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# SELECTED ISSUES CONCERNING THE PROMOTION OF HEALTH AND DEVELOPMENT IN THE ESCAP REGION

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## HEALTH AND DEVELOPMENT: THE DEVELOPMENT DETERMINANTS OF HEALTH

*Note by the secretariat*

**SUMMARY**

Health is a basic human right. It is essential for economic and social development. The pre-requisites for good health include social justice and stability, gender equality, food, income and education. Central to good health are the systemic and ecological conditions for mental and physical well-being. Hunger and malnutrition plague many countries of the Asian and Pacific region, leading to ill health and hindering economic progress. While poverty is the most serious threat to health, rapid urbanization, population ageing and environmental degradation pose new challenges.

The region is undergoing a major health transition, with most countries shouldering a double burden of communicable and non-communicable diseases. While such communicable diseases as HIV/AIDS, tuberculosis, and malaria show an upward trend, non-communicable diseases, such as cardiovascular diseases, diabetes and cancer, are also reaching alarming prevalence levels. Inadequate attention to safety measures in the course of industrialization and transport infrastructure expansion is associated with rising levels of injury.

Compounding the problem are resource-poor health systems that do not cater to the needs of the poor. Global trade regimes are a challenge to developing and least developed country access to essential medicines. Health financing for universal access to health services is a key issue in strengthening health systems and reducing the rich-poor health divide.

The present document identifies some key regional health trends and examines their underlying causes. It provides evidence for a framework on strategic promotion of health and sustainable development in the Asian and Pacific region. It complements the other three secretariat documents on investing in health, capacity-building for public health, and the draft framework for strategic action on promoting health and sustainable development.

CONTENTS



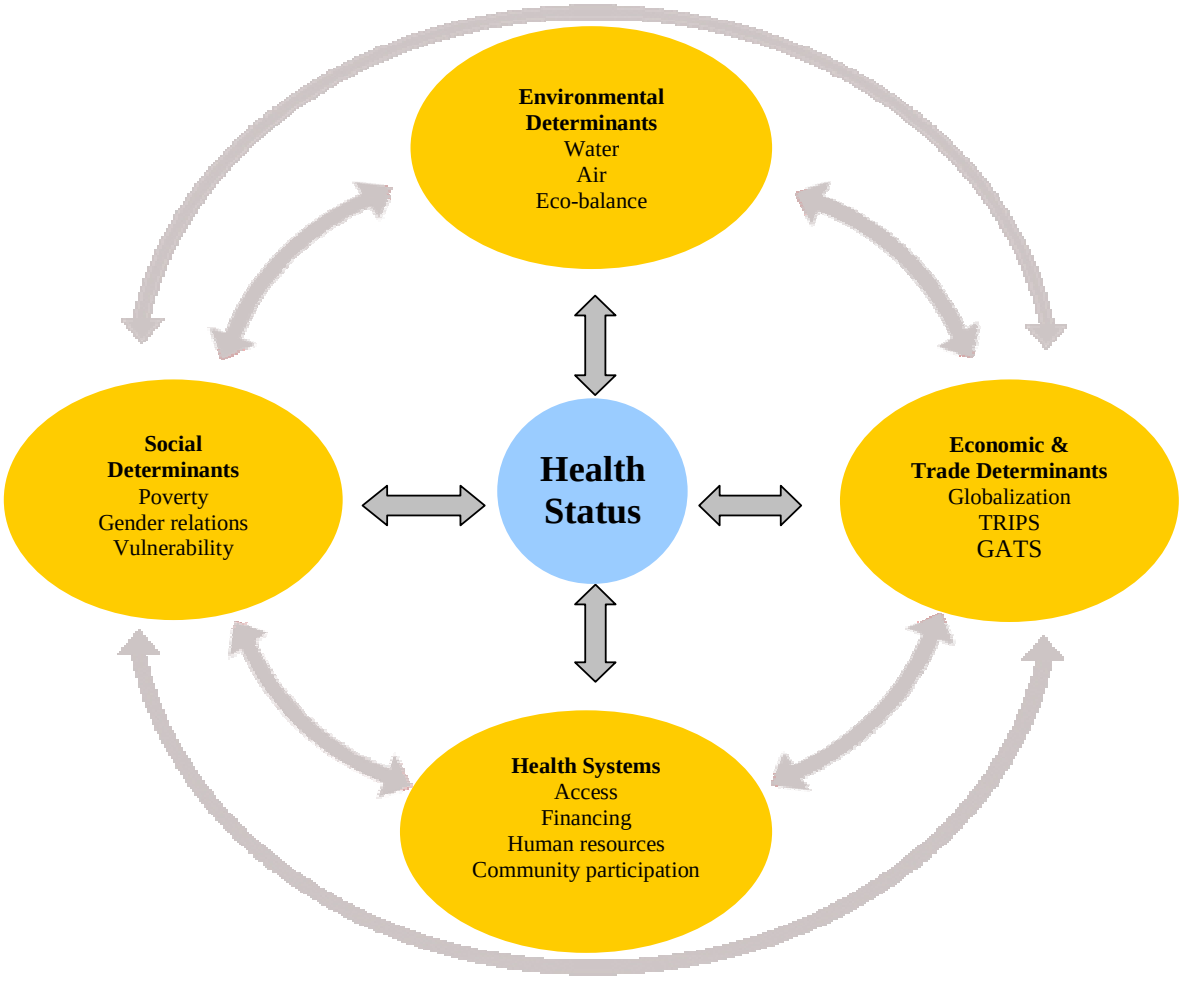
List of figures

## Introduction

1. Health is a basic human right. It is essential for economic and social development. "The attainment of the highest possible level of health…requires the action of many other social and economic sectors in addition to the health sector" (WHO, 1978).

2. Social justice and stability, gender equality and equitable access to food, income and education are prerequisites for health. Also central to good health are the societal, systemic and ecological conditions for mental and physical well-being (see figure 1). Demographic trends, such as urbanization, and an increase in the proportion and numbers of older persons, and epidemiological trends, such as the high prevalence of chronic diseases, pose new problems in the ESCAP region. Other social and behavioural changes pertaining to substance use, as well as civil and domestic violence, threaten the health and well-being of millions.

**Figure 1. Determinants of health**



3. Poverty is the greatest threat to health. Ill health is not only a consequence of poverty but also a cause of poverty. Almost two-thirds of the world's poor live in Asia and the Pacific, a substantial majority of whom are women. Those living in extreme poverty typically lack access to safe drinking water, nutritious food, education, health information, professional health care, adequate sanitation, decent housing, transportation, and safe and secure employment.

4. Globalization and trade liberalization bring both benefits and risks for poor people. Increasing market integration offers opportunities for growth, although barriers, both trade and non-trade, limit access by developing country producers to developed country markets. Financial crises associated with globalization has hit the poor and vulnerable hardest. Across the region, these changes are affecting peoples' access to food, water, land, health and other basic services, employment and a clean environment as well as their value systems, lifestyles and living conditions.

