Chapter XII

QUALITY OF LIFE

1. Quality of life is a broad concept that involves a variety of themes and dimensions affecting groups and individuals alike. A comprehensive approach to this issue includes diverse, complex and wide-ranging variables, such as traditional economic measures of employment, income distribution and education and social protection, which are presented in other chapters of the present report, as well as food security, health, housing and assessments of infrastructure as presented in this chapter. In addition, aspects of public safety, national security, the environment, recreation and human rights are also very closely related to quality of life, although they often may not be measured quantitatively.

2. How quality of life is perceived and how much progress is achieved reflects resources and values, choices and traditions, and the complexities of the economics and politics governing societies. Ultimately, socio-economic and human development by means of improved living conditions should allow every person to grow to full potential and make informed decisions about the quality of life.

3. The role of the state remains important in the redistribution of income that can improve the quality of life of the least favoured sectors of the population, even when their own income level is unchanged. Public transfers and investment play a crucial role. But this is not all. Families, as well as communities and other institutions of civil society, can have a fundamental impact on the improvement of quality of life for all. For example, at the personal level adequate and sensible health care can substantially raise a patient's quality of life. Similarly, quality of life for women at work can be dramatically enhanced with adequate and affordable child-care programmes for their children. Infrastructure and transportation for the disabled enable them to move and participate actively in society.

4. Technological changes have led to the production of more food at the global level, but hunger and malnutrition persist in both developed and developing countries. Medical innovations, better diets and sanitary improvements have on average drastically reduced morbidity and raised life expectancy, enabling a healthier and longer life for a large part of the population. But with rampant poverty and lack of financial resources, the quality of life for the vulnerable and the poor has not improved dramatically in the world. In fact, countries exposed to armed conflicts, political upheavals and HIV/AIDs epidemics experienced reversals in many development indicators. The analysis of trends in quality of life is indeed mixed: the accomplishment of considerable progress in certain areas coexists with unresolved problems, as well as the emergence of the new threats to human development.

A. Food security

5. Food security is a necessary condition for people's well-being and therefore directly affects quality of life. An important accomplishment of the last two decades is that the number of people in the developing world who do not have enough food to eat declined by 40 million during the first half of the 1990s. Despite this progress, however, there are still close to 800 million people in the developing world who do not have enough food to eat; another 24 million people in the developed countries and transition economies do not have access to sufficient food[1].

6. Technological advances have revolutionized and increased agricultural production, and have contributed to the encouraging achievements in the fight against food insecurity. On the other hand, several challenges remain. Poverty, inequitable distribution of food supply, natural disasters and environmental degradation, changing demographic pressures and demands, and prolonged armed conflict are factors that contribute to the slow and uneven gains in this area. Policies must build on the progress made so far to address the causes and consequences of food insecurity. Political will and community participation are necessary to assist vulnerable groups from malnutrition and to reach the World Food Summit goal of halving the number of hungry people in the world by 2015.

Incidence of malnutrition and under-nutrition

7. The first report on the state of food insecurity in the world in 1999, published by the Food and Agriculture Organization[2] of the United Nations (FAO), shows a global picture of hunger. Asia and the Pacific region account for almost two thirds of the undernourished people in the world. Two of the most populous countries in the world also have the most malnourished people: India, with 204 million, and China, with 164 million. It can be noted, however, that the proportion of undernourished declined from 38 per cent to 22 per cent in India and from 30 per cent to 13 per cent in China between 1979 and 1997. While some

countries have made moderate progress during 1980-1996, about half of the people in the Democratic People's Republic of Korea and Mongolia and one third of those in the Lao People's Democratic Republic and Cambodia are undernourished.

8. Progress has been slow in sub-Saharan Africa, where almost one fourth of the developing world's undernourished people lives. A few countries in West Africa – Benin, Ghana, Mauritania and Nigeria – made some gains. The proportion of malnourished people remained higher in central, East and southern Africa compared to West Africa. In the Congo, Mozambique, Eritrea and Ethiopia, more than half of the population is malnourished. The situation in Somalia is bleak, with about three quarters of its people undernourished.

9. Countries in the Near East and North African region show general improvement. In North Africa, no country has more than 5 per cent of its people undernourished. The incidence of undernourishment is low in most of the countries in the Near East except for Afghanistan and Yemen, where more than 35 per cent of the people do not have enough to eat.

10. Fewer people suffer from malnutrition in Latin America and the Caribbean, where 5 to 19 per cent of the people are undernourished in a majority of countries. The proportion of undernourished people in oil-rich Venezuela, however, rose from 4 to 15 per cent between 1980 and 1997. With 8 countries making progress compared to 16 countries losing ground, progress seems to be slowing down[3].

