used against malaria, along the lines that the British administration had pioneered in Malaya, but success took longer to achieve. Carr-

Saunders (1936) and Notestein and colleagues in the early 1940s (see Caldwell and Caldwell, 1986:9-17) analysed mortality data and concluded that a persistent mortality decline and a consequent increase in the population growth rates could be shown to have occurred in many colonies. Within the ESCAP region, they drew particular attention to the British colonies, Ceylon (Sri Lanka) and India, the Dutch East Indies (Indonesia), especially Java, the American activities in the Philippines, and those of the Japanese in Formosa (Taiwan Province of China), Korea and Manchukuo (Manchuria) in China.

Mortality was almost certainly declining in most of the ESCAP region by the 1930s, only to be interrupted in many cases by the Second World War. In the years immediately after the war, huge gains in life expectancy were achieved, apparently in most countries. The exact size of these advances is not clear because most Asian countries did not have vital registration systems and those that had existed were not functioning at the end of the war. Over a few years, gains of 10 or more years in life expectancy took place in Japan and Sri Lanka, and perhaps much more widely, as is suggested by the demonstration of similar gains in a part of India, i.e. Ludhiana (modern-day Punjab State), where there was a demographic record-keeping system (Dyson and Das Gupta, forthcoming). The reasons are complex: overcoming the lag of the war years; antibiotics and powerful pesticides; a new international system; changes first implemented in the 1930s coming to fruition; and a new determination by colonial administrations and the colonized people that health and social welfare should be placed higher on the political agenda as independence approached.

Two examples illustrate what could happen and suggest some of the forces that may have become stronger in the last 50 years. Between 1946 and 1953 Sri Lanka's life expectancy jumped 12 years, and between 1956 and 1971 that of Kerala State in India also increased by 12 years. A study (Caldwell, 1986) of these achievements concluded that the gains had been achieved because the societies were, by South Asian standards, well educated and fairly egalitarian, with women empowered to an unusual degree. Radical governments had introduced into this setting a democratic health system which provided free services throughout the society and made provision for all women to give birth in a health institution. The health providers tried hard to understand the needs of the poor, uneducated or inarticulate at least in the early days of revolutionary fervour. Poor provider performance met remonstrance in Sri Lanka through the political process, and in Kerala, through both that process and protest demonstrations at health centres. This interpretation suggests two powerful forces in the health improvements in Asia during the period 1950-2000 that led to a convergence of female and male levels of life expectancy: the steep rises in educational levels and the gains for women's empowerment achieved in most of the ESCAP region (cf. Knodel and Jones, 1996). All accounts of Sri Lanka's successful struggle with mortality have stressed the importance of its people's unusual sensitivity to the threat of sickness and death (cf. Caldwell and others, 1989; Pieris, 1999), and the situation seems to have had parallels in Kerala. Health transition studies have emphasized the importance for improved health and reduced mortality risk when societies transform themselves to regard death as the worst possible outcome, qualitatively different from all other outcomes, and to make individuals feel that they themselves have to do their utmost to minimize mortality risks that affect themselves, their children, their spouses and others (Simons, 1989; Caldwell, forthcoming b). Such changes in culture are strongly promoted by education and by reduced mortality, the latter tending to make mortality declines self-sustaining. On both these counts, the ESCAP region has done well over the last half-century.

Caldwell (1986) also identified an alternative route to low mortality, the socialist one that had notable success in the Union of Soviet Socialist Republics in the 1920s and 1930s, and greater success in China, Cuba and Viet Nam during the last 50 years. Some of the mechanisms parallel those of Kerala and Sri Lanka: an emphasis on education, relatively large expenditures on democratic health services, and a stress on gender equality. To this can probably be added a belief that the treatment and health of children are the concern of the whole society and of party cadres, and not a monopoly of the family.

The struggle for good health, 1950-1955 to 1995-2000

As table 2 shows, in parts of the ESCAP region gains against mortality that have no precedent in history were made during this period. Before the twentieth century, the Swedish achievement of a gain in life expectancy of just under 0.2 years per elapsed year for the whole nineteenth century was unprecedented. In the first four decades of the twentieth century, Australia, France, Netherlands and the United States averaged 0.4 years, while Japan, New Zealand and Sri Lanka reached 0.3 years. But in the period 1950-1954 to 1995-2000, three subregions, alone in the world, maintained an average gain of 0.6 years per elapsed year: eastern Asia, south-eastern Asia and Polynesia in the Pacific subregion. Australia and New Zealand, as was the case in Europe and North America, started the period at a high level, i.e. almost 70 years, and, approaching a kind of asymptotic although slowly rising ceiling, managed only 0.2 years.

Table 2. Mortality change, major world regions and ESCAP subregions, 1950-1955 to 1995-2000

Regions, subregions and countries	Expectation of life at birth				Infant mortality rate (per thousand)		Per capita income
	1950-1955	1995-2000	Growth per annum	Female excess	1950-1955	1995-2000	(1997 US\$)

ESCAP							
Eastern Asia	42.9	71.0	0.6	4.6	181	38	4,580
South-central Asia	39.3	62.3	0.5	1.1	186	73	470
South-eastern Asia	40.5	65.7	0.6	4.1	154	46	1,610
Australia and New Zealand	69.6	78.0	0.2	5.7	24	6	15,663
Melanesia	38.0	61.0	0.5	2.3	171	53	941
Micronesia	49.7	69.4	0.4	3.8	116	34	1,920
Polynesia	45.9	71.6	0.6	4.8	148	17	2,196
Other regions:							
Western Asia	45.2	68.0	0.5	6.3	189	51	3,370
Africa	37.8	51.4	0.3	2.8	179	87	660
Latin America and Caribbean	51.4	69.2	0.2	6.5	126	36	3,950
Europe	66.2	73.3	0.2	8.2	72	12	13,890
North America	69.0	76.9	0.2	6.6	29	7	28,130

Source: United Nations, 1999. World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations), and Population Reference Bureau, 1999. World Population Data Sheet 1999 (Population Reference Bureau, Washington DC).

Note: The following are included in the "eastern Asia" subregion: China; Hong Kong, China; Democratic People's Republic of Korea; Japan; Macau; Mongolia; Republic of Korea. The "south-central Asia" subregion: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan; Uzbekistan. The "south-eastern Asia" subregion: Brunei Darussalam, Cambodia, East Timor, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand; Viet Nam. The "western Asia" subregion: Armenia, Azerbaijan, Bahrain, Cyprus, Gaza Strip, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates; Yemen.

The micro-level examination, namely at the national level, carried out in the appendix table shows that the achievement in the ESCAP region was rather more heterogeneous. In terms of average gains in life expectancy, two groups stand out.

The first group comprises those societies caught up in international conflicts or internal disorder. Even though they were among those countries with relatively low initial life expectancies, which mostly recorded 0.6 or 0.5 years annual gains, five societies achieved only 0.3-0.4 years: Afghanistan, Cambodia, East Timor, Lao People's Democratic Republic and Myanmar (although, interestingly, not Viet Nam). Their high mortality is the product not primarily of violent death but largely of the breakdown of government services, especially health services, along with conflict, the failure of the governmental reach to cover all parts of the population, and concomitant slow economic growth.

The second group comprises those countries which were formerly part of the Soviet Union. With a change in the political and economic systems, there has been a fall in real per capita incomes, but, more importantly, universal free health services have partly or wholly given way to private medicine and a free market in health provision. Thus, the whole period witnessed gains of 0.1-0.3 years of life expectancy per elapsed year in Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. There were earlier gains, similar to those of other countries in the ESCAP region, but these advances came to a halt and even reversed during the late 1980s and 1990s as the Soviet Union moved towards dissolution and then broke up. There are two outliers. The first is Mongolia, which appears to have successfully weathered the storm, and the second is the Russian Federation (with only a small part of its population in Asia) where the 45-year period has witnessed an actual decline in life expectancy, the product of a cessation of gains from the 1960s until the 1980s, and a subsequent drop in life expectancies of four years for males and two for females.

With these exceptions, the rest of the countries and areas followed the asymptotic curve. Where 1950-1955 life expectancies were under 45 years, the average annual gains from that period until 1995-2000 were mostly 0.6 years. Those that started in the 46-55 years range usually achieved 0.5 years; those beginning in the 55-61 years range achieved 0.3-0.4 years; and those starting with a life expectancy above 61 years achieved only 0.2 years.

Relative gains have been analysed by examining the changes in ranking order during the period. The two anomalous groups fell in ranking order, the strife-torn countries by six and nine ranks in the cases of Cambodia and the Lao People's Democratic Republic, while Afghanistan and East Timor remained at the bottom of the ranking and Myanmar actually gained one rank. The ex-Soviet Union central Asian countries typically fell 13-14 ranks. The great successes, with gains in ranking of over 10 places, were China, Democratic People's Republic of Korea, Macau, Republic of Korea, Samoa and Solomon Islands. The impressive successes, with gains in ranking of 5-10 places, were Bhutan; Fiji; Hong Kong, China; Indonesia; Islamic Republic of Iran; Malaysia; New Caledonia; and Turkey. Large countries with strong central governments and continuing economic growth did well. So did Pacific

island countries, partly because they have only sea borders, which makes it easier to wipe out infectious disease, partly because their populations are small and technical assistance can be highly effective, and partly because many have colonial or ex-colonial links that prove useful. Micro-states have tended to do rather well generally, and not solely in terms of mortality reduction (Caldwell, Harrison and Quiggin, 1980). Nevertheless, once the two anomalous groups are removed, the most powerful determinant of the mortality level in the period 1995-2000 is the mortality level achieved in the period 1950-1955. This arises not merely because of historical inertia, but because the cultural and social determinants of good health in the period 1950-1955 also determine health levels in the period 1995-2000. Thus, Sri Lanka, with a life expectancy of 57 years in the period 1950-1955 — far above that which could be anticipated based on its per capita income — reached 73 years by the period 1995-2000, only five years behind Australia with eight times Sri Lanka's per capita income (as measured by parity purchasing power).

Other factors play a role in determining mortality levels. One is the material living standard. Every country with a life expectancy below 66 years in the period 1995-2000 had a per capita purchasing power below \$3,500 (in 1997 US dollars), while every country with a life expectancy above 75 years had a per capita purchasing power above \$16,000. Nevertheless, the correlation is not strong. The correlation with the Human Development Index ranking is better as a determinant partly because of the inclusion of female education, but also because the correlation is not strictly valid in that the Index has life expectancy as a component. The proportion of girls in primary school is no longer a good guide because in most countries nearly all girls are in primary school. The outstanding exception is Pakistan where only 49 per cent of girls are in primary school compared with 80 per cent of boys — a situation not paralleled in Bangladesh or apparently in the Islamic Republic of Iran (statistics not shown in the appendix table). Life expectancy does rise fairly consistently with the proportions of girls in secondary school, and infant mortality declines even more consistently. A major mechanism is probably the impact of the education of mothers in ensuring the survival of their children.

An ambiguous measure is the proportion of GDP spent on health. It is not closely tied to mortality levels, apart from the fact that all but one (Singapore) of the rich countries with per capita purchasing power over \$15,000 spends more than 5 per cent of its GDP on health. There is, of course, a general rise in the absolute amount spent per person on health as per capita income rises. It is possible to single out specific countries. To take one example, Mongolia has probably not suffered mortality stagnation like most components of the former Soviet Union because it spends almost 5 per cent of its GDP on health (although Tajikistan spends over 6 per cent), and all, including Mongolia, have a high proportion of girls in secondary schools.

There are two ways of maximizing the possibilities of reducing mortality. One is to ensure that the full benefits of the female propensity to a longer lifespan are realized, and the other is to ensure that the relatively easy gains against infant mortality are achieved.

Female excess in life expectancy over males is likely to be greatest where life expectancies are high largely because at these levels the same proportionate excess will translate into greater absolute excess. Further, part of the explanation is that the failure to achieve lower female mortality has left the overall life expectancy low. This situation may explain the relatively small difference in life expectancy in high-mortality East Timor. The problem area is South Asia with its unique family system and its gender relations. The low level of female autonomy almost certainly leads not only to unnecessarily high female mortality but also to unnecessarily high child mortality. Maldives and Nepal still exhibit shorter female than male life expectancies, while in Afghanistan, Bangladesh, India, the Islamic Republic of Iran and Pakistan the female excess longevity is less than 2.5 years. Even now in South Asia, there is usually higher female than male mortality in childhood (but not in infancy because of the gender-blind supply of mother's milk) and again during the female reproductive years, the result of most childbirth taking place without expert care. Female life expectancy has caught up with that of males only because of lower mortality in old age. In contrast, female life expectancy currently exceeds that of males by over five years in Australia; Democratic People's Republic of Korea; Hong Kong, China; Japan; New Zealand; Republic of Korea; Turkey; and the whole of ex-Soviet North and Central Asia (with China likely to reach this situation soon). All these countries, except Australia, New Zealand and those in North and Central Asia, have increased their life expectancy rankings over the last half-century, and the substantial gains against female mortality have been a key factor. Unexpectedly, even the Muslim countries of the ex-Soviet Asia exhibit, as does the Russian Federation, unusually higher female than male levels of life expectancy, ranging from 6.0 to 9.7 years. In the Russian Federation, one cause is alcohol "binge drinking" among males, and perhaps this occurs too in parts of North and Central Asia.