5. The Millennium Development Goals (MDGs) have highlighted the importance of health in the global development agenda. Of the eight MDGs, there are three that are explicitly health-related: reducing child mortality, improving maternal health, and combating HIV/AIDS, malaria and other diseases. Achieving those MDGs is closely linked with progress on other MDGs, for poverty reduction, gender equality, environmental sustainability and partnership-building. That progress would create vital conditions for attaining better health through improvements in food security and gender equality as well as access to education, essential medicine and clean drinking water. The MDGs underscore the centrality of health in development and not only as an outcome of development.

6. The present document identifies some key regional health trends and examines their development determinants. It provides evidence to support the creation of a framework for the strategic promotion of health and sustainable development in the ESCAP region. The paucity of region-specific data on many aspects of health is a serious issue that needs to be addressed.

## I. HEALTH TRENDS IN THE ESCAP REGION

7. The ESCAP region is undergoing a major health transition. Gains in health status have been considerable. Life expectancy at birth in developing countries has increased by 22 years from 46 years (1960) to 68 years (2004). The under-five mortality rate has declined 70 per cent from 225 per 1,000 live births (1960) to 68 per 1,000 (2004). Despite such impressive progress, the region still faces serious health challenges. The profile of major causes of disease, disorder and death is being transformed.

### A. Hunger

8. Hunger and malnutrition plague many countries of the Asian and Pacific region, leading to ill health and hindering economic progress.

9. There appears to be a widespread misconception that "hunger" is no longer of concern, given the success in income poverty reduction in many countries of the region. Six out of 10 of the world's hungry people live in the ESCAP region (United Nations, 2004). There has only been modest progress on hunger reduction (ESCAP/UNDP, 2003). Indeed, among the 20 countries in the world with the highest proportions of malnourished children, 11 are in the Asian and Pacific region (UNICEF-EAPRO, 2003).

10. Traditionally, hunger is associated with rural poverty. However, with rapid urbanization, urban food insecurity and malnutrition are emerging issues of concern. In the Russian Federation, for example, food insecurity is more prevalent in urban than in rural areas.

11. The most serious nutritional deficiencies are found among children and women. Anaemia in pregnant women causes one out of five cases of infant mortality. The economic costs of malnutrition, particularly in the case of widespread malnutrition among children, could be significant. Malnutrition in such countries as China and Pakistan is estimated to cost about 3 per cent of GDP (ESCAP/UNDP, 2003).

12. Paradoxically, hunger exists in net "food surplus" countries where there is no absolute shortage of food supplies (ESCAP/UNDP, 2003). This underscores the fact that hunger is a problem of inequitable access to food rather than the mere unavailability of food (Sen, 1997). Hunger reduction requires action on a range of deprivations beyond that of food supply. This includes the enhancement of general economic growth; the expansion of employment and decent rewards for work; the diversification of production; the enhancement of medical and health care; arrangements for vulnerable people to have special access to food; the spread of basic education and literacy; the strengthening of democracy and the news media; and a reduction in gender-based inequalities (Sen, 1997).

### B. Sexual and reproductive health

13. Sexual and reproductive ill health accounts for nearly one-third of the global burden of disease among women of reproductive age and one-fifth of the total global population. In South Asia, only 37 per cent of births are attended by trained personnel; in East Asia and the Pacific, the coverage is better, at 73 per cent. Many countries in the region have a maternal mortality rate exceeding 400 per 100,000 population. The unmet need for family planning services is 24 per cent, denying couples the opportunity to control the spacing of the births of their children or to limit the size of their families. The mortality rates and complications arising from illegal abortions are high. In response to increasing longevity and the emergence of HIV/AIDS, reproductive health services have been broadened to cover population groups of all ages, including men and adolescents.

## C. Communicable diseases

14. Although there is a downward trend in the prevalence of many communicable diseases, they are still a major cause of morbidity and mortality in the region. Communicable diseases still account for over 60 per cent of all child deaths. Furthermore, newly emerging communicable diseases pose new threats. There is considerable diversity in the occurrence of communicable diseases in the region. In some countries (Bangladesh, India and Myanmar), communicable diseases cause over 40 per cent of deaths, compared with 11 per cent of deaths in others (Australia, Brunei Darussalam, Japan, New Zealand and Singapore).

### *(a) HIV/AIDS*

15. In 2003, about 1.4 million people in the Asian and Pacific region were newly infected with HIV/AIDS and about 650,000 people died of AIDS, bringing the total number of people living with HIV/AIDS in the region to over 8 million (ESCAP, 2003a; UNAIDS, 2003). The epicentre of the epidemic is fast shifting to this region, making HIV/AIDS a critical public health threat. In terms of the highest number of people living with HIV/AIDS, India, with an estimated 4.9 million people infected, is second only to South Africa. In China, epidemics among vulnerable groups, particularly injecting drug users (IDUs), and involving contaminated blood and blood products are spreading into the general population. Despite efforts in China and India, some fear that the HIV prevalence in the region could double by 2010 if a significantly expanded response is delayed. HIV-related stigma, discrimination, as well as inadequate access to testing, counselling and antiretroviral (ARV) treatment are serious issues, especially in view of the region's large population base.

### *(b) TB, malaria, SARS and avian influenza*

16. After a 40-year decline, tuberculosis (TB) deaths are rising; 80 per cent are among those in their most productive years (aged 15-44). TB prevalence in South Asia is 343 per 100,000 population. The corresponding figure for East Asia and the Pacific is 313. These figures are higher than the global TB prevalence rate (257). TB kills more women than all causes of maternal mortality combined. Of the top 22 heavy burden TB countries worldwide, 12 are in the Asian and Pacific region (WHO, 2004a).

17. Although there have been significant reductions in malaria-caused death, the incidence remains very high in some countries of the region. About 56 per cent of the region's confirmed cases occur in India. In another eight countries (in the Pacific and the Greater Mekong Subregion), malaria-caused deaths exceed 10 per 100,000 per year.

18. Since the mid-1970s, over 30 new infectious diseases have been discovered. Severe acute respiratory syndrome (SARS) and avian influenza are the latest additions. Relative to other diseases, these two caused few deaths (SARS: 8,422 cases, 916 deaths in 30 countries worldwide - but mainly in Asia; avian influenza deaths: Thailand 8, Viet Nam 15). The absence of vaccines and cures,

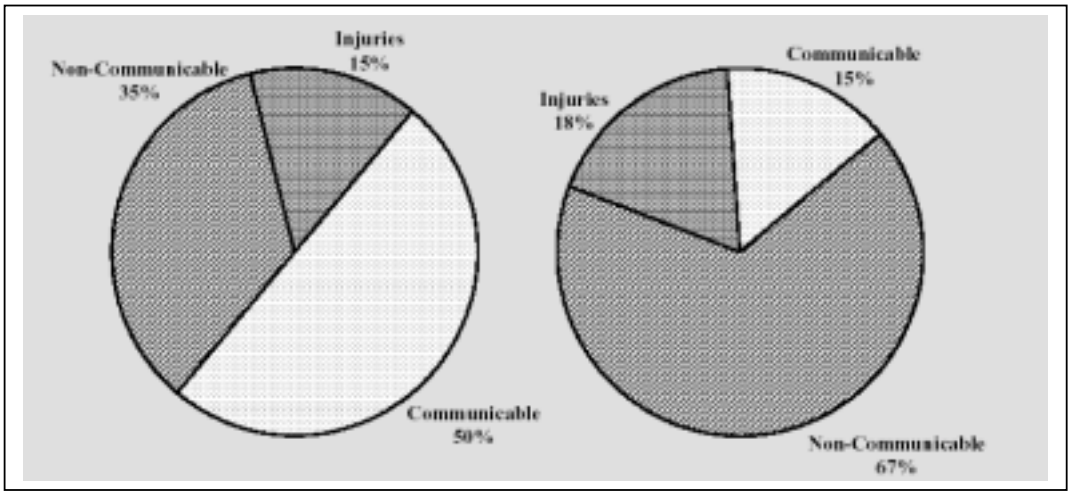
compounded by the rapid spread of the diseases, unleashed widespread panic. The resultant negative economic impact was significant.