11. Undernourishment in developed countries exists, although at a lower rate. Of the 34 million undernourished people in developed countries, 26 million live in countries in transition, mainly in the former USSR and former Yugoslavia.

12. There has been a reduction in the incidence of chronic undernutrition[4] (caloric intake of less than 1,900). Global undernutrition declined from 35 per cent to 21 per cent between 1969 and 1992. In East Asia, undernutrition decreased significantly, from 41 per cent to 16 per cent, while the incidence increased in the sub-Saharan region from 38 per cent to 43 per cent in the same period. Given the same global rate of increase, per capita food supply is expected to grow from 2,500 calories to 2,800 calories by the year 2010. Moreover, East Asia, North Africa, Latin America and the Caribbean regions will probably exceed 3,000 calories and contribute to a global decline in chronic undernutrition by10 per cent[5].

Related effects of malnutrition

13. Hunger and malnutrition in developing countries cause increased susceptibility to illness, reduced life expectancy and reduced productivity. Millions of people die from malnutrition-related problems each year. Children in the developing world are nutritionally vulnerable. For example, about half of the children less than five years of age are underweight in Bangladesh, India and Ethiopia. The World Health Organization[6] (WHO) suggests that malnutrition was a factor in almost half of the 10 million deaths among children under age five in developing countries. Data from surveys conducted between 1987 and 1998 show that two out of five children in poor countries are stunted (low height for age), one in three are underweight (low weight for age) and 1 in 10 are wasted (low weight for height). In South Asia, almost half the children under five are underweight, compared with 33 per cent on Africa and 21 per cent in East and South-East Asia. Latin America and the Caribbean have the lowest incidence[7].

14. Children who survive malnutrition are unable to fully develop their physical and mental potential. Malnourished bodies have weak immune systems and are more susceptible to infection and disease. Particularly vulnerable are children whose growth is stunted or wasted as a result of protein-energy malnutrition. These children weigh less and are shorter by as much as 60 to 80 per cent of the median weight and height compared with others in an age – or gender – specific category. Furthermore, intellectual development is impaired, thereby decreasing learning opportunities that further lead to limited employment and ultimately a loss to the overall economic productivity of society.

15. It is suggested that hunger during school may prevent children in developing countries from benefiting from education. Although many countries provide school-feeding programmes, their effects have yet to be evaluated. In Central America, where almost 60 per cent of the population are poor, some analysts believe that the effects of hunger may prevent one third of school-age children from getting any education[8].

16. Malnutrition increases the health risks for women during pregnancy and childbirth. Stunted and malnourished women have higher risks of miscarriage, abortion and stillbirth. They are also more likely to have obstetrical complications, which could lead to death from childbirth. Furthermore, they give birth to low-birthweight babies, which could lead to malnutrition in childhood.

17. In addition, overweight and obesity are another kind of malnutrition in developed countries and increasingly in some developing countries. The incidence of this type of malnutrition has reached epidemic proportions globally, and because the problem appears to increase rapidly in children as well as in adults, the true health consequences may only become apparent later.[9] Inadequate dietary practices and insufficient information, excessive food, little exercise, psychological disorders or combinations of these factors

are believed to contribute to the rising incidence of obesity. The current lack of consistency and agreement between different studies over the classification of obesity among children and adolescents introduces difficulties in the assessment of obesity prevalence at the global level. WHO estimates that there are approximately 18 million children under five years of age and 300 million adults who are overweight.[10] In large part, the rise in obesity is directly related to changes in the world food economy that have contributed to shifting dietary patterns, such as increased consumption of an energy-dense diet high in fat, particularly saturated fat, and low in carbohydrates. At the same time, the fall in energy expenditure due to a sedentary lifestyle has contributed to the problem. Being overweight is a high risk factor for a range of serious non-communicable diseases, including cardiovascular disease, hypertension and stroke, non-insulin dependent diabetes mellitus, some kinds of cancer, varicose veins, and gastrointestinal and liver diseases.

Threats to food security

18. Given the uneven progress in curbing hunger and malnutrition, the question of whether the world produces enough food to feed the world's population remains. Technological advances have increased agricultural production and raised the per capita food production in the world. The widespread use of irrigation and fertilizers and the success of plant breeding contributed to increased food production. The increase in grain production from 1950 to 1984 has resulted in a corresponding rise in food consumption, which led to some uneven declines in malnutrition. In terms of the average per capita requirement of 2,350 calories per day, it is estimated that the world has produced enough food to feed approximately 20 per cent more people than its actual population since the mid 1970s[11]. However, increased food production affected different regions and countries in different ways. In India, for example, the increase in grain yield was offset by population growth. On the other hand, the increased agricultural output in China, together with the decline in population growth, raised per capita grain production from 200 to 300 kilograms[12].