Infant mortality is still unduly high when compared with adult mortality in a range of ESCAP countries, notably Pakistan and the North and Central Asian countries. In Pakistan, the major explanation is probably the low level of maternal education, but this can hardly be the explanation in well-educated ex-Soviet Asia.

The future

Table 3 shows that, based on United Nations population projections, all ESCAP subregions will probably attain good health for all by the 2040s, with even the south-central Asia subregion and Melanesia in the Pacific subregion having attained life expectancies of 75 years. For individual countries, the picture is more heterogeneous, with Afghanistan's life expectancy expected to be only 66 years in contrast to 84 years in Japan.

Table 3. United Nations projections of expectation of life at birth, 1995-2000 to 2040-2050

<b>Countries, areas and subregions</b>	<b>1995-2000</b>	<b>2040-2050</b>
Australia/New Zealand	78.0	82.4
Polynesia	71.6	79.7
Eastern Asia	71.0	79.1
Micronesia	69.4	78.1
South-eastern Asia	65.7	77.1
Melanesia	61.0	75.2
South-central Asia	62.3	75.0
Selected countries		
Afghanistan	45.5	66.4
Lao People's Democratic Republic	53.2	72.5
Cambodia	53.4	71.5
Nepal	57.3	74.5
India	62.6	74.6
China	69.8	78.7
Japan	80.0	83.6

Source: United Nations, 1999. World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations).

Note: The following are included in the "eastern Asia" subregion: China; Hong Kong, China; Democratic People's Republic of Korea; Japan; Macau; Mongolia; Republic of Korea. The "south-central Asia" subregion: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan; Uzbekistan. The "south-eastern Asia" subregion: Brunei Darussalam, Cambodia, East Timor, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand; Viet Nam.

While the situation almost half a century hence will probably prove to be satisfactory, the real problem is reducing mortality and sickness at an earlier period. Projections do not determine the future, but merely record what will happen if past trends persist. The aim is to do better, and some of the evidence presented in this article suggests ways of doing this.

Three other aspects of the future should be addressed. The first is the achievement of small family size. One aspect of the ESCAP region's unusually steep mortality decline has been the success of its fertility transition, assisted by national family planning programmes. This has lowered female mortality during the reproductive span and made parents more determined that their small families should survive. Their success in this endeavour has strengthened the likelihood of further fertility decline. Only Afghanistan, Bhutan, the Lao People's Democratic Republic and Maldives have total fertility rates above five children per woman, although Cambodia and Pakistan are only just below this level (ESCAP, 1999). The second aspect is the tremendous growth of cities in the region. In 1996, the ESCAP region's urban population constituted about 33 per cent of its total; by 2025, the urban population will constitute the majority (United Nations, 1998). Of the world's 30 largest metropolises, in 1950 seven were in the ESCAP region; currently 15 are, and by 2015, 19 will be, with the largest of the cities approaching 30 million inhabitants. This might not be so serious were it not for the increasing atmospheric pollution in many of Asia's large cities, and the recent demonstration that the period of relatively low mortality in third world cities is probably passing: in the future, as in nineteenth-century Britain, such cities may be "the killers of men" (Brocknerhoff and Brennan, 1998). The third aspect is that we do not yet know the mortality implications of the AIDS epidemic for the ESCAP region. The current situation is not that of sub-Saharan Africa: by the end of 1997, 7.4 per cent of the adults of sub-Saharan Africa were HIV-positive and the level rose to 10 per cent in eastern and southern Africa. In contrast, the levels were 0.61 per cent in South and South-East Asia, 0.11 per cent in Australia and New Zealand, and 0.05 per cent in East Asia (UNAIDS and WHO, 1998). In individual African countries, levels rose to 26 per cent in Zimbabwe and 25 per cent in Botswana, compared with the upper limit of just over 2 per cent in Cambodia and Thailand in the ESCAP region. Furthermore, Asia may be able to contain the epidemic (Caldwell, 1995).

The lessons from the history of the health and mortality transition of countries in the ESCAP region are fairly clear. Mortality decline can be accelerated by successful policy implementation. The formula is the following:

1. Educate as many children as the economy can stand for as long as possible, and make sure that girls are at least as well-educated as boys.
2. Extend free or cheap, easily accessible health services throughout the society.
3. Ensure that there is adequate and trained care for all births, preferably by ensuring that the births take place in health institutions.



4. Encourage the empowerment of women, especially in their ability to make health decisions with regard to themselves and their children.
5. Encourage grassroots democracy, especially in local action ensuring the optimum operation of the health service.
6. Build better and more comprehensive family planning programmes with an increasing emphasis on reproductive health.
7. Combat city pollution and bring health care to the city slums.
8. Take action against the AIDS epidemic while it is in its early stages.
9. Encourage economic growth.
10. Keep the peace.
11. Continue all public health programmes, including immunization, water and sanitary programmes.

Most ESCAP countries have reached the position where they can address this whole programme, which, if carried out, will ensure not only better health but also a better quality of life for the people.

#### Acknowledgements

The author would like to thank Wendy Cosford and Elaine Hollings for their assistance in preparing this article.

#### Endnote

1. Estimates are from United Nations (1999), throughout the article.

Appendix table. National mortality levels, 1950-1954 to 1995-2000, and related measures

Country/area	Expectation of life at birth (years)							Infant mortality rate (per thousand)		Socio-economic measures (late 1990s)			Female education: percentage of age group in:	
	1950-1955		1955-2000		Change in rank 1950-1955 to 1995-2000	Average annual increase 1950-1955 to 1995-2000 <sup>a</sup>	Female excess over male life expectancy 1995-2000	1950-1955	1995-2000	Parity purchasing power per capita (US\$)	HDI <sup>b</sup>	Percentage of GDP spent on health 1990-1995	Primary school	Secondary school
	Rank		Rank											
East Timor	30.0	1	47.5	2	+1	0.4	1.7	264	135	-	-	-	-	-
Afghanistan	31.6	2	45.5	1	-1	0.3	1.0	227	151	-	0.37	-	-	-
Papua New Guinea	35.1	3	57.9	6	+3	0.6	1.5	190	61	2,390	0.51	2.8	67	10
Bhutan	35.2	4	60.7	9	+5	0.6	2.5	191	63	-	0.35	-	-	-
Nepal	36.3	5	57.3	5	0	0.5	-0.5	210	83	1,090	0.35	1.2	87	23
Bangladesh	36.6	6	58.1	7	+1	0.5	0.1	180	79	1,050	0.37	1.2	105	12
Myanmar	36.9	7	60.1	8	+1	0.4	3.3	206	79	-	0.48	-	-	-
Indonesia	37.5	8	65.1	13	+5	0.6	3.7	160	48	3,450	0.68	0.7	112	39
Lao People's Democratic Republic	37.8	9	53.2	3	-6	0.3	2.5	180	93	1,290	0.47	1.3	92	19
India	38.7	10	62.6	10	0	0.5	0.6	190	72	1,650	0.45	0.7	91	-
Maldives	38.9	11	64.5	12	+1	0.6	-2.4	185	50	3,230	0.68	-	-	-
Pakistan	38.9	11	64.0	11	0	0.6	2.2	190	74	1,590	0.45	0.8	49	-
Cambodia	39.4	13	53.4	4	-9	0.3	3.5	165	103	-	0.42	0.7	46	-
Viet Nam	40.4	14	67.4	18	+4	0.6	4.7	180	38	1,670	0.56	7.1	-	-

China	40.8	15	69.8	27	+12	0.6	4.1	195	41	3,570	0.65	2.1	116	51
Vanuatu	42.0	16	67.4	18	+2	0.6	4.7	169	39	3,020	0.56	-	-	-
Mongolia	42.3	17	65.8	15	-2	0.5	2.9	148	51	-	0.67	4.8	-	87
Turkey	43.6	18	69.0	25	+7	0.6	5.2	233	45	6,430	0.78	2.7	98	48
Samoa	44.0	19	71.3	30	+11	0.6	4.3	158	23	-	0.69	-	-	-
Solomon Islands	44.0	19	71.7	31	+12	0.6	4.2	156	23	2,350	0.56	-	-	-
Islamic Republic of Iran	46.1	21	69.2	26	+5	0.5	1.5	190	35	5,530	0.76	-	-	-
Thailand	47.0	22	68.8	24	+2	0.5	6.2	132	29	6,590	0.84	1.4	97	37
Democratic People's Republic of Korea	47.5	23	72.2	34	+11	0.5	6.2	115	22	-	0.77	-	-	-
Republic of Korea	47.5	23	72.4	35	+12	0.6	7.5	115	10	13,500	0.89	1.8	102	92
Philippines	47.5	23	68.3	23	0	0.5	3.7	100	35	3,670	0.68	1.3	-	-
Malaysia	48.5	26	72.0	33	+7	0.5	4.4	99	11	10,920	0.83	1.4	93	61
French Polynesia	48.8	27	71.7	31	+4	0.5	5.3	132	11	-	-	-	-	-
Turkmenistan	53.0	28	65.4	14	-14	0.3	7.0	115	55	1,410	0.66	2.8	-	-
Macau	54.0	29	77.7	43	+14	0.5	5.0	100	10	-	-	-	-	-
Fiji	55.2	30	72.7	37	+7	0.4	4.3	88	20	4,040	0.87	-	-	-
Kyrgyzstan	55.4	31	67.6	21	-10	0.3	8.6	95	40	2,040	0.63	3.7	-	-
New Caledonia	55.4	31	72.5	36	+5	0.4	7.1	93	11	-	-	-	-	-
Tajikistan	55.7	33	67.2	17	-14	0.3	6.0	110	57	930	0.58	6.4	-	-
Uzbekistan	56.4	34	67.5	21	-13	0.3	6.4	98	44	2,450	0.66	3.5	79	92
Kazakhstan	56.5	35	67.6	21	-14	0.2	9.7	85	35	3,290	0.70	2.2	86	91
Sri Lanka	56.6	36	73.1	38	+2	0.4	4.5	91	18	2,460	0.72	1.4	105	78
Guam	59.0	37	75.0	39	+2	0.4	4.4	47	10	-	-	-	-	-
Brunei Darussalam	60.4	38	75.5	40	+2	0.3	4.7	68	10	-	0.89	-	-	-
Singapore	60.4	38	77.1	42	+2	0.4	4.4	66	5	29,000	0.90	2.8	-	-
Hong Kong, China	61.0	40	78.5	45	+5	0.4	5.6	79	6	24,540	0.91	-	-	-
Azerbaijan	61.3	41	69.9	28	-13	0.2	8.6	68	36	1,520	0.62	-	87	88
Japan	63.9	42	80.0	46	+4	0.4	6.1	51	4	23,400	0.94	5.8	102	97
Armenia	64.8	43	70.5	29	-14	0.1	6.4	50	26	2,280	0.67	-	93	90
Russian Federation	67.3	44	66.6	16	-28	0	12.2	98	18	4,190	0.77	3.5	107	91
Australia	69.6	45	78.2	44	-1	0.2	5.6	24	6	20,170	0.93	5.5	107	86
New Zealand	69.6	45	76.9	41	-4	0.2	5.6	26	7	16,600	0.94	5.8	101	104

Source: United Nations, 1999. World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations); ESCAP, 1999. 1999 ESCAP Population Sheet (Bangkok, ESCAP); World Bank, 1997. World Development Report 1997 (New York, Oxford University Press); and World Bank, 1999. World Development Report 1998/99 (New York, Oxford University Press).

a Linear increase

b Human Development Index

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The Demography of Asian Ageing: Past Accomplishments and Future Challenges For Asia, population ageing lies almost entirely ahead

By John Knodel \*

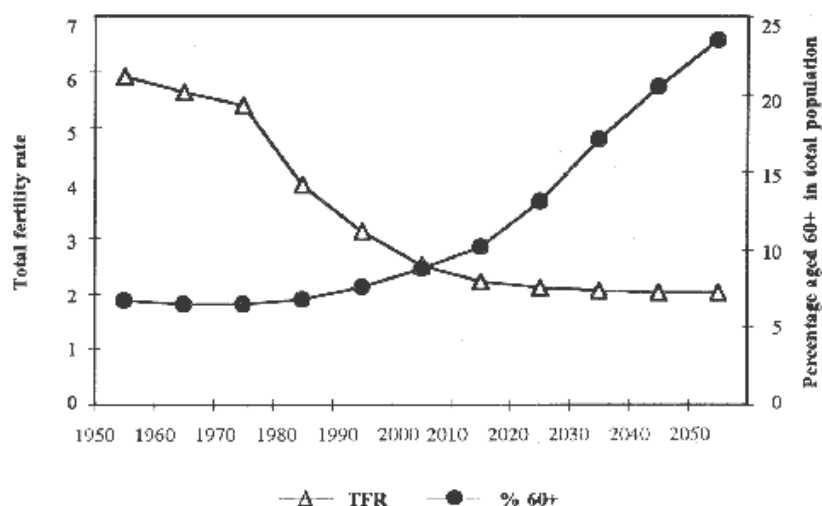
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While rapid population growth, resulting from high fertility combined with lowered mortality, has been the major demographic issue of public, political and scientific concern in much of Asia during most of the last half century, population ageing is poised to replace it as the major demographic preoccupation in the twenty-first century (Lutz, Sanderson and Scherbov, 1997). Figure 1 makes clear why this is so. The last half of the twentieth century, especially the last three decades, has been marked by rapid fertility decline. According to the latest United Nations estimates and projections, by the year 2000, the total fertility rate (TFR) declined to 2.5 births per woman, or to just 43 per cent of its 1950 level of 5.9, and only a modest additional reduction is projected over the next 50 years. In contrast, population ageing, as measured by the percentage of the total population aged 60 and older, has only just begun to increase by the year 2000, but will rise rapidly over the next half-century.