### D. Non-communicable diseases and their risk factors, and injuries

19. The burden of non-communicable diseases (NCDs), widely seen as problems of industrialized countries, is increasing even in countries where hunger is endemic. In South Asia by 2000, 44 per cent of the burden of disease was attributed to NCDs. By 2002, NCD conditions accounted for 62 per cent of all deaths in the Asian and Pacific region. This sharp increase is associated with changes in lifestyles, increased smoking and shifts in dietary habits towards refined foods, meat and dairy products with high fat, sugar and salt content, as well as reduced physical activity. The developing countries of the region now shoulder a double burden of communicable and non-communicable diseases. As the region battles communicable diseases, NCDs have emerged as serious health threats (see figure 2), becoming principal causes of morbidity and mortality.

**Figure 2. Burden of disease in Asia and the Pacific, 1990 and 2020**

**1990** **2020**




*Source:* Murray and Lopez, *The Global Burden of Disease* (Geneva, WHO, 1996).

#### *(a) Smoking and tobacco use*

20. Smoking is the single largest preventable cause of disease and premature death. One in five of smoking-related deaths occurs in the WHO Western Pacific (WPR) region, which includes China. Of the global burden of disease attributable to tobacco use, 16 per cent occurs in the WPRO region, and 20 per cent in the WHO South-East Asia (SEAR) region. Smoking affects every organ in the body and causes a range of cancers. It harms both smokers and non-smokers. Adult smoking behaviour influences the likelihood of earlier smoking by children. Between 80,000 and 100,000 children worldwide start smoking every day. Around half of them live in Asia.

***(b) Drug abuse***

21. Drug abuse disrupts lives and threatens human security. Over 50 per cent of worldwide amphetamine-type stimulant (ATS) abuse occurs in the ESCAP region. Most ATS abusers are youth. The rapid and widespread expansion of ATS consumption is a cause for concern, as is polydrug use, especially when ATS is combined with heroin. The acute and chronic health effects include the possibility of irrevocable brain damage.

22. There are 13 million injecting drug users, nearly 70 per cent of whom are in this region. Injecting drug use with sharing of unsterilized injection equipment, fuels the HIV epidemic. The prevalence of HIV/AIDS among IDUs reaches between 50 and 90 per cent in a very short period of time (less than six months).

***(c) Cancer***

23. By 2015, two-thirds of all cancer cases are expected to occur in developing countries. In Thailand, the registered prevalence rates (cases per 100,000 population) rose from 53.8 (1987) to 60.4 (1997), while in India, in any given period, there are about 2.5 million cases of cancer, and nearly 700,000 new cases are detected yearly. In China, cancer-related deaths grew by nearly 30 per cent over two decades; cancer is now the leading cause of death. The incidence of lung cancer in China could be cut by 80 per cent through reductions in smoking.

***(d) Cardiovascular diseases and diabetes***

24. As the NCD epidemics advance and mature, the risk of cardiovascular diseases will affect all sectors of society, with the poor being most susceptible. Individuals with lower levels of income or education are at higher risk of coronary heart disease.

25. Diabetes has risen more rapidly in South Asia than in any other part of the world. By 2025, the WHO SEA region will have almost 80 million diabetics, while its Western Pacific region will have at least 55 million adult diabetics.

***(e) Obesity***

26. Over 1 billion adults are overweight, of whom at least 300 million are obese, with the majority living in the ESCAP region. Obesity is a major contributing factor to the global burden of disease and disability, often co-existing with under-nutrition in developing countries. The rise of childhood obesity is worrying, as obese children become obese adults. Obesity and overweight pose a major risk for serious diet-related chronic diseases, including type 2 diabetes, cardiovascular disease, hypertension and stroke, as well as certain forms of cancer. Some of the highest levels of adult obesity in the world are found in the Pacific. Obesity rates in most Pacific communities exceed 20 per cent (higher than in Australia and the United States of America), and are higher in women and in urban dwellers.

***(f) Mental illness***

27. Mental illness has emerged as a major public health issue. It is estimated that 450 million people suffer from mental or neurological disorders. Worldwide, depressive disorders and schizophrenia are responsible for 60 per cent of all suicide cases. Five out of 10 leading causes of disability are related to mental disorders, including depression, substance abuse, manic depression, schizophrenia and obsessive-compulsive disorder. With rising population ageing in the region, mental disorders commonly associated with old age, such as depression and senile dementia, will increase (WHO, 2004d and 2004e).

***(g) Noise-related health problems***

28. Around 120 million people worldwide have disabling hearing difficulties, mainly due to exposure to noise. Noise pollution is responsible for sleep disturbances, cardiovascular and psycho-physiological effects (such as hypertension and anxiety), reduced performance and aggressive behavior. Prolonged exposure to noise results in hearing impairment and inability to understand speech under regular conditions. This is a severe and avoidable social handicap with economic consequences.

***(h) Injuries***

29. Over 90 per cent of the world's injury-related deaths occur in low- and middle-income countries. Injuries account for 12.5 per cent of the burden of diseases in Asia and the Pacific.

30. The Asian and Pacific region accounts for about 60 per cent of global road deaths, despite having only 16 per cent of the world's vehicles. Annually, some 10 million people are severely injured or killed on Asian and Pacific roads. Road deaths increased by nearly 40 per cent in Asia between 1987 and 1995, while in developed countries, they fell by about 10 per cent because of better safety measures. In the WHO SEA region (2001), road traffic injuries accounted for an estimated 354,000 deaths and 6.2 million hospital admissions. The high burden of road traffic injuries in the region is predicted to more than double in the next two decades. Investment in transport infrastructure improvements and the production of more powerful modes of transport has not been matched by investment in comprehensive safety measures for all drivers, pedestrians and passengers.