19. There are also enough food stocks to make up for food shortages due to natural disasters and military conflicts. Cereal stocks were approximately 20 per cent of overall world cereal consumption in early 1990 but slowly declined in 1992. By 1994, it was estimated that stocks had been below the 17 per cent level that would safeguard global food security[13].

20. While global food supply indicates that a sufficient amount of food is available to feed the world population adequately, there are several threats to food security. Population growth, diminishing resources, distribution problems, access to food supply and the potential misuse of technology are some of the problems to be addressed.

Demand for food

21. Population growth is projected to increase by 32 per cent to reach 7.5 billion between 1995 and 2020, with most of the growth occurring in developing countries. The largest population increase is expected in Asia, where the population growth in China and India alone is projected to account for one third of the total population increase. In Africa, population is expected to increase by 70 per cent. Under the given trend, about 85 per cent of the increase in global demand for cereals and meat will largely be in developing countries.

22. The International Food Policy Institute (IFPRI) report on world food prospects estimates that 85 per cent of the increase in global demand for cereals and meat between 1985 and 2020 will be generated in developing countries[14]. Nonetheless, it is projected that a person in a developing country in 2020 will consume less than half the amount of cereals consumed and a little more than one third of the meat consumed by a person in a developed country.

23. IFPRI research also suggests that the world's farmers need to increase grain production by 40 per cent in order to meet the increased demand in 2020. This is a challenge amid declining cereal production since the success of the Green Revolution in the 1970s. Although it is projected that developing countries will produce 59 per cent of the world's cereal production and 61 per cent of the world's meat, net cereal production will not meet the increased demand. Thus, it is projected that net cereal imports of developing countries will double between 1995 and 2020. Similarly, net meat imports by developing countries will increase 8 times to 6.6 million tons during the same period. Related to the increase in demand for meat products is the increased demand for grain to feed livestock, which is projected to surpass the demand for rice and wheat by 2020.

Urbanization

24. Increasing urbanization is another factor that could put food security at risk. Urban population is projected to surpass rural population by the year 2010. Between 1995 and 2030, the world's urban population is estimated to increase from 2.5 to 4.9 billion, while rural growth will increase by 116 million during this period[15]. It is also projected that urban growth will continue to occur in the cities of developing countries. The urban areas in developing countries are estimated to double in size over the next 10 to 15 years. For example, the less urbanized regions of Asia and Africa are growing the

fastest. The implications of feeding the growing number of cities remain an enormous challenge.

25. Two patterns are likely to affect food distribution due to increasing urbanization. Income levels are projected to increase and cause a shift in demand for food from cereals to meat products. For example, with economic progress, the Chinese are eating more meat. There is growing concern whether there will be enough supply to meet China's growing demand for food as it becomes progressively dependent on imports. At the same time, the World Bank foresees a growing number of urban poor. FAO estimated that poor urban families could spend as much as 60 to 80 per cent of their income on food alone. The impact of the growing urbanization on the world's agricultural production and trading system will require innovative food policies.

26. Increased demand for food production needed to feed a growing population comes at a time when resources are dwindling. Decreasing croplands, land degradation, water scarcity, natural and man-made disasters affect the food production capacity and could heighten food insecurity in the coming years. The rise in food production between 1950-1984 was attributed in part to more land cultivated, newer machines, fertilizers, better irrigation, crop rotation and plant breeding. Over time, however, the heavy use of fertilizers and pesticides resulted in land degradation, pollution and soil erosion of cultivated lands. The reliance on pesticides also produced insecticide-resistant pests.

27. Recent years of increasing urbanization have witnessed croplands being eliminated to make way for roads and buildings. In the United States, about 1 million hectares (ha) of farmland are converted to suburban roads and residential areas each year. Similarly, in China about 200,000 ha of arable land are converted to city streets and developments each year[16]. Adding to land degradation in most developing countries are chaotic urban developments, where 30 to 60 per cent of city populations live in squatter settlements and 70 to 95 per cent of new housing is illegal. In addition, the increasing migration of youth to urban areas compromises rural food security. Increasingly, youth hold agriculture in low esteem as an activity and way of life. The lack of access to land as well as credit and information further limit agricultural production.