These two phenomena, the decline of fertility and the consequent population ageing that follows, are likely to be seen as the most significant demographic developments in Asia during the past half century and the next half century to come.<sup>1/</sup> The implications of both for social and economic life are far-reaching and profound. Despite the fact that the two phenomena are inextricably linked, with the reduction in birth rates driving the ageing of the population, they are typically viewed quite differently by government planners and policy makers. Most countries in Asia not only welcomed lower fertility but actively encouraged it through supporting family planning programmes and related measures. In contrast, population ageing and associated increases in the numbers of older persons are viewed unfavourably, mainly because they are perceived as posing growing burdens for economic support and health care, and thus as a "crisis" to be averted (World Bank, 1994).<sup>2/</sup>

Demographic research is already shifting its emphasis in line with the trends shown in figure 1. Fertility and related topics, especially family planning, have been the dominant themes over much of the period from the 1960s to the early 1990s. Starting in the 1980s, however, researchers concerned with population matters have increasingly directed attention towards ageing. The goal of the present article is to review some of the accomplishments of demographic research on Asian ageing so far and discuss some of the challenges that it will face in the coming decades of the new century. Although there are other important disciplinary approaches to the study of ageing, the focus of this review on demography is intentional.<sup>3/</sup> Not only has the demography of ageing been among the most dynamic areas for research in recent years but presumably it is also of primary interest to readers of population journals.<sup>4/</sup>

Figure 1. Fertility decline and population ageing, Asia, 1950-2050



Source: United Nations, 1999. World population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations).

Note: TFR for 1950 equals that for the period 1950-1955 and the TFR for 2050 equals that for 2040-2050. TFRs for other years are calculated as the mean of the TFRs for two adjacent periods that include the year in question.

### Basic demographic analysis

Research on the demography of ageing for Western countries has been under way for quite some time, reflecting their earlier demographic transitions and more advanced stages in the associated process of population ageing. Except for anthropological studies dealing with the position and role of elders in society, research on ageing for developing countries, including most of Asia, is much more recent, taking off only in the 1980s. Initial efforts focused on the basic demographic parameters of the situation, typically relying on analysis of census data and population projections (Martin and Kinsella, 1994). The United Nations has played a prominent role in promoting such work globally as well as specifically within Asia (e.g. ESCAP, 1987; United Nations, 1988, 1994, 1999b).<sup>5/</sup> The United States Census Bureau is also an early and continuing contributor to this effort (e.g. Torrey, Kinsella and Taeuber, 1987; Kinsella, 1988). These basic demographic analyses have been instrumental in raising awareness of ageing as a policy and research issue both regionally and within individual countries. Most planners in the region are now conscious of the inevitability and predictability of growing numbers and proportions of older persons that will characterize the future. Many also realize that, when the time comes, the pace of ageing will be faster than has historically been the case in the West (owing to the faster pace of fertility decline in Asia) and that this will make accommodation more difficult (Jones, 1993).

A comparison of some aspects of the Asian and the Western experience with population ageing as it occurred over the last half-century and is anticipated to occur during the next 50 years is presented in table 1. Projected results for the first half of the twenty-first century are, of course, speculative and based on assumptions that may not be fulfilled.<sup>6/</sup> While the percentage of the population aged 60 and older increased considerably during the last half-century in the West, for Asia population ageing lies almost entirely ahead. The West, however, still has substantial additional ageing to come. In fact, as measured by the increase in the percentage of the total population that is aged 60 and older, the pace of ageing during the next 50 years will not be so different from that in Asia, although occurring from more advanced levels (the West will experience a 13 percentage point increase compared with a 15 percentage point increase in Asia).

Where the main difference occurs is in the far faster growth of the older population itself in Asia compared with the West. This has already been the case for the last quarter of the twentieth century and will continue to be so at least for the next half-century to come. Over the last 25 years, the number of Asian elders has more than doubled and will do so again over the next 25 years. For the period between 2025 and 2050, the population of Asians aged 60 and older is anticipated to increase by more than 75 per cent. In contrast, the increases in Western elders are occurring in far lesser proportions. In both settings, the growth of the population 60+ is outstripping the growth of the population in the main working ages (15-59). Thus, over the coming 50 years, the ratio of the prime working-age population to their seniors in the population will be cut by almost two thirds in Asia (from 7.0 to 2.5) and more than half in the West (from 3.3 to 1.6). It is this latter trend that raises concerns about the ability of governments and families alike to support elders, especially those who are no longer economically active.

Two features of the Asian ageing process that are less marked than in the Western experience are the ageing of the elderly themselves and the feminization of their sex composition. Both of these features have been highlighted in the demographic analysis of the Western experience and are matters of concern. Given that economic dependence and health problems, especially dementia, generally increase with age, the ageing of the elderly is worrisome owing to the increasing level of familial and government assistance they will require. Likewise, an excess of women over men at older ages is typically viewed as problematic since it reflects high levels of widowhood and because elderly women, and especially those without spouses, are thought to suffer a greater disadvantage than elderly men. As table 1 shows, the share of persons 60 and older who are 75 and older in the West has grown substantially during the last half-century and is projected to reach over two fifths by the middle of the twenty-first century. While the elderly population in Asia is also ageing, the extent of the process will remain well below that evident for the West during the same time. In both regions, there are also more elderly women than men. However, throughout the century covered in table 1, the sex imbalance is less in Asia and overall is rather modest.

Table 1. Some comparative statistics on population ageing in Asia and the West

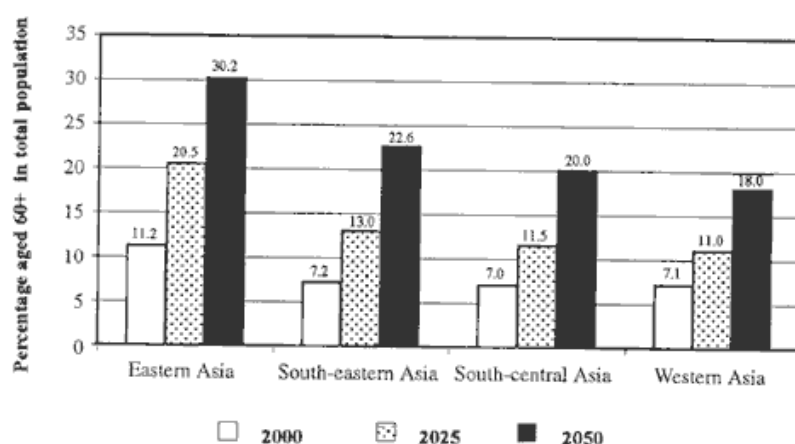
	1950	1975	2000	2025	2050
Percentage 60+ in total population					
Asia	7	7	9	15	24
West	12	16	19	27	32
Percentage increase in population 60+ over previous quarter-century					
Asia	-	67	104	119	76
West	-	67	36	46	13
Ratio of population: 60+ to population 15-59					
Asia	8.4	8.2	7.0	4.2	2.5
West	5.0	3.8	3.3	2.1	1.6
Percentage 75+ of population 60+					
Asia	14	17	21	23	33
West	22	24	31	32	42
Percentage female in population 60+					
Asia	54	53	53	53	53
West	58	60	59	57	56

Source: Calculations based on United Nations, 1999. World Population Prospects: The 1998 Revision. Volume II: Sex and Age (New York, United Nations).

Note: West includes Europe and North America. The 2000, 2025 and 2050 results refer to the medium variant projection of the United Nations.

No Asian country is likely to escape a substantial ageing of its population sometime during the twenty-first century. A transition from high to low fertility levels is the main demographic cause of population ageing and it is inconceivable that any country can indefinitely maintain high fertility in the context of modern low mortality levels. To do so would lead to continuing levels of population growth that would be unsustainable over the coming century.<sup>7/</sup> Indeed, fertility is either currently falling or has already reached low levels in most countries in Asia. Nevertheless, there is marked diversity in the past and expected future trends in fertility and, to a lesser extent, mortality among countries in Asia. Thus, there will also be considerable diversity in the timing, and perhaps eventual levels, of population ageing. Figure 2 illustrates this diversity on a regional level and mainly reflects the timing and pace of fertility decline. Population ageing, as measured by the percentage of the population aged 60 or older, is expected to be most advanced by 2050 in eastern Asia and least advanced in western Asia, even though differences in the levels will be quite modest at the start of the century.

Figure 2. Regional population ageing in Asia, 2000-2050



Source: United Nations, 1999. World Population Prospects: The 1998 Revision. Volume I: Comprehensive Tables (New York, United Nations).

Note: The following are included in the "eastern Asia" subregion: China; Hong Kong, China; Democratic

People's Republic of Korea; Japan; Macau; Mongolia; Republic of Korea. The "south-central Asia" subregion: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan; Uzbekistan. The "south-eastern Asia" subregion: Brunei Darussalam, Cambodia, East Timor, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand; Viet Nam. The "western Asia" subregion: Armenia, Azerbaijan, Bahrain, Cyprus, Gaza Strip, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates; Yemen.

Among the individual countries, differences in the extent of ageing that will occur in the next 50 years are even more pronounced than at the regional level. For those where fertility still remains high or has only recently shown signs of decline, any appreciable population ageing is still decades off; in others which have already sustained fertility at or below the replacement level for a decade or more, rapid ageing is already occurring. Thus, by the middle of the twenty-first century, some countries, including China, Japan, the Republic of Korea, Singapore and Thailand, are anticipated to have between 30 and almost 40 per cent of their populations aged 60 or older (United Nations, 1999a) while others, including Cambodia, the Lao People's Democratic Republic and Pakistan, will have reached only half (or less) of those levels. However, even in these countries, substantial ageing will only be delayed and, if the United Nations projections are right, not be much further off given the low fertility that it is assumed will have been reached everywhere by that time.

In contrast with this diversity in the timing of population ageing, virtually universal is the fact that the absolute numbers of older persons are growing very rapidly (as a result of the high fertility and falling mortality of the past), even where relative ageing may be slow in occurring. In many respects, it is this numerical growth that is of prime relevance for social and economic programmes in the short and intermediate terms (Hugo, 1996). It would thus be unwise to ignore this demographic inevitability even where the share of elderly in the population is currently low and not expected to increase soon.

Besides providing information on the numbers of older persons and their share in the population, another contribution of the basic demography of ageing of significance for planners is the study of the changing social and demographic characteristics of the old-age group. Not only can such changes be traced over the past but, based on the principle of cohort succession, it is a relatively straightforward exercise to project the changing composition of the elderly in the future in terms of characteristics that are fixed earlier in their life course (Hermalin and Christenson, 1992; Preston, 1992). Indeed, these changes are almost as predictable as the growth in numbers of elderly that will take place over the coming decades. Thus, besides examining the changing age and sex distribution of future older persons, demographic analysis makes it possible to project how they will be distributed with regard to literacy, educational levels, residential and occupational backgrounds, and number of children. These projections make clear that the elderly of the coming decades will be quite different from their counterparts in the last few decades of the twentieth century. For example, the elderly of the not-too-distant future will be more literate, better educated, more likely to have urban experiences, and to have fewer living adult children than the current generation elderly. These changes in composition have important implications for the demands the elderly will pose for health care and formal and informal support independent of just their changing numbers.

Much of the important work on the basic demography of ageing has already been done and widely disseminated, and has successfully served to raise awareness of population ageing within government and academic circles alike. Thus, future challenges for research are mainly in areas beyond basic demographic analysis. It will still be essential to continue monitoring older age mortality for its implications for the numbers of surviving older persons and monitoring fertility trends given their longer term implications for population ageing. In addition, demographic analysis to project the social and economic composition of the elderly would undoubtedly prove to be a valuable undertaking where it has not already been done. Demographic researchers, however, have been quick to recognize the need to go beyond simply mapping the demographic contours of population ageing if their work is to provide meaningful guidance for the challenges it poses.

### Social and economic demography

In virtually every population, health problems of the elderly, and thus their need for health services including hospitalization, are greater than for other age groups except perhaps for the very young. Equally universally, economic activity decreases with old age thus creating a need for material support from other sources. Thus, the rapid growth in the numbers of elderly and the inevitable shift towards an older population age structure raise two main areas of concern for government policy makers: how to ensure adequate health care and adequate economic and social support for elderly societal members. Throughout Asia, the family has traditionally been the primary source of care and material support for the elderly, who in many cases live with or near their adult children. Most governments of countries and territories in Asia are interested in



preserving this family-oriented support system in some form (Chan, 1999; Chen and others, 1989; ESCAP, 1999; Phillips, forthcoming; World Bank, 1994). By doing so they hope to avoid the costs and problems associated with the extensive formal support measures common in the West, although some public programmes are generally thought to be essential as a "safety net" for the most vulnerable. Many planners as well as academics, however, fear that the family system of support and care may be undermined by the demographic and social changes that are part of or closely associated with economic development, a process virtually all governments seek to promote (ESCAP, 1998; Hugo, 1996).