***(i) Occupational health risks***

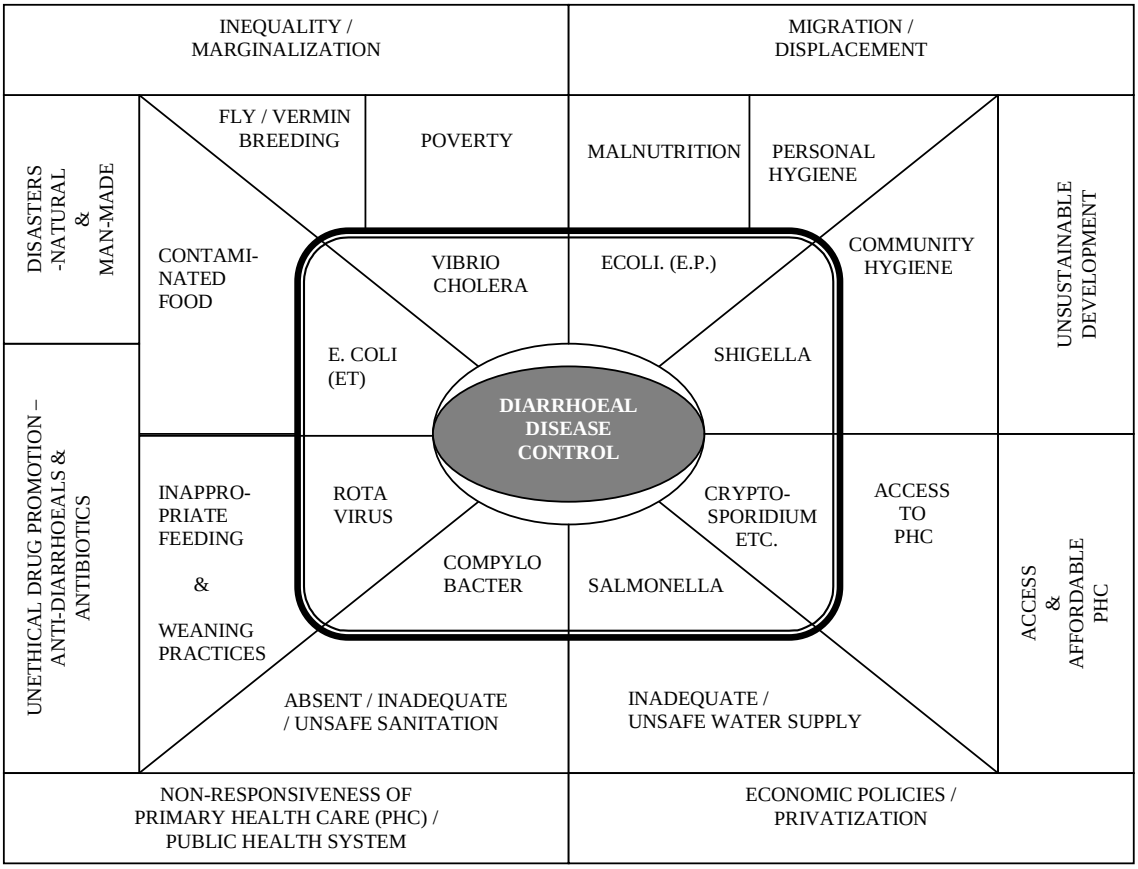
31. An estimated 1.2 million people die from work-related diseases and injuries annually; as many die globally from malaria. Work-related ill health is present in all settings worldwide. The risks and hazards associated with work are largely experienced by, but not restricted to, low-income and other vulnerable groups, such as women, children and minorities. The further industrialization of developing countries, with an expansion of the workforce, is expected to substantially increase the burden of occupational diseases and injuries.

32. In many Asian and Pacific countries, occupational hazards are not adequately addressed, leaving workers exposed to possible injury, chemicals and noise. Noise-induced hearing impairment is the most prevalent irreversible occupational hazard.

## II. DETERMINANTS OF HEALTH

33. Diverse social, economic, environmental and health system factors significantly co-determine the health profiles of societies. While universal access to medical care is clearly one of the primary determinants of health, more important to the health of populations as a whole are the economic, social and environmental conditions that cause illness and create a need for medical care. Evidence shows that improved water and sanitation, education, particularly of women and girls, and more equitable access to health services, result in health improvements and rising income (WHO, 2001). Furthermore, equitable income distribution reduces disparity. The present chapter examines development determinants in three main areas related to social, economic and trade, and environmental factors. Many of the factors may work concurrently and may have an impact on each other, leading to multiplier effects. Some of these factors are in turn worsened by ill health, leading to a vicious cycle. Figure 3 is an illustrative example of the impact of diverse determinants on one disease, diarrhoea.

**Figure 3. Impact of diverse determinants on diarrhoea**




*Source:* Based on original figure by R. Narayan, "The community health paradigm in diarrhoeal disease control".

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## A. Social determinants

34. There are several social determinants of the health of populations in the region. These include eight major ones discussed below. Other related factors include stress, the nature of work, employment status, as well as social support.

### *(a) Poverty*

35. Poor countries and poor people suffer from multiple deprivations that translate into high levels of ill health and disability. Poverty is an absolute barrier to good health. It impacts health by influencing all other factors adversely. The poor are more vulnerable to disease owing to, inter alia, their lack of access to promotive, preventive and curative health care, nutritious food and financial resources. In addition, poor people are also more vulnerable to environmental threats to health, such as polluted air and water, which undermine the quality of their lives. Preventable and treatable diseases therefore take an enormous toll on the poorest people.

36. Over 2.3 million people, primarily in developing countries, die annually from eight vaccine-preventable diseases. An estimated 1.7 million people in developing countries die annually from diseases linked to unsafe water and sanitation and poor hygiene (Wagstaff, 2002). Throughout the world, children are at higher risk of dying if they are poor. Yet, with improved water and sanitation, nutrition and effective oral rehydration therapy, child diarrhoeal mortality could be reduced by about 50 per cent.

37. HIV/AIDS affects the poor much more dramatically, compromising livelihoods, and diverting earnings and savings to cover treatment costs. The cost of ARV therapy is still beyond the reach of the poor. Disposable income could fall by 80 per cent in families whose main income earner dies of AIDS-related causes (UNAIDS, 2002).

38. In many countries, the poor use tobacco the most. In some countries, smoking rates are twice as high in the lowest income group when compared with the highest.

39. The vicious cycle of ill health has a greater impact where poor people are generally not covered by adequate health insurance that protects their access to health services (see chapter III below). In the two most populous countries of the region, high proportions of the health care expenditures of the poor are met through out-of-pocket payments, largely to private health service providers, that are disproportionately high in relation to their earnings.

### *(b) Gender inequality*

40. The impact of gender discrimination on health begins from the feotal stage with malnutrition in young pregnant women. The effects of malnutrition in childhood and adolescence are particularly devastating for girls. Girls who are malnourished during childhood are more likely to be malnourished as adolescents, to enter their first pregnancy malnourished, and to give birth to underweight babies

whose learning capacities are stunted from nutritional deficiencies, thus perpetuating the cycle of hunger and poor health. This effect is aggravated if the first pregnancy occurs during adolescence.

41. Household food security, gender equity in access to food within households, gender-sensitive knowledge of nutrition and nutrition-related health practices and the child care that household members, both male and female, could provide, are crucial for overcoming childhood malnutrition, and ensuring that girls and women continue to be fairly and adequately nourished.

42. Women are increasingly more prone to HIV infection than men. In earlier stages of the epidemic, the infection occurred predominantly among men. The numbers of HIV-positive women and men are now about equal. Prevalence rates are higher among young women aged 15 to 24 than among men of the same age group. This is partly due to biological factors. It is also due to the disadvantages women face in efforts to negotiate safer sex and deal with domestic violence, as well as their inadequate access to information and health services concerning contraception and sexually transmitted infections.