Water scarcity

28. In addition to land scarcity, water scarcity is seen as a serious constraint in expanding food production. Since 1950, water use has tripled in Africa alone and is up 500 per cent in Europe. As of 1990, there has been mounting evidence that water tables are falling in all continents of the world. Water shortages are projected as aquifer depletion spreads and result in shrinking irrigation water supplies. Of particular concern is the adverse consequence to the grain harvest of large countries, such as China and India, which rely on irrigated land for half or more of their food.

29. In the case of China, the agriculture sector is the largest user of its water resources. About 70 per cent of China's grain production comes from irrigated land. Irrigation supply, however, is being depleted due to the diversion of water from rivers and reservoirs to cities, aquifer depletion and the increasing pollution caused by rapid industrialization. Furthermore, drought over the past decade has contributed to declining agricultural production, particularly in dryland areas of China. Developing dryland farming to increase grain production capacity offers an alternative in 62 per cent of China's arable land, which is not suitable for irrigation.[17]

30. A similar water scarcity situation exists in India. India's population is expected to exceed that of China in 2050. The growing number of people use groundwater from wells faster than it can be replenished. Water shortages could mean shifting water from irrigation, which will affect harvest and reduce food supplies below the survival level.

31. In most of the countries in the Middle East and North Africa, water scarcity has been a serious problem. In the beginning of 1990, eight countries in the Middle East reached the category of absolute water scarcity, when the annual per capita fresh water availability of a country falls below 500 cubic metes (m^3). The added pressure of rapid population growth in this region on limited water resources carries the potential to breed conflicts. The struggle over control of the Jordan River basin by Israel, Jordan, Lebanon and the Syrian Arab Republic continues to be a challenge in the Arab world. While efforts at promoting regional water cooperation are ongoing, one of the concerns for future generations will be achieving greater equity in the distribution of water throughout the area. For example, per capita use of water in Israel (344 m^3 per year) is more than three times that in the West Bank and Gaza Strip (94 m^3 per year)[18]. Iraq, on the other hand, has implemented a new strategy to address water shortage. It seeks to educate people about the importance of water resources, promote awareness in using water rationally and ensure water for the requirements of food security[19].

32. There were similar concerns on the potential conflict over water supply in the region of the Aral Sea basin after the collapse of the former Soviet Union. The area extends across the territories of five newly independent States in central Asia – Kazakstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan – including parts of Afghanistan and northern Islamic Republic of Iran. These States, however, have completed an admirable task in implementing processes and mechanisms for amicably resolving their water-related problems[20].

Other threats

33. Natural and man-made disasters also contribute to food shortages. Whereas most food emergencies were caused by natural disasters 15 years ago, the threat of natural disasters has lessened recently. Part of the reason is that improvement in early warning technology and rapid information dissemination have made us better prepared for dealing with food emergencies.

34. The rising incidence of armed conflict and economic collapse has contributed to food shortages. According to FAO, there are about 35 countries in such crisis, 14 of which are in Africa, facing food shortages that require emergency food assistance. There are also 5 countries in the Commonwealth of Independent States and 4 Balkan States in Europe experiencing food crises and where the increasing number of refugees have no access to adequate food supply.

35. Violence and war have displaced communities. In Colombia, for example, civil war has forced families to abandon their homes and flee the countryside. As a result, local farming has virtually stopped. Since there are no farmers to save seeds, varieties of basic foodstuffs have been lost. Preserving local genetic biodiversity and the knowledge accumulated by local people over the centuries are necessary for continued food production. The longer they are kept from their land and their rights violated, the more difficult it will be to recover the lost seeds and preserve genetic biodiversity for food security[21].

36. The long running wars in Africa, such as those in the Democratic Republic of the Congo, Angola, the Congo and the Sudan, have had indirect consequences on the day to day living conditions of the population. In most areas, the conflict has disrupted farming activities. Village farmers no longer plant crops because harvests are stolen by soldiers or taken by refugees, them without food or seed for the next planting. This has led to further declines in agricultural production, and food consumption of households has fallen sharply. Food is also used as a weapon in many wars. Parties at war disrupt access to main sources of food and other international aid in order to blunt the ability of enemies to attack. Refugees, in particular, children, who are displaced from their homes by war are most likely to suffer food shortages and to be left vulnerable to diseases.

37. Governmental policies have also affected the levels of global agricultural production. Price supports adopted by developed countries provided a cushion against fluctuations due to unexpected market changes or unfavourable climate conditions. Price stability induced farmers to increase food production, thereby creating a food surplus in developed countries. In the long run, food prices declined and raised developed countries' international competitiveness, while at the same time reducing the competitiveness of food production in developing countries.