Sound approaches to dealing with population ageing and enhancing the well-being of the rapidly growing populations of elders are far more likely to come about if solid empirical evidence is available on which to base those approaches. Researchers involved with the demography of ageing have already started to collect data suitable for examining a whole range of issues related to the health and the social and economic welfare of older age groups. Probably the most significant development has been the advent of representative surveys related to the situations of older persons (Andrews, 1992; Hermalin, 1997a). In large part, these surveys have been directed at older persons themselves, although some have also included younger generation respondents in order to map their roles in the systems of intergenerational exchanges that prevail.

The first such surveys were launched in the mid-1980s. These included a World Health Organization (WHO) Regional Office project that sponsored surveys undertaken in four countries in 1984 and an ASEAN (Association of Southeast Asian Nations) Population Project series, carried out primarily in 1986 in five countries (Andrews and others, 1986; Chen and others, 1989). A second set of WHO-sponsored surveys was undertaken in five additional countries around 1990 (Andrews, undated). The United Nations, through ESCAP and the United Nations University, was also instrumental in sponsoring multi-country studies involving small-scale surveys (e.g. ESCAP, 1989; Hashimoto, 1991). More recently, major national surveys of the older population have been undertaken in several countries as part of a collaborative project sponsored by the University of Michigan (Hermalin, 1995). The Rand Corporation has also sponsored family life surveys with components related to the elderly in several other countries (Rand, 1999). In addition, several major national surveys have been conducted independently under government or other auspices (Hermalin, 1997a). The WHO surveys emphasized health while many of the other surveys included substantial sections examining economic and non-economic intergenerational exchanges of services and resources, and the living arrangements with which they are inextricably entwined.

It seems likely that surveys of older persons (and persons linked to their well-being through intergenerational exchanges) potentially can play the same crucial role in monitoring the situation of the older population and guiding related policies and programmes that surveys of reproductive behaviour and attitudes did in assisting population programmes over the last four decades in efforts directed towards fertility reduction and the improvement of reproductive and child health. Unlike surveys dealing with these more traditional demographic topics, however, those dealing with issues of ageing still have only limited accumulated experience upon which to build. We are still at an early stage of learning how best to collect data relevant to understanding the social, economic and health conditions of the elderly in less developed countries and the intergenerational familial exchanges that play crucial roles in their determination. Thus, there is still much to learn about how best to design such surveys to increase their ability to reflect accurately the complex reality they are attempting to portray (Knodel and Saengtienchai, 1999).

Hermalin (1995, 1999) has provided comprehensive assessments of the directions that need to be followed to improve quantitative data collection related to policy-oriented research on ageing in Asia. He points to the need for taking advantage of the potential of censuses and surveys not specifically targeting the older population (e.g. labour force, health and welfare, and even fertility surveys) for yielding relevant information related to ageing. He also stresses the need for surveys related to ageing to adopt a longitudinal design and to obtain information beyond the narrow confines of the household to capture more fully the support network of kin and acquaintances in which the elderly are commonly involved. Linkages between surveys of the elderly and administrative records also have the potential to expand the databases that could be particularly useful in assessing programmes related to ageing issues.

Although large-scale surveys of representative samples are an essential component of the social demography of the elderly, it is also important to recognize that surveys are not well suited for soliciting relevant information for a number of topics of importance to gaining a fuller understanding of data on familial support systems for the elderly. For example, survey methodology is unlikely to be able to capture adequately a variety of interpersonal dynamics that shape how the system operates. Strained relations between parents and children can strongly influence their living arrangements and the extent and quality of support exchanges occurring between them. Indeed, increases in such strains may be a critical mechanism through which social change may operate to undermine filial piety in the future, as some fear. Yet assessing such strains is likely to prove difficult through an impersonal survey format. Likewise, it may not prove feasible to develop appropriate standardized questions and recording forms to trace adequately how living arrangements and

support exchanges evolve over the later stages of the family cycle. A more qualitative research approach may be needed. Already focus groups, systematic case studies and narratives have been used in an attempt to circumvent the problems of the surveys for providing insights into some of these issues (Knodel, 1995; Knodel and Saengtienchai, 1999; Peterson, 1993). Improving such techniques or developing alternative ones will pose an additional challenge to the demography of ageing in the decades to come.

### Topics for the demography of ageing

As we are about to enter the new century in which population ageing will become the premier demographic concern, there are a myriad topics that deserve the attention of the population research community in Asia. However, an exhaustive or detailed discussion of an appropriate research agenda for the demography of ageing in the twenty-first century is well beyond the intended scope of the current review. Nevertheless, a few selected topics are discussed below to illustrate the interesting territory that awaits exploration.

### Development and well-being of the elderly

From both an academic and a policy perspective, the most important issue for the demography of ageing in Asia to address in the coming decades deals with the implications for the well-being of the elderly of the social and economic changes associated with development. As Hugo (1996) points out, various theoretical arguments have been made regarding the nature of the impact of development on the elderly that point to very different conclusions (see also ESCAP, 1998). Probably the most common view is that family support for elders will be undermined and, unless there is greater government intervention than most anticipate is feasible, the welfare of many among the elderly will be seriously threatened (Tout, 1989). Only now are we starting to collect the data necessary to examine the many hypothesized linkages between development and the well-being of the elderly; the evidence so far by no means provides a clear confirmation of the predominant negative view. Much attention of social and economic demographers concerned with ageing is likely to be devoted to analysing this set of issues in the future.

As Hermalin (1997b) cautions, our ultimate concern is with the well-being of the older members of society and not simply with the maintenance of particular arrangements for achieving this. Thus, to judge whether changes in the structure of the support system have negative implications requires knowing if, in the context of a changing socio-economic environment, newly emerging forms serve the functions better or worse than those that they are replacing. For example, declines in coresidence may or may not herald a worsening of the well-being of the parties involved. Although this might reflect a lesser willingness of the younger generation to care for elderly parents as some fear, it could also reflect positive changes in living arrangements that continue to meet the need for support of both generations but enhance their need for privacy as well. Likewise, the maintenance of coresidence could mask the changing content of the relationships among household members that detracts from the welfare of both generations. Clearly, assessing the impact of development on the older population poses a formidable challenge and will not only involve substantial data collection activities but also require considerable interpretive and conceptual skills if it is to be carried out effectively.

### Identifying the elderly in need

In reality, development will surely not impact all the elderly in the same way. Even if most benefit, there will be others who do not. Although most Asian governments are counting on the family to continue to provide the bulk of support and care for older members, none wishes to ignore those elderly who are truly in need of help from formal institutions. Thus, despite eschewing an extensive welfare model to provide security for older persons, many governments maintain social welfare measures targeting elderly people who are considered to be abandoned, indigent or disabled. Thus, another challenge to the demography of ageing will be to help to define appropriately, identify and assess the numbers of those older persons who are particularly in need of outside assistance.

The task will not be an easy one for several reasons. Research that has already been done indicates that accurate markers of vulnerability or true disadvantage are unlikely to be simple ones. For example, living alone in societies where coresidence is common might seem to be a sign of desertion. Likewise, having no income might appear to be a marker of desperate poverty. Yet both of these indicators can be clearly misleading. Recent analyses for the Philippines, Thailand and Viet Nam reveal that most elderly persons in solitary households are far from being deserted by their children, kin or other persons (Natividad and Cruz, 1997; Knodel and Chayovan, 1997; Knodel and Saengtienchai, 1999; Truong and others, 1997). Moreover, recent survey data reveal that many elderly who report no income have their material needs met in other ways. Only if surveys ask the appropriate questions, however, is it possible to make such determinations. Adding to the difficulty of defining and assessing vulnerability and disadvantage among the elderly is the likelihood that risk factors will change over the course of development.

## Gender and ageing

While attention to ageing as a population issue in developing countries has increased during the last decade and a half, the increase in concern with women's issues has been far greater. As often noted, the 1994 International Conference on Population and Development (ICPD) represented a virtual paradigm shift in which matters related to women became of central importance for guiding population-related policies and programmes (McIntosh and Finkle, 1995). While the ICPD Programme of Action makes only modest references and recommendations related to ageing and older persons, extensive attention is devoted to gender equity and the empowerment of women (UNFPA, 1998). In this context, it is not surprising that proclamations and discussions regarding ageing by international organizations frequently introduce gender as an issue (see e.g. UNFPA, 1998; HelpAge, 1995; Gorman, 1996; ESCAP, 1996, 1997). This discourse is characterized by global generalizations emphasizing the disadvantaged situation of older women and the burden imposed on female family members by having to care for and support the elderly.

Interest in women as a theme in discussions of population ageing arises in part from the recognition that women predominate among the elderly. As noted above, in Asia this demographic dominance is in fact rather modest and expected to remain so (see table 1). There is a greater excess of women, however, among unmarried elders (primarily the widowed) and among the oldest age groups. Older women are also presumed to be more economically and socially vulnerable than men because their productive activities are more commonly conducted outside the formal economic sector and because gender inequality characterizes family and community life in many societies. Moreover, the predominant role of women in the younger generation in terms of providing care for older family members constitutes an additional issue related to gender and ageing. Although rarely mentioned, there also are factors that could work to women's advantage in old age. Mothers may command greater emotional loyalty from their children than fathers (e.g. Wolf, 1972). Women may experience greater continuity in their major roles as they enter old age compared with men who commonly experience discontinuity associated with their exit from paid work (Gibson, 1996). Older women may also be more valued members within co resident households than non-working elderly men because of the greater contribution they make to domestic chores.

Despite the common impressions that social and economic vulnerability and disadvantage disproportionately characterize older women compared with older men, there is surprisingly little systematic empirical research into the many aspects of this issue in the Asian context. The experiences of women throughout their life course are conditioned by many interrelated social and economic institutions that differ substantially across societies. Thus, considerable variation is likely to exist in the way gender influences the different dimensions of well-being, both from the perspective of the older person and the adult family members responsible for the various types of assistance that help to determine the well-being of older persons (e.g. Ofsterdal, Knodel and Chayovan, 1999). Distinguishing settings, circumstances and ways in which older women are truly disadvantaged from those where they are not and understanding the basic determinants of these differences are clearly needed if sound policies incorporating a gender dimension are to be developed. Future research on gender and ageing hopefully will provide the basis to do so.

## AIDS and older persons

The global AIDS pandemic is clearly one of the foremost health challenges that is being carried over into the next century. Although AIDS is most commonly associated with Africa, where in many countries the situation is truly devastating, Asia has not been spared. The spread, however, has been very uneven so far among different regions and countries. As of the end of 1997, only Cambodia, Myanmar and Thailand have estimated adult HIV prevalence levels reaching 2 per cent (UNAIDS/ WHO, 1998). These countries illustrate, however, how sudden and sharp increases can occur in a population. The lack of adequate information creates considerable uncertainty about the level and potential of the epidemic in most Asian countries (MAP, 1998). Nevertheless, UNAIDS estimates that India, despite quite low levels of infection (still under 1 per cent), by virtue of its population size, had by the end of 1997 the largest number of HIV-infected persons in the world. Overall, UNAIDS (1998) predicts that, by the end of 2000, one fourth of the world total of current HIV-infected persons are expected to be in Asia.

HIV/AIDS is usually viewed as a disease affecting adults of reproductive age and their infant children. Discussions rarely consider the impact on older persons and when they do, the focus is typically on those who are infected themselves. A far greater number of older persons, however, are affected as parents of AIDS victims. Impacts of AIDS on parents can occur through numerous routes, including (a) the strain of giving care and associated opportunity costs, (b) providing financial and material support, (c) raising surviving grandchildren, (d) suffering emotional stress and (e) losing old-age support that the child would have provided (VanLandingham and others, forthcoming). The impact of AIDS compared with other illnesses can be particularly severe given the lengthy periods of illness and disability, the untimely nature of the death, and possible negative community reactions to persons with AIDS and their families, including

their elderly parents.

Consequences for the older generation in Asia where AIDS is prevalent are likely to be pronounced given the widespread dependence on intergenerational arrangements for care-giving and support. In most countries, institutional care and state financial support for persons with AIDS are quite limited. Thus, AIDS victims are heavily dependent on informal channels of care and support and are likely to turn to parents for residential care once the illness incapacitates their own ability to care for and support themselves. Doing so is quite congruent with the intergenerational exchange system that prevails in much of Asia in which older parents not only receive help from adult children but also provide important services for them. Yet, few studies focus on older people as parents of persons with AIDS. Even rarer are quantitative assessments of how frequently this dimension of the epidemic impacts on the older population. The sensitive nature of the topic combined with its increasing importance clearly poses a challenge for researchers as the new century dawns.

#### Concluding comment

As noted in a theme issue on ageing of this Journal seven years ago, sound policies to deal with population ageing need to be based on empirical evidence derived through appropriate data collection procedures (Knodel and Debavalya, 1992). During the last decade and a half, the demography of ageing in Asia has made impressive progress towards meeting this need. As we start the new century, two main challenges for demographers interested in ageing are apparent: (a) to develop further appropriate methodologies to provide the quantitative and qualitative data needed to guide ageing-related policies and (b) to conduct analyses that will advance understanding of the social and economic dynamics that underlie the situations these policies address. Based on recent experience, the prospects for meeting these challenges seem bright.