43. Smoking rates are lower among women than men. However, the tobacco industry is increasingly targeting women in developing countries of the region where female roles have begun to change. Increased smoking among women is indicative of the success of such targeting, which fosters an association between smoking and images of emancipation, slimness and sexual allure.

44. Generally, there are no sex differences in the prevalence of mental and behavioural disorders. There is, however, a higher prevalence of depression and anxiety disorders among women. Women tend to experience considerable psychological distress because of reproductive health conditions and problems. There is also a strong association between mental disorders (depression, anxiety and stress-related syndromes) and violence in the lives of women.

### *(c) Education*

45. Education, especially girls' education, is key to addressing health disparities throughout the region. Education levels are low in South Asia, with the adult literacy rate at 57.6 per cent and the female literacy rate even lower (40.8 per cent). Education is crucial if people are to obtain safer and better employment; achieve greater levels of health literacy; understand the importance of sustainable food security in order to reduce malnutrition; take preventive health measures; and avoid high-risk behaviours. Adequate and appropriate education provides the tool for breaking out of the cycle of hunger and poverty. Girls having improved access to education is associated with better health for both women and their children.

### *(d) Population ageing*

46. Owing to declining fertility and increasing longevity, the Asian and Pacific region is experiencing a rapid increase in the proportion of the population aged 60 years and over. As of 2002,

52 per cent of all people aged 60 years and over in the world lived in Asia and the Pacific. By 2025, this is expected to reach 59 per cent (ESCAP, 2002).

47. Much of the disease burden among older persons results from chronic NCDs that are difficult and expensive to treat. Indeed, a part of the shift towards NCDs between 1990 and 2020 will be due to demographic changes, with lifestyle changes being the other major causal factor. Such diseases as Alzheimer's and senile dementia and such mental illnesses as depression occur predominantly in the ageing population. Cataract blindness is also more prevalent among older persons. However, the ageing population faces increasing problems in accessing health services. Older persons are likely to be most affected by the privatization of health services and the erosion of universal care through publicly funded health systems, with an increased global emphasis on cost recovery.

48. Currently, "most care for dependent older persons is provided by family members with scarce community-based resources" and lacks "quality assurance mechanisms and regulatory provisions in formal long-term care" (ESCAP, 2002: 10). The disintegration of family and community support systems associated with rapid urbanization and decreases in the ratio between workers and older dependants (ADB, 1999) render the provision of aged care a challenge in much of the region where change is often abrupt and compensatory social services are weak. The development of effective strategies has also been hampered by a lack of international policy focus on the well-being of older persons and the predominance of a negative global paradigm of old age (Sherlock, 2002).

***(e) Population mobility***

49. Labour migration in the ESCAP region has grown rapidly and is increasingly important. Migration is occurring within countries, across borders within the region interregionally. China alone has 170 million domestic migrant workers.

50. Migrant workers tend to be concentrated in sectors of economic activity with little or no health, safety or legal protection. They are particularly vulnerable to human rights abuses. Migrant workers often perform jobs that entail higher risk, and are poorly paid. Their status is impermanent and they have least recourse when illness, injury or other problems occur that require medical attention. Most national health care plans do not cover migrants, especially unregistered ones.

***(f) Urbanization***

51. Internal migration from rural to urban areas and the urban transformation of rural settlements are important determinants of the high urban population growth in less developed regions (United Nations, 2004). The urban population of the region is projected to increase dramatically, from 1.2 billion (1995) to 2.5 billion (2025), with over 400 million residing in cities of 10 million or more people.

52. The urban poor suffer overcrowding, poor ventilation, lack of potable water, poor sanitation and inadequate nutrition. The infant mortality rate in a Manila slum was 2.8 times higher than that in non-squatter areas. In the slums of Dhaka, diarrhoea was twice as prevalent as in rural Bangladesh (ADB, 1999).

53. Housing is an important determinant of health that is linked with other determinants, such as poverty, urbanization and education. The housing environment can impact health through its structure (protection from the elements and safety of construction), provision for waste disposal, ventilation, indoor air pollution, and the use of the home as a workplace and for the storage of hazardous chemicals.

54. Throughout the region, construction activity and the volume of traffic have burgeoned, causing significantly higher noise levels, often without protection. Technological advancements in sound amplification systems are widely used, with public announcements, broadcasts and music being part of the ubiquitous urban noise.

***(g) Stigmatization and discrimination***

55. Many social groups are subjected to systematic stigmatization, discrimination and marginalization, which have a significant impact on their health status. Their access to health services, as well as the quality and appropriateness of services provided, and the extent that their views are respected in treatment options are affected by the attitudes and behaviour of health service providers. For many, access could also be determined by care-givers. Stigmatization exerts a strong influence on personal perceptions of self-worth and the will to fight for one's right to be healthy.

56. People living with HIV/AIDS are often unable to obtain adequate health and other basic services. Similarly, many mentally ill people are rejected by their families, leading to their becoming homeless or remaining abandoned in institutions. Women living with AIDS and women who are mentally ill are likely to face greater obstacles; often their links with their children are forcibly severed.

57. The majority of the region's estimated 400 million people with disabilities tend to be poor and socially excluded. People with diverse disabilities have the same need for regular access to health services as non-disabled persons. However, they face more challenges in securing that access due to physical (built environment) and information barriers that arise from stigma and discrimination.

***(h) Conflicts and disasters***

58. In situations of conflict and environmental disasters, morbidity and mortality related to injury, violence, accidents and destruction are common. The shock of displacement, sudden loss and physical trauma triggers mental health problems among many. Refugees typically experience high mortality following their displacement. Furthermore, health services may be disrupted, restricting access

precisely when the need for it escalates and conditions for disease (e.g., diarrhoea, cholera and malaria) outbreaks have been created. Food and water supply lines are often targeted in conflict situations.

### B. Economic and trade determinants

59. Economic globalization, characterized by trade liberalization and massive cross-border capital flows, has a profound influence on health. Increasing market integration offers opportunities for growth, although barriers, both trade and non-trade, limit access by developing country producers to developed country markets. International trade could facilitate competition and knowledge dissemination, raise productivity and spur innovation. However, trade expansion guarantees neither immediate economic growth nor longer-term economic and human development. Poor households are especially vulnerable to shocks in international markets, and any reduction in household budgets affects expenditures that have health consequences, as was the case during the 1997 financial crisis, which most affected four countries in the region.

60. Food now accounts for 11 per cent of global trade (Chopra et. al., 2002). Food supply changes have influenced dietary change. Most visible is the rapid spread of the fast food culture through multinational fast food chains. Global marketing and the systematic moulding of taste are major features of the globalization of the food industry. Children and young people are targets of marketing campaigns that play a key role in the nutritional transitions of populations. There is a surge in such "lifestyle diseases" as cardiovascular diseases, obesity, certain kinds of cancer and hypertension.

61. These changes can be linked to multimillion dollar expenditures on marketing lifestyle items via the mass media and other channels of advertising, promotion and sponsorship. The major proportion (80 to 90 per cent) of international advertising expenditures focus on processed foods, soft drinks, cigarettes, alcohol, drugs and toiletries. The aspirational messages that advertisers have been perfecting in higher income countries for decades are now used worldwide. Global trade, information technologies and economic liberalization facilitate the global marketing of these consumer items as essential hallmarks of modernity and progress (Buse et al., 2002).

62. No other trade agreement has as much impact on the health sector as the Agreement on the Trade-Related Aspects of Intellectual Property Rights (TRIPS). Under TRIPS, countries are prevented from producing, exporting, importing and selling generics for at least 20 years. Compulsory licenses may be issued without reference to patent holders only for reasons of "national emergency", "extreme urgency" and public non-commercial use. TRIPS imposes obligations on developing countries that may adversely affect access to life-saving medicines. The Doha Declaration has provided a ground-breaking opportunity for the introduction of safeguards to protect national public health interests and improve the poor's access to drugs.

63. Other WTO agreements, such as the General Agreement on Trade in Services (GATS), could have a significant impact on health systems, as they affect the movement of personnel and foreign direct investment in the health sector. Many developing countries perceive an economic opportunity in exporting health services under GATS. Decisions need to be based on prior close examination of the implications and consultations with all concerned stakeholders. At its meeting in July 2004, the WTO General Council reaffirmed the Doha ministerial declarations and decisions and adopted a framework. However, the processes need to be time-bound and focused and result in tangible benefits for poorer countries in the region as well as reducing the rich-poor divide.

64. Countries need to understand the full implications of the agreements and make the necessary amendments to their national laws to give full effect to the safeguards.

65. The expansion of the private sector, in the absence of safeguards for vulnerable groups, could undermine the integrity of health systems as a whole, leaving the public sector to provide services only for the poorest and most needy, a phenomenon described as "cream skimming." GATS could affect a wide range of other service sectors that directly impact health. One example is the commercialization of water and the regulation of its use through tariffs. In practice, pricing clean water beyond the reach of most poor households could lead to serious health problems.

66. Globalization has changed the nature of work and the work environment. Insufficient attention is given to occupational safety and health.

67. Work-related injuries, illness and death are seriously underreported. Reporting systems are weak or non-existent. ILO estimates that there are 14 million non-fatal injuries annually in the region. For every fatal accident, there are at least 750 accidents causing permanent disability (ILO, 2001).

68. Prolonged microscopy work in the electronics industry, computer-related work and poor lighting in workplaces affect vision. Insufficient attention to the ergonomic design of workplaces, including the positioning of worktops, machinery, materials, keyboards and chairs, has resulted in musculoskeletal problems. Inadequate ventilation systems enable mites and dust to thrive while restricting the elimination of fumes, causing respiratory problems.

69. Globalization has contributed to the erosion of indigenous and complementary systems of medicine in many countries by encouraging the neglect of these systems and reducing official support and funding for them. These systems of medicine, which provide the poor with a viable alternative to expensive therapies and patented drugs, need to be mainstreamed. Governments in the region are now paying serious attention to these systems.

### C. Environmental determinants

70. Approximately one quarter of the global burden of disease may be attributed to environmental causes, with 40 per cent of those affected being children under 5. Among the 10 leading mortality

risks in high-mortality developing countries, unsafe water, sanitation and hygiene ranked second, while indoor smoke from solid fuels ranked fourth (WHO, 2002b).

***(a) Water and sanitation***

71. Globally, water-related causes account for approximately 80 per cent of all communicable diseases (Ford, 2004). In the ESCAP region, diarrhoeal diseases kill approximately 750,000 people annually, mainly children. Water-borne bacterial infections may account for as many as half of these deaths (UNICEF, 2004).

72. Worldwide, 1.1 billion people lack access to a safe water supply and 2.4 billion to adequate sanitation. In East Asia and the Pacific, 48 per cent of the population have access to improved sanitation. In South Asia, only 37 per cent have such access. An inadequate water supply and inadequate sanitation lead to ill health and thus increase poverty. Those who lack an affordable and adequate water supply are the poorest in society.

73. It is estimated that over 200 million, mostly rural, people in nine Asian countries are at risk of arsenicosis, cancer and eventual death from the long-term consumption of groundwater contaminated with arsenic. Arsenic toxicity has a pervasive effect on all systems in the body and long-term consequences on children, slowing their cognitive development and mental ability. There is no known medical cure for arsenicosis. The only sure way of preventing arsenicosis is to avoid drinking contaminated water. Furthermore, excessive fluoride in water causes dental and skeletal fluorosis, and cadmium is linked with kidney damage.

***(b) Air pollution***

74. In the Asian and Pacific region, indoor air pollution ranks as the highest health risk among the many sources of air pollution. Exposure to smoke from burning solid fuel (wood, dung, coal and agricultural residue) increases with the degree of pollution and the time spent in contact with smoke. Women and children are most at risk. Indoor air pollution causes an accumulation of pollutants, such as coarse and fine particulate matter, carbon monoxide, oxides of nitrogen, benzene, toluene and formaldehyde, in the bodies of those exposed to indoor air pollution. Epidemiological evidence suggests a link between indoor air pollution and respiratory infections, TB, cancers, low birth weight and increased infant and perinatal mortality (Suk, 2003).

75. Industry and transport vehicle emissions harm human health. Lead emissions are a serious problem in the region. Lead is found in rice, vegetables and drinking water, leading to high levels of lead in the blood. In China, children with such high lead levels are smaller and lighter than average children in their cohort and are sick more often (Suk, 2003).

76. Apart from its immediate toxic and carcinogenic effects, air pollution also affects the environment and health in other ways. Some air pollutants descend as acid rain. Acid rain causes environmental degradation that impacts on ecosystems, increasing health hazards. Ozone depletion,

associated with use of ozone-depleting chemicals, is expected to increase UV-B radiation, resulting in the suppression of immune systems and skin cancer. In South-East Asia, 70 million people are seasonally affected by air pollution resulting from forest fires (Sastry, 2002).

***(c) Food production and food safety***

77. Many agricultural practices leach pesticides, fertilizers and other chemicals into the air and water. Agrochemical poisoning and agro-machinery accidents cause diseases, injuries and death that are underreported. Small-scale farmers are especially vulnerable to exposure to chemical fertilizers and pesticides that are widely used in the region, and to ergonomic hazards aggravated by sustained hard physical work with old and poorly maintained equipment (ILO, 2001). Some pesticides are associated with cancers, miscarriages and congenital malformations in the children of parents exposed to them (Suk, 2003).

78. Many new infectious diseases have emerged because viruses have jumped the species barrier from animals to humans. Agricultural production systems, in particular intensive animal husbandry in densely populated areas, with livestock in close proximity to humans, are the perfect breeding ground for new diseases. SARS and avian influenza are recent examples. Emerging diseases affect not only humans, but also animals and plants, thereby affecting ecosystems and human health. Diseases that threaten agricultural production also undermine food security and livelihoods. Thus, emerging diseases have themselves become drivers of ecological change (Epstein et al., 2003).