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#### Endnotes

1. Population ageing refers to shifts in the age distribution of the population such that the relative share of persons at older ages increases and the share at younger ages decreases. This is distinct from absolute increases in the number of older persons, which can occur even if their share does not increase.
2. The United Nations and other organizations concerned with older persons have been making a concerted effort to place population ageing in a more balanced or even positive light by promoting concepts such as "productive ageing", "age integration" and "a society for all ages" as well as by encouraging the view of older persons as resources rather than burdens for society (e.g. UNFPA, 1998; HelpAge International, 1999). However, it is too early to know if significant shifts away from the widespread, largely negative view of population ageing will actually take place.
3. I define demography in the broader sense in which it is now commonly regarded to include not only the direct study of population processes and structure but also their determinants and consequences and thus their relationships with other social and economic phenomena (Caldwell, 1996). It even includes some use of qualitative research as related to demographic issues (see the Symposium on Qualitative Methods in Population Studies published in *Population and Development Review*, December 1997).
4. Several comprehensive reviews of policy issues created by ageing in Asia for the coming century have been or will be published elsewhere (e.g. Hugo, 1996; Phillips, forthcoming).
5. For a comprehensive list of publications issued by the ESCAP secretariat related to ageing issues, see Knodel and Debavalya (1997).
6. However, since everyone who will be aged 60 or older during the next 50 years has already been born, the uncertainty involved in their future numbers depends primarily on mortality trends and those numbers are far more predictable than total population size which will also depend on future trends in fertility. Migration can also affect the numbers but will probably play only a minor role.
7. For example, at the growth rates associated with current fertility and mortality, high fertility countries such as Afghanistan, Cambodia and the Lao People's Democratic Republic would have populations of 398 million, 131 million and 71 million respectively by the end of the twenty-first century. Populations of such magnitudes for these countries seem patently implausible.

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Mobility Transitions within a Global System: Migration in the ESCAP Region

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Migration, particularly undocumented migration, will become an issue of major political conflict

Migration is an outcome of economic and political change. Economic growth creates disparities in wealth among countries and among areas within countries. These disparities stimulate movement from places of limited opportunities to those areas with higher levels of opportunity. Other migration flows, such as refugee movements between countries or movements of displaced persons within countries, result from political conflict.

Although global forces increasingly contribute to a homogenization of development experiences, the societal transformations that affect migration are felt in different ways by different countries. This situation results in what are referred to as "mobility transitions". The use of the plural is meant to stress that there is no single mobility transition. A variety of migration patterns evolve in the process of development, but these patterns emerge within an overall system that provides some coherence and regularity in these changes.

This article focuses on the context within which migration occurs in the ESCAP region. The discussion links this context to outcomes for migrants and society. The article concludes with a discussion of possible trends in mobility patterns in the first quarter of the twenty-first century. At the outset it is important to stress that considerable variation exists among ESCAP countries in their levels of economic development, demographic composition and political structure. This variation is related to differences in migration patterns. It is beyond the scope of the article to provide an adequate treatment of all the variations in migration patterns in the region. Furthermore, there are many forms of migration, each of which could easily be the focus of its own review paper. Therefore, this article deals only with geographical and mobility variations at a very general level.

### Mobility transitions

Economic development in relation to migration has been treated in the migration literature as a "black box". While considered crucial in structuring migration flows, the processes of development that affect migration are typically not specified. For example, the influential model of the mobility transition proposed by Zelinsky (1971) links levels and types of migration to demographic and development changes, but does not specify in any detail the demographic and development processes underlying these links.

Skeldon (1990) has built upon the work of Zelinsky by being more specific about the processes in development that generate clear patterns of migration over time. He describes the mobility transition as a systematic sequence of change in the spatial patterns of mobility over time. He argues that movement shifts from local short-distance migration, to massive rural-to-urban migration (mainly to the largest cities) but still temporary, to a situation where mobility becomes more permanent. Later, commuting becomes dominant and there is some decentralization of urban areas with migration to smaller urban areas. The mobility transition is linked to transformations in production relations.

The work of Skeldon is closely related to the work of world system theorists (see Portes and Walton, 1981; Portes, Dore-Cabral and Landolt, 1997). Within this framework, it is not necessary to examine the motivations of individuals to understand emerging migration patterns. Instead, what is crucial is how institutions change during the processes of development. Individuals are constrained in their behaviour by the choices available to them and these choices vary according to the institutional framework. In particular, it is institutionally constrained opportunities for employment and housing that shape migrant flows.

Recent developments in migration theory have included much more attention to the contextual factors that shape individual and community migration responses to the global integration of markets and the associated trends towards homogenization of culture (see Massey and others, 1994). Localized patterns of development and societal norms and values interact with more generalized processes of global development to produce migration patterns that are broadly similar among countries but that demonstrate regional and country variations.

### Patterns of migration in the ESCAP region



Most countries in the ESCAP region are undergoing mobility transitions. These transitions stem from multiple causes and this is reflected in a variety of patterns of mobility. To understand these patterns it is necessary to locate these transitions within the demographic, social and economic changes that transformed the ESCAP region in the second half of the twentieth century.

Many countries in East and South-East Asia have completed the demographic transition — the movement from a situation of high fertility and mortality to low fertility and mortality — and have also experienced rapid export-led economic growth. The majority of countries in South and South-West Asia are in the midst of their demographic transitions and have pursued models of economic growth that have been more focused on import-substitution. North and Central Asian countries generally have relatively low levels of fertility and mortality, but they are also experiencing difficulties in terms of economic restructuring in a period of political and social transformation. Finally, many of the small island countries and territories that comprise the majority of societies in the Pacific are heavily dependent economically on the more developed countries in that subregion (see ESCAP, 1998).

### Internal migration

Although international migration is receiving increasing attention in the ESCAP region, migration within countries makes up the vast majority of moves. Although census estimates of internal migration for countries in the ESCAP region typically suggest movement over a five-year period of less than 10 per cent of the population aged 5 years and older, more accurate survey-based estimates can be two or more times this level (for Thailand, see Chamrathirong and others, 1995).

As a broad generalization, it can be stated that: (a) the level of internal migration in countries in the ESCAP region is increasing, (b) internal migration increasingly comprises movement from rural to urban places, (c) the movements involve a high proportion of temporary migrants and (d) migration flows include a significant proportion of females. Each of these trends and characteristics of migration is a direct outcome of models of development that have been followed by countries of the region.

Because of the high levels of migration among the young, the demographic situation of countries has a large effect on the level of migration. For the ESCAP region, it is projected that between 2000 and 2010 the population in the young adult years of 15-24 will continue to expand (ESCAP, 1998). This has been, and will continue to be, a major factor in increased levels of migration, especially rural-to-urban movement. The result is that urban areas will become increasingly "young" in their demographic profiles. South and West Asian countries in particular can expect upward pressure on migration rates through rapidly expanding numbers of young entrants to the labour force. In East and South-East Asia, the situation is different. In many countries in these subregions, the numbers of young adults have begun to decline. This situation will contribute to a stabilization, or perhaps even a reduction over the long term, in levels of internal migration in those countries (Skeldon, 1991).

Another factor that sets the South-East and East Asian countries apart from most other countries in the ESCAP region is the high level of female migration, especially in terms of rural-to-urban migration (Singelmann, 1993). Evidence from several countries shows that the level of female migration has increased over recent decades (Hugo, 1993; Lim, 1993; Skeldon, 1998). In many rural-to-urban migration streams, the majority of female migrants are young and unmarried. This situation results in urban populations that include large numbers of young unmarried females, usually living away from their families. The concentration of young adult females in urban areas is particularly pronounced in the "megacities" of East and South-East Asia (Guest, 1994).

Although levels of female migration in ESCAP countries and areas outside the East and South-East Asian subregions are generally lower, there is evidence that even in these contexts there has been increased female mobility, particularly of young unmarried women. Using census data, Pathak and Mehta (1995) describe the increasing proportion of single female migrants in internal migration streams in India and note that most of this increase is directed towards large urban centres.

A major factor in the rise in female migration has been the transformation of the structure of the labour force that has resulted from government policies that have promoted export-led development. These policies have centred on the establishment of free-trade zones, encouragement of foreign investment, investment in human resource development and considerable efforts devoted to maintaining a labour environment free of industrial activity. Many of these economic policies are conducive to high levels of female labour force participation.

Another feature of internal migration movements in the region is the large proportion of temporary moves. In Thailand, temporary moves, which include both seasonal movement and other forms of short-term

moves, have been estimated to account for one third of all migrations with a duration of one month or more (Chamrathirong and others, 1995). These movements are also common in China — with temporary migrants, i.e. the "floating population", outnumbering registered migrants by approximately four to one — as well as Indonesia and Viet Nam. They are particularly prevalent in the movement to large cities. All studies reviewed indicate that in Asia temporary migrants are likely to be older, male, have lower levels of education, be married (but have left behind their families in the area of origin), live in poor conditions and remit more of their income compared with more permanent migrants. The main purpose of their migration is to earn cash in order to support their rural-based households.

It has been argued that the extent of temporary migration will diminish over time as employment structures change to a situation where the demand for skilled labour increases faster than the demand for unskilled labour. The experience of many ESCAP countries suggests that the transition from temporary to permanent migration is not yet happening. Rural development policies that have encouraged existing patterns of smallholder agriculture while at the same time utilizing agricultural surpluses to fund urban-centred industrial development have contributed to the establishment and subsequently the maintenance of temporary migration flows. Other factors, such as the development of transport infrastructure, have led to increasing integration of rural and urban areas (Jones, 1997) and have reduced the risks and costs of temporary migration.

### Urbanization

Globally, only in Asia were there consistent increases in levels of urbanization over the three-decade period from the 1960s through the 1990s (United Nations, 1996). Gilbert (1993) argues that this regional variation has resulted from slower growth, or even a decline, in urban employment opportunities in Latin American and African countries, but rapid expansion of urban employment in many Asian countries. Within Asia, there is considerable variation in the levels of urbanization, with growth in urbanization being most rapid in East and South-East Asian countries and areas.

Rural-to-rural migration still numerically dominates internal migration in most Asian countries because of the high proportion of the population living in rural areas. However, the share of this form of migration has been decreasing, while the share of rural-to-urban migration has been increasing. Recent analyses by the United Nations (1996) indicate that in the decade of the 1980s migration contributed slightly over half of urban growth in Asian countries. The contribution of migration/reclassification to urban growth was generally lower in South and West Asian countries compared with East and South-East Asian countries. The large contribution of migration to urban growth in East and South-East Asia during the 1970s and 1980s can be attributed to the economic dynamism of the subregions, most of it centred on the large cities. This has increased the attractiveness of city life to rural dwellers (Rondinelli, 1991; Jones, 1997).

Large populations, geographically concentrated patterns of economic development and expanding economies have contributed to the growth of megacities in Asia. The ESCAP region now contains more than half of the world's megacities and this proportion is projected to grow in the first quarter of the twenty-first century. Another emerging feature of the growth of large urban populations in Asia is the expansion of the influence of large cities into their peripheries. This has been accompanied by a change in migration patterns away from large cities to areas adjacent to these cities. The issue of the emergence of extended metropolitan regions and the role they play in the urban hierarchy is not fully understood and needs to be further explored (see Gilbert, 1993; Drakakis-Smith, 1995; Jones, 1997).

### International migration

The broad features of international labour migration in the ESCAP region have been well documented (see reviews by Skeldon, 1992; Hugué, 1995; Pongsapich, 1995; Battistella and Skeldon, 1999). Most of the countries of East and West Asia act as receiving countries, while Central, South and South-East Asian countries are generally exporters of labour. Most of the Pacific island countries are labour exporters, with most of the out-migrants moving to North America, Australia and New Zealand.

Demographic transitions also have an impact on international migration. Hugo (1998) notes that the emergence of a labour market based on transfers of labour among countries in the region has evolved, in part, because of the proximity of countries with very different demographic structures. Countries such as China, India, Pakistan, the Philippines and Viet Nam are identified as major regional source countries of out-migrants and are also countries that have had considerable growth, and potential for growth, in their working-age populations. Other nearby countries, particularly the "tiger" economies of East Asia, are facing declining population numbers in the labour force ages and need to augment their labour forces by accepting migrants from neighbouring countries and areas (see Skeldon, 1999).

Within the ESCAP region, it is important to distinguish between legal and illegal migration, long-term and contract labour migration, and labour migration and refugee movements. Much of the long-term migration from the region is of migrants leaving for settlement in countries such as Australia, Canada and the United States. These migration streams have included significant numbers of migrants from economies such as Hong Kong, China; Malaysia; the Philippines; Singapore; and many Pacific island countries and territories. Substantial numbers of students also study outside the region. However, it is labour migration on short-term contracts and undocumented migrants that constitute the main flows of migrants.