79. A controversial issue in food production is the use of genetically modified organisms. There is vigorous international debate on the large-scale use of genetically modified organisms when their long-term consequences on human health have not been established. The export of food from genetically modified crops to developing countries has caused concern.

80. Plastics are widely used for packaging food. Many plastics contain toxic chemicals, including biocides (to prevent organisms colonizing their surfaces), colourings and flexibility-enhancing agents known as plasticizers. These substances could be released if ingested (Owen, 2004). Vast quantities of microscopic plastic fragments are building up in oceans. The mass of plastic fragments in parts of the central Pacific Ocean is six times greater than that of resident plankton, the very basis of the food chain. There are indications that plastic fragments are being ingested by marine organisms and could enter the food chain.

***(d) Waste***

81. Indiscriminate waste disposal is a major health risk. Non-biodegradable plastic waste constitutes a major part of waste. Plastic floats in water; it accumulates and absorbs toxic hydrophobic chemicals that are present from other sources. Plastic waste also clogs sewerage systems, causing severe sanitation problems.

82. Despite some progress since the Basle Convention on the Transboundary Movement of Hazardous Waste came into force in 1992 (UNEP, 2004), large amounts of hazardous waste, including electronic waste, are still exported to developing countries in the region. Recycling is often uncontrolled and the burning of plastics, acid baths and dumping are commonplace. The region's poor are exposed to lead, mercury, hexavalent chromium, beryllium, cadmium and brominated flame retardants that are set free in these processes (Puckett et al., 2002). The unsafe disposal of hazardous domestic medical and industrial waste poses a severe health risk to people in the region.

## III. HEALTH SYSTEMS

83. Health services play an important role in promoting and protecting health. Providing equitable access to health services is key to reducing the occurrence and impact of disease among the poor. Governments are under pressure to provide health services effectively, efficiently and equitably. Industrialized and developing countries have adopted similar approaches to improving the performance of health systems: downsizing, privatization, partnerships, competition in service delivery, performance measurement and indicators, and participation of citizens. Health systems need further strengthening through focused action if internationally agreed health goals are to be met.

### A. Accessibility

84. Increasingly, in many countries of the region, the poor have less access than the better-off to health services. Factors that limit the poor's access to public health services include demand-side barriers (lack of health knowledge and financial resources) and supply-side issues (short-staffed primary care facilities, unreliable drug stocks, shortages of equipment, deteriorating quality of services, or public clinics and health centres with inconvenient hours or in inaccessible locations, unhygienic conditions and poor provider-user relations).

85. Over the past two decades, international trends in market-oriented health sector reforms have led to severe health cuts in national budgets. This has resulted in a deterioration of health service provision. Among the poorest 37 **c**ountries worldwide, per capita public spending on health declined by 50 per cent during the 1980s. Fiscal policies, including inadequate financial allocations for capital and recurrent costs have led to a decline in the quality of health care facilities and shortages of equipment, drugs and transport. The deteriorating conditions of service have lowered the performance of health personnel.

86. Furthermore, market forces drive research spending. This accounts for the 10/90 gap in health research – less than 10 per cent of the funds available for health research is directed at improving the health of 90 per cent of the world's population. The diseases that are most common among the poor attract relatively little research and development spending. This hinders the development of medicines that the poor need. Annual global research investment on malaria in 1990 was US$ 65 per fatal case of the disease, compared with US$ 789 per asthma fatality. Between 1975

and 1997, only 13 out of the 1,233 drugs that reached the global market were for tropical infectious diseases of most relevance to the poor in low- and middle-income countries (Global Forum for Health Research, 2002).

### B. Financing

87. Inequitable provision of health services increases the rich-poor divide. In many countries of the region, 85 per cent of health expenditure is out of pocket. Regressive payments absorb a larger share of the prepayment income of a poor household compared with that of a rich one. User fees for public services and out-of-pocket payments for public and private health services, which shift the cost of health care from the public to the private sector or to the individual household, drive many families into poverty and deepen the hardship of the poor.

88. The fact that many people pay for health care has for too long been taken as synonymous with willingness and ability to pay, with no assessment of the burden of payment on the household budget. Of several risks that poor households face, the health risk is crucial as it destabilizes household resources by increasing health expenditure in the event of illness, affecting household income-earning capacity and usurping household resources, including women's unpaid time, for care provision.

89. Inequitable forms of financing health care through taxes or insurance result in ineffective pooling of risks across a population. The region has yet to see a gradual change towards pooling of risks in social health-insurance systems, in which healthy, high-income groups subsidize care for low-income groups. Such risk-pooling arrangements would involve prepayment for care through non-discriminatory premiums or salary deductions, thereby lowering individual liability for health care costs and avoiding large payments in the event of illness.

90. Community-based health insurance, such as microinsurance, is an effective way of financing the poor's health care costs. The advantages of community health care financing schemes lie in their potential for reaching rural low-income people and informal sector workers, harnessing social capital to increase awareness, correcting adverse decisions, encouraging preventive measures and increasing access to health care.

### C. Human resources

91. Many health systems face diverse human resource problems. These include overcrowding among skilled and costly health personnel in urban areas and the private sector; low morale and motivation among health personnel; poor conditions of service; inadequate training; and a lack of good support and able management, including planning and supervision. Inequalities in the distribution of health workers are compounded by skewed skill levels, with concentrations of higher-skilled workers in better-served areas. Health personnel migrate from rural to urban areas, and from

the public to the private sector. International migration further exacerbates health inequities between the public and private sectors and between urban and rural areas.

### D. Community participation

92. In the ESCAP region, providing health services has traditionally been the responsibility of Governments. However, given the human resource and other constraints in health systems, there is scope for more community participation in planning, implementation and monitoring to strengthen health service outreach and delivery. Civil society partnerships with formal government health institutions and the private sector could also improve health services by enhancing accountability and governance in health systems. Innovative modalities are needed for community stakeholder networking and involvement in improving health outcomes and the performance of health systems. The 2003 SARS outbreak highlighted the importance of community participation in ongoing surveillance and control of infectious disease outbreaks. Many rural communities are local repositories of indigenous health knowledge and resources whose value has been overlooked. There is considerable scope for strengthening community knowledge and skills to promote health and to encourage more effective community contributions to disease surveillance and control.

## IV. CONCLUSIONS

93. The State is primarily responsible for ensuring equitable access to health as a basic human right. The ESCAP region is undergoing a major health transition. Persistent and re-emerging health issues, including malnutrition and communicable diseases, require the renewed attention of policy makers. At the same time, the emerging health challenge of an increasing burden of NCDs co-exists with HIV/AIDS and other new epidemics. The region thus shoulders a “double-burden”.

94. In the 25 years since Alma-Ata, globalization, trade liberalization, urbanization and industrialization have gathered momentum, sweeping across Asia and the Pacific. These forces have a profound impact on socio-economic structures and environmental conditions in the region, which, in turn, influence health.

95. Economic globalization, in particular, will continue to be a critical influence on the status of population health. It would be necessary to ensure that the globalization process, in all its dimensions, contributes to health promotion rather than to its deterioration. Managing globalization, through a deeper understanding of its complex impact on social transformation, could lead to significant health gains.