Historically, in the latter part of this century, contract labour migration involving the region was to the oil-rich countries of West Asia (Huguet, 1995). The major exception was Viet Nam, where large numbers of contract workers were employed in the former Union of Soviet Socialist Republics and in eastern Europe during the 1980s. In the late 1980s and early 1990s, there were over 4 million contract workers of Asian origin in the Middle East. Indians comprised the majority of these workers, followed by workers from Pakistan, Bangladesh, Sri Lanka, the Philippines and Indonesia in that order. Commencing in the 1980s, and increasing in pace after the Gulf conflict at the start of the 1990s, was a shift in the destination of contract migrants. The rapidly developing economies of East and South-East Asia, such as Brunei Darussalam, Japan, Singapore and Taiwan Province of China, became major destinations.

The South-East Asian countries that have relied most heavily on the export of contract labour — Indonesia, Malaysia, the Philippines and Thailand — experienced rapid economic growth during the 1980s and 1990s. It was assumed that they were well on the way to a migration "turnabout" where these countries would change from mainly exporting labour to importing labour. This argument was buttressed by the large inflows of undocumented migrants into Malaysia and Thailand during the 1990s. However, the recent economic crisis that has occurred in East and South-East Asia has seen calls for both the forced repatriation of the undocumented migrants in those countries and government initiatives to try to increase the number of contract migrants going overseas (Skeldon, 1999:8).

It is undocumented migration that most concerns the governments of those countries that import labour. The extent of undocumented migration is difficult to estimate. Martin (1996) notes that, although the number of undocumented workers in East Asian economies such as Japan, the Republic of Korea and Taiwan Province of China are high, the numbers in Malaysia and Thailand dwarf them. In 1997, it was estimated that there were approximately 1 million undocumented foreign workers, mostly Indonesian, working in Malaysia. The estimates for Thailand are also approximately 1 million, with most of the illegal workers being from Myanmar.

The Asian region has been the site of large volumes of involuntary migration over the last half-century. Some of this movement has clearly been refugee movements, with host governments going to great lengths to limit interaction between the refugees and the local population. For example, the flows of migrants from Viet Nam in the 1970s and 1980s and those from Cambodia during the 1980s were clearly refugee movements, although the flows undoubtedly contained some who were migrating solely for economic reasons. Other large-scale displacements, such as Chinese into Hong Kong, China, Laotians into Thailand, and Burmese and members of ethnic minorities into Thailand from Myanmar, often combine features of both labour migration and refugee movements. Recent conflicts in West and Central Asia have added to the numbers of refugees in the ESCAP region.

In general, international migration flows in Asia are dominated by males (see Skeldon, 1998); however, there are exceptions. For example, migration of contract labour from Indonesia and the Philippines includes as many or more women than men (see Gulati, 1993). These women work mainly as domestic servants. A significant number of women from the Philippines also go to work abroad as "entertainers". The emergence of East and South-East Asian countries as migrant destinations has also contributed to increasing the proportions of international movers who are female. The further development of these migration networks will help to reduce risks of migration and can therefore be expected to contribute to increased levels of female international migration.

#### Impacts of migration

Most of the development impacts of labour migration at the micro-level are based on the hypothesized change of economic roles resulting from migration. These changes can result from new skills learned during migration or may be an outcome of the productive use of savings to develop new economic activities upon the return of the migrant. It is very clear that the vast majority of migrants, both international and internal, benefit economically from their moves. Most studies of internal migration show that migrants have higher levels of labour force participation than non-migrants, usually have a job arranged before they move or, if not, spend little time looking for a job, and earn much more than they would be able to earn undertaking equivalent work in their areas of origin (Guest, 1998). Even though rural-to-urban migrants do make more

money than they would if they had not moved, they still make up large segments of the urban poor. Jones (1997) argues that much of the poverty can be traced to institutional denial to migrants of access to credit and other resources.

Given the concern about the economic benefits of migration to female migrants, it is also important to note that, although many women are placed in vulnerable positions because of their migration, they and their families typically benefit economically from migration. Skeldon (1998), in a review of the literature on migration and women in the ESCAP region, argues that women are generally empowered by migration and that, instead of trying to restrict their movement, more attention should be placed on eliminating those factors that contribute to their vulnerability.

The development benefits of migrant remittances are well documented (Abella, 1993). The volume of these remittances can also be very large. For example, Battistella (1994) quotes International Labour Organization figures to show that in 1993 the value of remittances for the Philippines was over US\$ 2.2 billion, and \$983 million (1991) for Thailand, \$446 million (1992) for the Republic of Korea, and \$218 million (1991) for Indonesia. Although largely undocumented, remittances from internal migration are also large and can have a significant impact on development, particularly in rural areas.

Skeldon (1997) argues that rural-to-urban migration is particularly beneficial as a means of alleviating poverty in rural areas. He notes that remittances from temporary migrants provide rural families with cash incomes that can be used to sustain their rural way of life. Guest (1998) uses data from two linked surveys of migration in Thailand to show that remittances provide an important supplement to household income. The use of remittances has important multiplier effects on the economy, with many of the major items of expenditure, for example construction materials and labour, being obtained locally. Guest (1998) also found that remittances helped to reduce the levels of intra-rural household income inequality.

Compared with economic impacts, there is much less consensus on the social impacts of migration. In a summary of comparative studies from several Asian countries on the social impacts of labour migration, Pongsapich (1995) argues that the social effects are conditioned by the structure of societies where the movement takes place. For example, she argues that, although spousal separation owing to international migration has negative implications for relations between spouses in a patriarchal society such as Pakistan, in societies such as Thailand, Sri Lanka or the Philippines, where there is more flexibility in gender roles, the separation of spouses does not result in major adjustment problems for spouses. She argues that the process can indeed be quite positive, with a heightened value of family relations deriving from separation.

#### Future transitions

What will be the patterns of migration in the ESCAP region over the first quarter of the twenty-first century? To answer this question with any degree of certainty would require knowledge of the political and economic developments that are likely to occur within the region. Although that is impossible, based on developments over the previous quarter of century we feel relatively confident in making the following predictions.

There will be increases in migration numbers and rates, and decreases in migration selectivity. It is likely that these changes will occur for both internal and international migration. Higher levels of migration will occur because of increased spatial concentration of economic development. Within countries, this will occur through concentration of investment and employment growth in large urban centres, and increasingly, in extended metropolitan zones. Improved transportation links will operate to change the structure of mobility, with increasing proportions of the labour force being able to engage in long-distance commuting, further contributing to the blurring of the boundaries of rural and urban areas.

One factor that may alter the predicted changes in internal migration patterns, especially in East and South-East Asian countries and areas that have aggressively followed export-led development strategies, is the economic restructuring that has followed the economic crisis that developed in 1997. For the sake of contrast, in a number of Latin American countries that were forced to restructure their economies in the 1980s, migration patterns underwent considerable change, including declines in rural-to-urban migration, with particularly large declines in moves directed towards primate cities (Portes, Dore-Cabral and Landolt, 1997). However, the current low levels of urbanization in most ESCAP countries are likely to mean that the effects of the restructuring on migration patterns will have a more limited impact compared with the Latin American situation.

A slowing of economic growth and subsequent economic restructuring may also have an impact upon international migration. Governments will come under increasing pressure to limit the numbers of workers entering their countries, and to repatriate many of those already residing in their countries. However, there

is also increased pressure to migrate for those living in traditional labour-exporting countries. Furthermore, the increasing political, trade and aid ties between countries in the region will contribute to higher levels of migrant flows and reduce the political will of labour-importing countries to act too harshly in trying to stop in-migration. Martin (1996) believes that all factors — demographic, economic and political — indicate increased flows of both legal and undocumented migrants in the Asian region. Kim (1996) also argues that greater economic inter-dependence within the Asian region can be expected to lead to increased levels of international migration in the future.

Decreased selectivity of migration will result from a reduction in the risk and cost of migration. This is occurring because of improvements in transportation and through the development of migration networks. As migration risk decreases, more women will become involved in migration (Hugo, 1997). We can also expect to see a reduction in the age concentration of migration, and more family migration. Because international migration typically entails a higher risk than internal migration, the decreases in migration selectivity will be less pronounced for international migration than they will be for internal migration. The interaction between cultural values and patterns of development affects the level of minimum acceptable risk. Therefore, levels of female migration, for example, are unlikely to rise in South and West Asian countries to the levels that will be observed in East and South-East Asian countries.

Temporary migration will (a) remain a major form of migration for some countries of the region, (b) emerge as a major form of migration in some countries, and (c) decline in importance in other countries. Temporary migration is most likely to occur in those countries where a system of smallholder agriculture is encouraged within a context of rapid urban development. A country such as Viet Nam would fit this pattern. In this situation, which occurs in many countries of the region, temporary migration provides households with a mechanism for maintaining a rural base while at the same time providing an abundant and relatively cheap labour force for urban-based development. A shift away from temporary forms of mobility will emerge in those countries where a combination of demographic and economic factors operate to reduce the growth of the rural labour force. Thailand has the potential to reduce markedly the levels of temporary migration over the next quarter of a century.

Even though movements from one Asian country to another were relatively unimportant for most of the twentieth century, the regional migration system that became established during the 1990s will develop further, and most international migration in the region over the next 25 years will occur within this system. Both demographic and economic forces are likely to continue to make East Asian countries and areas the main destinations of migrants. Within this regional migration system, subregional systems will also evolve. Most of these systems will build upon existing flows, for example, between India and Nepal, or between Thailand and neighbouring countries. But as countries such as China and Viet Nam, and the newly independent countries in Central Asia, continue their transition to market economies, they will provide large new source areas for migrants. Small Pacific island countries, their economies heavily dependent on larger more developed nations, will continue to experience high levels of out-migration.

The current migrations within the region are largely the product of forces that lie outside the control of any single government. They are part of the processes that have come to be included under the rubric "globalization". Globalization essentially involves increasing interdependence between economies and, as a concomitant of this increasing interdependence, greater flows of investment capital and technology and the development of a global culture. The increased intensity of exchanges is supported by international financial institutions and by economic powers pursuing national interests. However, an undesired outcome of this process has been increases in the levels of undocumented migration.

These increases have resulted in a growing recognition that there is a need for governments in the region to be flexible in their approach to migration (Archavanitikul and Guest, 1999; Battistella and Skeldon, 1999). However, this form of movement poses sensitive questions about national security throughout the region. The sensitivity of migration makes attempts at regional cooperation extremely difficult. Migration, particularly undocumented migration, will become an issue of major political conflict. This will revolve, as it has in the last decade, around the conflict between the efforts of labour-exporting countries to utilize migration as a development tool and to protect the rights of the migrants, and the desire of most labour-importing countries to minimize the social and economic cost of migration. Attempts have begun at the regional level to seek solutions to these problems, but the complexity of the issues will mean that progress will be slow.

One area where progress can be expected is related to human trafficking. Migration increasingly is a business dominated by commercial interests and, to some extent, organized crime. The smuggling of workers across borders has become big business in Asia (Martin, 1996). The extent of trafficking is enormous. Skeldon (1998) cites sources which estimate that worldwide up to 4 million persons a year are trafficked and that the majority of these are women and children. Many of these flows occur in Asia and

involve prostitution. Labour contractors are also an integral part of labour recruiting, both legal and illegal. While many governments attempt to control labour contractors through systems of registration and through the setting of maximum fees that can be charged, the regulations are often flouted and many migrants are victims of this system. Governments in the region are increasingly motivated to address these issues.

In conclusion, the first 25 years of the new century will see migration come to the forefront as a demographic, economic, social and political issue. The variation in and complexity of migration patterns that are found within the region will increase as global development processes interact with the unique cultural and social context of each country. These developments in the area of migration will require intensive programmatic and research efforts to understand and shape the evolving migration patterns.

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Asia's Population and Family Planning Programmes: Leaders in Strategic Communication

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The Asian and Pacific region can look forward to continuing to play a key role as a leader in strategic communication for better reproductive health

Asian countries have led the world in identifying problems related to rapid population growth and high fertility and in developing programmes to address those problems. Thus, it is not surprising that Asian countries have been leaders in developing strong communication programmes to inform, educate and persuade their people of the need to grow more food, provide more jobs, plan and space births, limit fertility, and feed and educate their children wisely. It is also very likely that Asian countries, despite temporary economic problems in some of them, will continue to be leaders in development programmes in the twenty-first century as mankind continues to deal with the ever-challenging reproductive and family health problems of a world populated by more than 6 billion people.

In developing programmes to deal with these emerging problems, Asian countries were the first to see that communication — with policy makers, clients, the public and health care providers — is not a "spare wheel" to be used when economic or health programmes break down, but rather a "steering wheel" that can guide the direction of people's thinking, of community norms and of informed individual choice (Fraser and Restrepo-Estrada, 1999).

It is widely acknowledged that until the 1960s and 1970s most of the world's experience in the area of development communication was driven by the agriculture sector. The dominance of rural populations, of farming as a source of revenue, the need for higher agricultural productivity (e.g. the "green revolution") and the investments of the donor community made possible projects and experiments in agricultural communication that provided the theories and early publications in this field. Until fairly recently, the art and science of development communication, as well as the teaching of communication as an applied discipline, was largely derived from the collective experience in agricultural communication (Rogers, 1973).

During the last quarter of the century, however, the learning and knowledge curve shifted from agriculture to public health. The increasing prominence of issues such as population and family planning, primary health care, maternal and child health, and most recently HIV/AIDS and other infectious diseases, has focused attention on the role of communication in public health programmes. As public health communication following the agriculture model attracted more investment resources from governments and donors, it also attracted more highly qualified individuals and institutions worldwide in experimenting, designing, implementing and evaluating innovative communication programmes aimed at behaviour change. Today, in Asia and elsewhere, the art and science of development communication is much more driven by the experience and lessons learned from health than from any other development sector.

Early programmes such as the Taichung experiment in Taiwan Province of China and the mothers' clubs in the Republic of Korea depended heavily on communication (Rogers and Kincaid, 1981). Both of these programmes, beginning in the 1960s, drew much from agriculture-based theories of information dissemination and laid the basis for many subsequent Asian programmes. In Taichung, fieldworkers were the key element of a multifaceted experiment, with posters, community meetings and mailings to newlyweds and others. Ultimately, home visits produced only about 40 per cent of the acceptors but contributed to a broad dissemination of information about family planning methods to a population that already wanted smaller families. Later, with the addition of mass media, a wide range of methods and accessible services, the programme became one of the first family planning successes (Freedman and Takeshita, 1960).

In 1968, the Government of the Republic of Korea initiated the mothers' club programme as a village-level organization, the purpose of which was to promote family planning practice and serve as a channel for information and for supplying contraceptives, especially the newly introduced oral pill. One of the main purposes was to make the programme's 1,467 family planning fieldworkers more effective as agents of change without increasing their numbers and cost. The typical mothers' club was a small discussion and action group composed of about 25 mothers of childbearing age. Each month the leader of the club



received a copy of the Happy Home magazine, which contained information about family planning and other health-related topics. Nationally broadcast radio programmes often featured the activities of successful clubs. The clubs were also used as "voluntary rotating credit associations" for members to fund individual or group development projects. In 1975, one of the most successful mothers' clubs, in the village of Oryu Li, was used as the basis for a national television documentary programme. The club's story was then used as the basis for one of the earliest entertainment-education projects in Asia, a prime-time 28-episode television drama, entitled "Pearl of the Soil", enacted by some of the country's most popular television personalities. In this manner, one village's successful mothers' club became a model for the whole country to emulate (Rogers and Kincaid, 1981).

Similarly, in India, the first country officially to adopt population policies in 1951 and launch a family planning programme in 1952, the government used media, group talks, print and other materials available at the time to spread the word about family planning. The greatest setback in the Indian programme occurred in 1976 when the government turned away from a voluntary, communication-driven programme to an emergency effort based on forced sterilization, a move which proved counterproductive (Panandiker and Umashankar, 1994).

Nevertheless, when Wilbur Schramm and Everett Rogers reviewed the state of family planning communication programmes in the early 1970s, they highlighted a number of important weaknesses. These included the following: (a) minimal coherent communication planning or strategic design to define and achieve specific goals, (b) a failure of communication campaigns using single or multimedia to integrate their messages with existing service delivery programmes on the assumption that awareness would automatically lead to action, (c) "one-size-fits-all" messages disseminated to the general public rather than specific appeals to different segments of the audience, (d) limited pretesting of messages with intended audiences, (e) little application of scientific theories of behaviour change in relation to communication in developing messages and activities and (f) lack of indicators and other evaluation tools to determine the impact of any communication interventions (Rogers, 1973; Schramm, 1971).

#### Strategic communication

In the last 25 years, Asian programmes have moved ahead to compensate for many of these weaknesses. As family planning programmes overall have moved from the clinical, medical stage through the field-based, community distribution stage to a more client- or consumer-oriented basis, communication programmes have become more sophisticated and, above all, more strategic (Piotrow and others, 1994; 1997).

What are the specific elements that distinguish a strategic programme or campaign from many of these earlier efforts? There are at least seven key elements of strategic communication which are well exemplified in family planning programmes that have been organized in the last quarter-century in a number of Asian countries. In fact, the authors predicted some of these elements in an earlier article in this Journal (Piotrow and Rimon, 1988). Today strategic communication has the following characteristics:

#### Science and research-based

A science and research-based approach to communication builds upon social science models of behaviour change and documented evidence of audience reaction to specific messages. Modern strategic communication is therefore science-based, research-based and theory-based in order to develop clear objectives and hypotheses, test them in the field, put them into practice on a scaled-up basis, and evaluate the results (Bandura, 1977; Flay and Burton, 1990).

#### Client-centred

There is much more emphasis in all aspects of family planning programmes on the client, but nowhere is this emphasis more important than in the field of communication. Focus groups, interviews, surveys, values and life-style research and other forms of audience analysis are widespread. Moreover, audiences for family planning messages today are segmented so that specific messages can be developed which are most appropriate for women, for men, for adolescents, for new mothers and for other important segments of the population.

#### Benefit-oriented

Building upon much greater knowledge of the needs and concerns of the audience, communication programmes today emphasize the benefits to a specific audience of particular behaviours. These benefits may differ widely. For example, the benefits of contraceptive use for a sexually active adolescent may be

quite different from the benefits to a 35-year-old woman who already has four children. A crucial element in strategic communication is to emphasize not the goals and objectives of the policy makers or service providers, but rather those of the clients and intended audience.

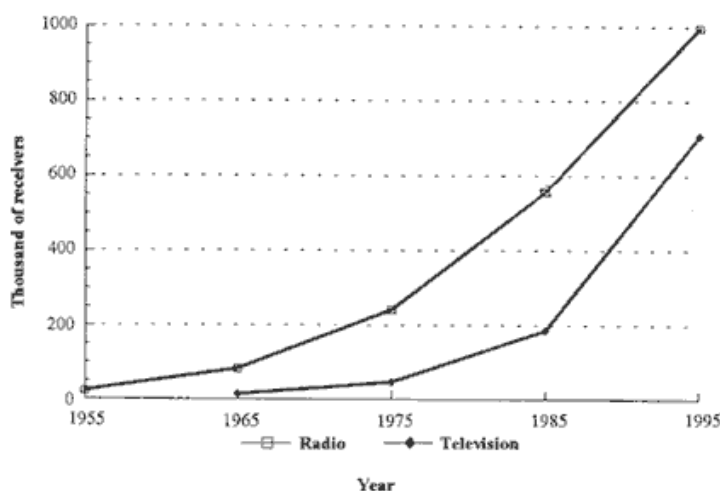
#### Service-linked

Strategic communication needs to link the proposed benefit with an immediate course of action that can bring that benefit to the client. Thus, health promotion programmes, including family planning programmes, need to identify and promote those services, providers or products that can help individuals meet their needs. They also need to provide a direct cue to action to stimulate the client and to build self-confidence. In short, health messages need to empower clients to make decisions and adopt behaviours that benefit them individually (self-efficacy) and as a group (collective self-efficacy) (Bandura, 1977).

#### Entertainment-education focused

The increasing role of mass media in bringing information, entertainment and new agendas to the modern world has helped to revolutionize health communication (IBAR/BBC, 1996). Strategic communication in the mass media uses entertainment to capture audience attention, create role models, show the consequences of behaviour, and provide an emotional impact that helps clients to understand and remember the advice that is given (Coleman and Meyer, 1990; Noelle-Nariman, 1993). Entertainment-education approaches are used today in communication at the grassroots level through street theatre, community drama and the like, but, above all, they are incorporated in many mass media productions, including radio and, to an increasing extent, television (Kaiser Family Foundation, 1996). There is increasing evidence from many projects worldwide that the mass media, especially those using entertainment-education approaches, are cost-effective in reaching people, increasing their knowledge and influencing their behaviour (Singhal and Rogers, 1999).

Figure 1. Developing-World Radio and Television Receivers, 1955-1995



Source: International Broadcasting Audience Research Library/British Broadcasting company, 1996. World Radio and Television Receivers, 1996 (London, IBAR/BBC World Service)

#### Professionally developed

Strategic communication today uses the skills of communication professionals, including market researchers, advertising agencies, radio and television broadcasters, theatrical producers, theatrical script writers and performers. The quality of strategic communication today needs to be comparable not only to the quality of commercial entertainment and communication, but also comparable, in its fashion, to the professional quality of medical care and health services that are provided.

#### Programmatically sustainable

The era of one-time or intermittent communication interventions is becoming history. We hear less of the old refrain: "We had a health communication campaign last year; we don't need to do one this year".

Lessons from the corporate world, especially from successful consumer-oriented companies, confirm that communication and advertising are an integral part of the overall process and not an outside stimulus needed only to "jump-start" or save a faltering programme. For example, if Coca-Cola were to suspend its communication and advertising for a year or two, it would most certainly lose market share. It would be unthinkable for any health service delivery programme to take the position that, because health services were provided the year before, they therefore need not be provided this year. Yet, this thinking used to predominate in the field of communication. But the situation is changing. Now, more than ever, the need for informed choice, gender sensitivity and attention to client-provider interactions as they relate to quality of care calls for sustained strategic communication interventions, whether these are expressed through increasing involvement and participation of beneficiaries as stakeholders of programmes or through partnerships, leveraging and investment in mass media programmes that sustain themselves over time.

Moreover, it is increasingly recognized that, as communication programmes become programmatically sustainable, they are more likely to influence social norms and social networks. These in turn lead to more individual behaviour change that is itself better sustained, because social conditions and norms are more favourable and supportive. Then, as individuals start publicly advocating the behaviour they have adopted (e.g. contraceptive use, or safe sex practices), they are more likely to continue such behaviour. The open and public nature of such personal advocacy has a cumulative impact on changing community norms and on sustaining those changes over time.

### Success stories

These seven components of modern strategic communication are well illustrated in recent Asian family planning communication programmes which have had a considerable impact in their own countries and which have also served as examples to be copied and adapted in other countries around the world. Some of these outstanding Asian examples of strategic communication are described below.

#### Indonesia

The Blue Circle campaign in Indonesia illustrates how a promotional campaign strongly linked to services used other elements of a strategic approach to increase the clientele for urban-based private-sector services during the late 1980s (Haryono and others, 1990; Piotrow and others, 1997; Rimon, 1986). Indonesian survey data clearly showed that, unlike any other country in the world, Indonesia experienced higher contraceptive prevalence rates in rural areas, where villages were closely bound communities, than in urban areas, where individuals often did not know where to find family planning facilities. The Blue Circle campaign was designed to increase the use of private-sector facilities and reduce dependence upon the government, which would serve only those clients who were too poor to pay a fee for services. The Blue Circle symbol was selected after extensive audience research because it was an easily identified, protective symbol that doctors, nurses and clients would all accept as a sign of private-sector, good-quality services. Initially, participating doctors and midwives in private practice were trained and given continuing education and materials about family planning. Afterwards they received a Blue Circle sign to display outside their offices and educational material to offer to their clients. A publicity campaign promoted Blue Circle clinics as a way to find convenient, high-quality, private-sector services at an affordable price.

The project started in four cities in the first year and expanded to 300 cities and urban areas by the third year. In 1988, within six months of the programme's launch, 32 per cent of the participating doctors reported an increase in their weekly family planning patient load averaging 28 per cent. Almost 60 per cent of midwives reported increases averaging 36 per cent. By 1994, the proportion of family planning services provided by the private sector had increased from 12 to 28 per cent. The Blue Circle project, by articulating a clear goal of promoting professional providers — the "PRO" approach — and an obvious benefit to urban dwellers who could afford a small service fee, succeeded in creating a whole new market for family planning services in Indonesian cities. Modern advertising and public relations techniques were used, including mass media, radio and television promotion, billboards and a special event in which a helicopter landed in a national sports arena to publicize the Blue Circle. It proved to be such an effective application of strategic communication that the Blue Circle logo was eventually used to designate a whole range of contraceptive products.

#### Philippines

The opposition of the Roman Catholic Church to modern contraceptive methods has posed a constant challenge for family planning promotion in the Philippines. A strategic communication campaign in that country began with extensive audience research. Through focus groups, interviews and surveys, it became clear that Philippine families loved their children and would not embrace family planning if it were seen as anti-baby or anti-child. To meet the concerns of clients and would-be clients and to respond to the love

which Philippine families have for their children, the campaign developed a logo of two children skipping along and the slogan: "If you love them, plan for them". This approach honours the Philippine belief in children as central to the family. The aim of family planning therefore could be projected not so much to avoid having children as to provide the opportunity to love each child better by planning for each of them appropriately (Rimon, 1998).

The logo was widely promoted in a range of mass media through radio spots, billboards, print materials and appropriate media news and references. The benefits of family planning for families and children were consistently emphasized. Over a three-year period, these communication programmes helped to increase modern contraceptive use by five percentage points, from 25 to 30 per cent. The approval rating for the logo and the message "If you love them, plan for them" was 99.9 per cent. The Department of Health adopted the logo as the new symbol for the family planning programme. Like many of the most recent campaigns, the Philippine campaign relied heavily on mass media. It used both radio and television extensively during the period 1993-1996, and integrated interpersonal and community events as part of the overall communication strategy. Strategically, the campaign was launched after the logistics system was in place and the health providers had been trained to provide improved services. The campaign was designed in three phases: first, the repositioning of family planning as "love of children"; second, the promotion of health providers as better trained and caring; and third, promotion, through testimonials, of specific contraceptive methods as being safe and effective. Throughout the three-year period, the communication materials were designed, packaged and tested using the entertainment-education approach (Rimon, 1998; Kincaid and others, 1999).