96. To achieve the goal of “health for all”, countries and territories of the region have to tackle the root determinants of health rather than dealing with the symptoms as and when they emerge. This requires a systemic understanding of the determinants of population health and the manner in which their effects manifest themselves in the societies of the region. Furthermore, it is necessary to strengthen policies and programmes that promote the good health of populations and to narrow the

widening rich-poor health divide. Strategic development planning for positive health outcomes is a challenge to which the region must now rise in order to save millions from disease, disorder, injury and premature death and to protect its development gains.

97. Access to health care is a basic need. It is inextricably linked with access to education, food and shelter, and with civil rights.

***References***

Asian Development Bank (1999). *Policy for the Health Sector* (*http://www.adb.org/ Documents/Policies/Health/health.pdf*, 20 May 2004).

Buse K., N. Drager, S. Fustukian, K. Lee (eds.) (2002). *Health Policy in a Globalising World* (Cambridge, Cambridge University Press).

Chopra, M., S. Galbraith and I. Darnton-Hill (2002). "A global response to a global problem: the epidemic of overnutrition", *Bulletin of the World Health Organization 2002,* 80(12).

Epstein, Paul, Eric Chivian, Kathleen Frith (2003). "Emerging Disease Threaten Conservation", *Environmental Health Perspectives,* 111(10).

ESCAP (2002). "Shanghai implementation strategy: regional implementation strategy for the Madrid International Plan of Action on Ageing 2002 and the Macao Plan of Action on Ageing for Asia and the Pacific 1999" (E/ESCAP/1280).

_____ (2003a). "Policy issues for the ESCAP region: integrating economic and social concerns, especially HIV/AIDS, in meeting the needs of the region" (E/ESCAP/1267).

_____ (2003b). "Consideration of a regional framework for action towards an inclusive, barrier-free and rights-based society for persons with disabilities in Asia and the Pacific" (E/ESCAP/APDDP/4/Rev.1).

ESCAP/UNDP (2003). *Promoting the Millennium Development Goals in Asia and the Pacific: Meeting the Challenges of Poverty Reduction* (United Nations publication, Sales No. E.03.II.F.29).

Ford, Timothy (2004). "Increasing risks from waterborne disease: both U.S. and international concerns", Center for Health and Global Environment, Harvard Medical School (*http://www.med.harvard.edu/chge/textbook/global/drinking/transcript.htm*, 10 June 2004).

Global Forum for Health Research (2002). *10/90 Report on Health Research 2001-2002* (Geneva, Global Forum for Health Research).

International Labour Office (August, 2001). *Decent Work in Asia* (Bangkok).

Lee, K., K. Buse and S. Fustukian (2002). "Introduction to global health policy", *Health Policy in a Globalising World* (Cambridge, United Kingdom, Cambridge University Press).

Liu, Y., K. Rao and W.C. Hsiao (2003). "Medical expenditure and rural impoverishment in China", *Journal of Health, Population and Nutrition,* 21(3): 216-222.

Murray, C.J.L. and A.D. Lopez (1996). *Global Health Statistics: Global Burden of Disease and Injury Series*. Volumes I and II (Harvard School of Public Health, Boston).

Narayan, R. (2003). "The community health paradigm in diarrhoael disease control" in D. Raghunath and R. Nayak, eds., *Diarrhoeal Diseases: Current Status, Research Trends and Field Studies*, Sir Dorabji Tata Symposium Series, p. 302 (India, Tata McGraw-Hill Publishing Company Limited).

Owen, James (2004). "Oceans Awash with Microscopic Plastic, Scientists Say", *National Geographic News*, 6 May 2004.

Puckett, Jim, Leslie Byster, Sarah Westervelt, Richard Gutierrez, Sheila Davis, Asma Hussein, Dutta Madhumitta (2002). "Exporting harm: the high-tech trashing of Asia" (*http://www.ban.org/E-waste/technotrashfinalcomp.pdf*, 20 May 2004).

Sastry, Narayan (2002). "Forest Fires, Air Pollution, and Mortality in South-East Asia", *Demography*, February 2002, vol. 39, No. 1, pp. 1-23.

Sen, Amartya K. (1997). *Hunger in the Contemporary World* (London, Suntory and Toyota International Centres for Economics and Related Disciplines (STICERD), London School of Economics).

Sherlock, P.L. (2002). "Ageing and health policy: global perspectives" in Kelley Lee, Kent Buse and Suzanne Fustukian, eds., *Health Policy in a Globalising World* (Cambridge, United Kingdom, Cambridge University Press).

Suk, Williams et al. (2003). "Environmental threats to children's health in Southeast Asia and the Western Pacific", *Environmental Health Perspectives*, 111(10).

United Nations (2004). "Interim report of Task Force 2 on hunger", Millennium Project *(http://www.unmillenniumproject.org*, 12 May 2004).

UNAIDS (2003). *AIDS Epidemic Update* (Geneva, UNAIDS).

United Nations Development Programme (2003). *Human Development Report 2003* (New York, UNDP).

UNEP (2004). Web site of the Basel Convention (*http://www.basel.int/index.html*).

United Nations Educational, Scientific and Cultural Organization and World Water Assessment Programme (2003) *United Nations World Water Development Report*.

UNICEF (2004). *Water, Sanitation and Education* (*http://www.unicef.org/wes/index_schools.html*, 16 June 2004).

UNICEF-EAPRO (2003). *Towards a Region Fit for Children* (Bangkok).

Wagstaff, Adam (2002). "Poverty and health sector inequalities", *Bulletin of the World Health Organization*, 2002, 80(2).

World Health Organization (1978). Declaration of Alma-Ata. International Conference on Primary Health Care, Alma-Ata, 1978.

_____ (2001). "Macroeconomics and health: investing in health for economic development", *Report of the Commission on Macroeconomics and Health* (Geneva, WHO).

_____ (2002). *Report of the International Conference on Environmental Threats to the Health of Children: Hazards and Vulnerability, Bangkok, Thailand, 3-7 March 2002*, Geneva (*http://www.who.int/docstore/peh/ceh/Bangkok/bangkokconf.htm*, 20 May 2004).

_____ (2004a). "Global tuberculosis control - surveillance, planning, financing", *World Health Report 2004* (Geneva, WHO).

_____ (2004b). "A human-rights perspective" (*www.who.int/nut/rights.htm*, 15 June 2004).

_____ (2004c). World Health Organization Tobacco Free Initiative (*http://www.who.int/tobacco/areas/framework/signing_ceremony/countrylist/en/*).

_____ (2004d). "Mental and neurological disorders" (*http://www.who.int/mediacentre/factsheets/fs265/en*, 15 June 2004).

_____ (2004e). "Snapshots of mental health in the Western Pacific Region" (*http://www.wpro.who.int/multimedia/whd2001/Facts_and_Figures*, 15 June 2004).

Wilkinson, R. and M. Marmot (eds.) (2003). *The Solid Facts – Social Determinants of Health* (Denmark, WHO-EURO).

Zwi, A., S. Fustukian and D. Sethi (2002). "Globalization, Conflict and Response" in K. Lee, K. Buse and S. Fustukian, eds., *Health Policy in a Globalising World* (United Kingdom, Cambridge University Press).

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