## Nepal

In Nepal, the government took a different strategic approach towards communication. Recognizing the difficulty of transport and person-to-person training and communication in the mountainous Nepalese terrain, the Ministry of Health and Radio Nepal worked with Johns Hopkins University Population Communication Services to develop a radio communication project that strategically integrated distance education for service providers with entertainment-education for villagers. The programme was developed on the basis of extensive audience research, which showed that providers in Nepal often did not treat their clients well and clients were not eager to seek out clinic services (Schuler and others, 1985). Therefore, the programme was focused on improving the quality of client-provider communication and on promoting these new attitudes and practices of the providers to potential clients. The benefits to both clients and providers of a participatory and friendly exchange would be shown in increased use of services, longer continuation rates and a higher rate of client satisfaction (Kincaid and others, 1999; Storey, 1998; Storey and others, forthcoming).

Figure 2. Trends in contraceptive prevalence: percentage of currently married women aged 15-49 using modern and traditional contraceptives in the Philippines: 1968-1998



Source: National Statistics Office and Department of Health of the Philippines, and Macro International, Inc., 1999. National Demographic and Health Survey 1998 (Manila, National Statistics Office and Macro International), p. 55.

Thus, the strategic programme was based on two different interventions: first, a radio serial drama entitled "Cut Your Coat According to Your Cloth" told the story of a Nepalese village and was designed to appeal to rural listeners throughout the country. The second programme, entitled "Service Brings Rewards", was created to train providers in counselling their clients in a pleasant, friendly, respectful manner so that clients would accept the services offered, return and bring their friends. The programme developed and promoted a new concept of client-provider communication which emphasized a highly participatory approach on the part of both client and provider to emphasize the needs of the client rather than rote training of providers. The radio communication programme in Nepal has, therefore, been a unique example

of a research-based, entertainment-education project directly linked to service providers, yet focusing entirely on the needs of the clients.

What has been the impact of the Nepal programme to date? In clinics in the region where the programmes were initially broadcast, the number of clients more than doubled from about 600 per month to 1,200 or more. Both programmes are now broadcast nationally. The unique combination of entertainment-education for clients and distance education for providers has provided a strategic thrust to health promotion in Nepal, a thrust which is applicable not only to family planning programmes but also to a whole range of maternal and infant health interventions (Storey and others, forthcoming).

## India

India has a long history of family planning communication campaigns, often producing mixed results. A strategic campaign that began recently in Uttar Pradesh shows some of the new directions being pursued. With a population of 165 million people, Uttar Pradesh is the largest state in India, equivalent in population size to the fifth largest country in the world. Despite a total fertility rate (TFR) of 5.4 children per woman, modern contraceptive method use reaches only 18.5 per cent. To address the situation, the United States Agency for International Development and the Government of India established the Innovations in Family Planning Services project in 1992. The goal of the project is to reduce TFR to less than 4.0 and increase the modern contraceptive prevalence rate to 35 per cent by 2004.

Formative communication strategy research identified the lack of open discussion about family planning and modern methods as a key inhibitor among all intended audiences. In fact, additional research indicated that only 32 per cent of rural couples ever discussed family planning and 46 per cent of family planning decisions were made by someone other than the wife (Williams and others, 1998).

A professional advertising agency was hired which developed a comprehensive interpersonal and mass media campaign centred around the slogan "Come Let's Talk". This campaign theme is illustrated by the tota and mynah birds, well recognized in India as male and female mythical characters that are known for their talkative nature. Their benefit-focused messages are contained in entertaining poetry, riddles and banter intended to stimulate dialogue between couples, their in-laws, friends and relatives as well as policy makers and service providers — all in a non-threatening, non-controversial but action-oriented way. These mnemonic characters have been featured in a mass media campaign on television and radio, in the press and wall paintings — as well as incorporated into more than 600 entertainment-education performances of folk media, including puppet shows, street theatre, ballad songs and traditional singing groups. The entertainment-education approach was also used to link the campaign to service delivery through a massive counselling training programme which oriented more than 9,000 field staff through health melas (fairs or festivals) and interactive workshops.

This client-centred campaign is helping to reposition family planning in India from a government quota programme to a "people's programme", with strategic communication offering better informed families something positive to talk about.

## Bangladesh

A strategic communication campaign is under way in Bangladesh that links public-sector clinics and more than 40 private-sector service providers in offering integrated family planning and reproductive health services. An outstanding example of strategic communication, the Green Umbrella campaign illustrates how an effective visual symbol can powerfully communicate the idea of integrated services and the important concept of preventive services as protection for the whole family (Kincaid, 1999; Whitney and others, 1999).

The Green Umbrella logo, with its slogan "Take Services, Stay Well", was introduced to dramatize the new orientation of the primary health care programmes from a domiciliary, door-to-door delivery system towards a more stationary facility able to provide a range of family planning, reproductive health, and maternal and child health services. Launched with great fanfare and a parade through the streets of Dhaka, the Green Umbrella was quickly recognized as the symbol for integrated care and the identifying logo for private sector and government clinics which could provide a range of services for the family.

The Green Umbrella logo and its message were powerfully reinforced through an entertainment-education television serial. The programme "Shabuj Shathi" featured a charming fieldworker, Bokhul, who travelled with her green umbrella to different villages and different families to provide needed family planning supplies and health advice for mothers with young children. Evaluation of the impact of Shabuj Shathi

revealed that approximately 80 per cent of the urban population and 60 per cent of the rural population watched episodes of Shabuj Shathi. It was rated as one of the most popular local drama serials ever seen on Bangladeshi television. A nationally representative cross-sectional survey of 10,500 women showed that married women who watched the television drama were more likely to use a modern contraceptive (52.8 per cent) than those who did not watch it (38.4 per cent).

Moreover, those who watched Shabuj Shathi gained substantial knowledge about HIV/AIDS, childhood diseases and nutrition. Interestingly enough, none of the other available sources of information — watching television, listening to radio, visit by health worker or membership in the Grameen Bank — had a comparable impact on HIV/AIDS knowledge. The television show appeared to have a greater impact than even socio-economic status, education or urban residence in informing a substantial portion of the population about the looming HIV/AIDS threat. Visiting a health planning service facility and using a modern contraceptive were significantly related to recall of the Shabuj Shathi television drama even after controlling for socio-economic characteristics and other influences on behaviour. In other words, the combination of a colourful, popular symbol, promoted through television spots, public appearances and the donation of 80,000 green umbrellas to family planning workers, combined with a very popular nationally distributed television series, constituted a highly strategic communication initiative in Bangladesh that reached a significant portion of the population, including more than a third of those in rural areas, and positively influenced health knowledge and reproductive health behaviour (Kincaid, 1999). Recognizing the popularity of the series, the Lever Brothers company provided funding support, thus making a major contribution to programmatic sustainability.

These examples of strategic communication in five Asian countries with strong voluntary family planning programmes have been publicized around the world and cited as examples for programmes elsewhere. It is indeed true that, through research-based, client-centred, benefit-oriented, service-linked, entertainment-focused, professionally developed and programmatically sustainable strategic campaigns, Asian countries have once again shown their leadership in family planning programme development and specifically in the area of strategic communication. They have shown that strategic communication can be the steering wheel for modern family planning and health promotion programmes.

#### Future directions

Where will strategic communication programmes in Asia go in the future to address new and emerging health and population issues? In the early part of the new century, there will be more emphasis on the following issues.

#### Behavioural science research as a basis for programme design

As evidence of the impact of communication on behaviour increases and as more resources are invested in communication, expectations for the role of communication in affecting behaviour will continue to grow. As a result, there will be increasing attention to behavioural science research both at the formative stage in designing programmes and at the evaluation stage in determining programme impact. Sophisticated research techniques will go beyond the usual demographic and socio-economic segmentation of audiences and will include segmentation by values and lifestyles, psychographics, image-mapping, product positioning, readiness according to behaviour change models and advanced evaluation methodologies which can measure intermediate behaviour changes, interaction effects and the relative cost-effectiveness of different measures. All these approaches, which are currently employed by advanced programmes, will be used much more extensively. And undoubtedly new models and analytic techniques will be developed leading perhaps towards an overarching theory of the impact of communication on behaviour change (Piotrow and others, 1997).

#### Much increased use of entertainment-education through the mass media

The rapid spread of entertainment vehicles, such as television dramas, respects no boundaries (Singhal and Rogers, 1999). In the last few years, for example, the most popular television/radio drama series in Indonesia and the Philippines were Mexican soap operas. Brazilian and Venezuelan programmes have also found their market niche in Asian countries. "Baywatch", an American television production, is considered the most watched television programme in the world, because it is broadcast via satellite and cable networks which cover most of Asia. Indian movies are omnipresent in theatres and television programming in many other Asian countries. At the same time, the movement for entertainment-education for social change is also spreading, either through direct production of television series such as Shabuj Shathi in Bangladesh (which has also been requested in Japan and Viet Nam) or by collaboration with commercial producers of television programmes and movies worldwide.

The Third Conference of Entertainment-Education for Social Change will be held in the Netherlands in September 2000. It will bring together practitioners, advocates, producers, celebrities, communication specialists, educators and evaluators worldwide. If entertainment vehicles are capable of spreading mores and behaviours which maybe considered harmful in some countries, they can also be used to spread messages and lifestyles which encourage people to choose healthy behaviours. A number of comprehensive evaluations of Asian entertainment-education programmes have documented their impact, from the popular "Aahat" television series in Pakistan on the need for family planning (Lozare and others, 1993) to the "HumLog" soap opera in India on women's roles (Singhal and Rogers, 1999), to the Philippine music campaign on sexual responsibility among young people starring Tony Award winner, Lea Salonga, of "Miss Saigon" fame (Rimon and others, 1994), and, as previously noted, the Bangladeshi Shabuj Shathi television series.

#### Dialogue rather than monologue

Strategic communication programmes will be designed more and more to stimulate dialogue, discussion and even debate. When issues are brought out into the open, especially when they are discussed in the mass media, they become legitimate for discussion, even if they remain controversial. Once an issue is openly debated, policies and programmes can be developed. This is certainly the experience in Thailand where pioneering and effective communication campaigns have reduced the spread of HIV/AIDS. In the Philippines, between 1993 and 1996 during the incumbency of HE Mr Juan Flavio as Secretary of Health, family planning became a controversial issue openly attacked by the Catholic Church hierarchy. Yet, during the period of the controversy, which included a three-stage nationally broadcast family planning communication campaign, modern contraceptive prevalence increased almost 70 per cent faster than before or after when the national mass media campaign was discontinued.

Moreover, research findings from India, Nepal, Pakistan and the Philippines show that spousal discussion about family planning can be triggered by exposure to a mass media campaign. This then becomes a strong predictor of family planning practice. The act of dialogue and discussion is in itself a form of behaviour and can be tracked as part of a series of intermediate behaviour changes that lead to actual practice of family planning (Kincaid and others, 1999; Lozare and others, 1993; Singhal and Rogers, 1999).

#### Communication for service integration

As family planning programmes expand into reproductive health and as health services offered become both more integrated and more decentralized, the need for a strategic approach to communication becomes more pronounced (Rimon, 1999). The challenge is to design communication strategies broad enough to accommodate a range of reproductive health concerns in a given country and yet specific enough to deliver clear and simple messages that will lead to action. More specifically, can communication programmes promote a category of services, such as reproductive health, yet not dilute each individual component, such as family planning, within that category? What kind of "layering" of issues, or strategic phasing of implementation can achieve programmatic goals for the lowest cost? Lessons can be learned from the ongoing experience of the Green Umbrella communication strategy in Bangladesh. In the Philippines, a new social enterprise called "Friendly Care", encouraged and supported by the business sector, is strategically positioning itself as a provider of integrated family health services (family planning, reproductive health, HIV and other sexually transmitted diseases, child survival, child health, maternal health, adolescent health) which are of high quality but affordable, delivered in clean well-lit clinics, staffed with friendly and caring health providers and franchised to qualified private doctors and midwives. Its success will depend in part on a communication strategy which can develop a "brand of service" that is consistent across all its service outlets and thus builds a cadre of loyal clients and customers.

#### New communication technology

Satellite transmission and computers, the Internet, distance learning, computer-aided simulation and strategic design, and combinations of new and existing technology will change programmes in ways that cannot even be imagined. No field today is changing faster than communication, and Asian countries will almost certainly be among the leaders. To take just one example of how technology can influence strategic communication, consider that computers can be programmed to serve as an interactive tool which combines (a) a step-by-step design process to ensure the most effective outcome possible, (b) rich databases of bibliographic and factual information such as contained in online journals, statistical profiles, focus group reports, survey data, and so forth, (c) all information accessible from within the national programme itself and via Internet connections to the World Wide Web, (d) integrated by means of alternative theories of behaviour change and (e) utilized by means of interactive computer simulations that enable planners to try out alternative strategies and receive feedback immediately about their relative effectiveness. Computer simulations are now used regularly in industry to design such things as electronic

components, aerodynamic automobiles and jet airplanes without having to build actual prototypes for trial-and-error testing and development. The same can be done for national communication programmes.

With the high levels of technology available, with skilled populations comfortable in cyberspace, and with the innovative approach to communication that has always marked their programmes, the countries and territories of Asia and the Pacific can look forward to continue playing a key role as leaders in strategic communication for better reproductive health in the new century.

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