38. The impact of trade liberalization and decline in food subsidies in developed countries, however, may well result in rising food prices in the future. Farmers from developing countries could then increase their production and compete in the world market. On the other hand, net food-importing countries in developing countries such as sub-Saharan Africa and the Middle East, would be adversely affected. Similarly, malnutrition among urban and low-income dwellers who buy most of their food could worsen.

39. Food and agriculture production has been an important concern in the debate about free trade and the re-establishment of sustainable agriculture, food security and rural development. Protectionist measures in the developed world are considered to have a negative impact on food production in developing countries. It is expected that the international debate will continue to shape policies and capital flows in food systems worldwide.

40. Most often, access to food is a problem of distribution. Access to food is exacerbated by poverty and increasing income inequality in developing countries. Many low-income countries have no access to technology and are unable to increase agricultural production. For example, most African farmers cannot afford improved varieties of seeds, agrochemicals and machinery to increase agricultural production. Landless rural populations and the unemployed struggle to survive. In South Africa, the continuing effects of the land dispossession of the apartheid era contribute to the overcrowding and environmental degradation of the black rural hinterlands[22]. Faced with food security problems, the poor are deprived of getting the minimum nutritional requirements.

41. There are countries, however, that have enough food for their population but whose highly skewed income distribution limits the purchasing power of poor households. For example, although Brazil is one of the world's largest food-exporting countries, 30 million people suffer from hunger and malnutrition and an estimated 100,000 children die from hunger each year. This is reportedly due to unemployment, environmental degradation and lack of access to land, which have impeded the ability of people to grow or buy food[23].

42. Some argue that the potential to increase food supply through genetically modified food may be the answer to threats of food security. Others hold that agro-biotechnology is a long-term threat to food security because of its possible adverse impact on small-scale farmers, biodiversity and the environment. Ethical, safety and intellectual property rights issues are still being debated. Furthermore, there is also the perception that only a few large corporations stand to benefit and

thereby widen the rift between the rich and the poor. Alternatively, the use of the agroecological approach to help small-scale farmers raise productivity is gaining interest. It aims to rely more on farm labour, organic materials and improved management skills and less on external inputs, such as fertilizers, pesticides and irrigation water. Developments in information technology also open up opportunities towards achieving food security.

Outlook for the future

43. Contrary to gloomy predictions, an unprecedented global rate of agricultural production outpaced population growth in the past century. Rapid technological innovations paved the way for the growth of agriculture and made possible food consumption at a nutritionally adequate level for many. Yet, even with adequate food supply for the world's population, we remain confronted with the uneven progress in attaining food security for all. Hunger and malnutrition persist, especially in vulnerable regions mired in poverty and virtually untouched by technology. Similarly, despite progress in nutrition there is increasing malnutrition in the form of obesity due to excessive food intake as a result of increasing income and a shifting consumption pattern.

44. National policies towards achieving food security should include increasing agricultural productivity and distributing food more equitably. It is equally important to address the changing demographic pressures of population growth and urbanization responsible for the increasing and shifting demand for food. Enhancing economic growth, including increased investment to revitalize the agriculture sector, would help generate employment. More importantly, poverty, growing income inequality, political instability and armed conflicts, if not addressed, will exacerbate food insecurity. The comparative advantage of relying on food imports or producing food supply domestically must be weighed. The diminishing agricultural returns from technology over time due to the toll on natural resources calls for long-term environmental conservation efforts.

45. Putting in place policies to solve the hunger problem requires political will and a global perspective. Government at all levels, including community participation, plays an important role. Regional and international cooperation towards fair and just trade liberalization policies should ensure that poor countries and poor people benefit from further trade liberalization. With national commitment and global engagement, ensuring food security for all is an attainable goal.

B. Health

46. The following section is intended to provide a synopsis of selected aspects of global health viewed narrowly as an indicator of quality of life and is not intended as an overview of the global health situation. For a broader review, the reader is referred to the annual World Health Report published by the World Health Organization,[24] which provides a yearly overview of the world health situation and also provides special coverage of selected topics, such as communicable diseases and health systems.

Improvements in health 1950-2000 and regional disparities

47. The health of the world's population was substantially improved in the last half century, although the degree of progress has varied between regions (see table XII.1). Globally, expectation of life rose on average from about 47 years to about 65 years for a child born in 1950 and 2000, respectively.

48. Of all regions, the situation in Africa, especially sub-Saharan Africa, remains worst. Life expectancy in this region is the lowest in the world (about 49 years in 2000) and showed no improvement during the last decade of the twentieth century, contrary to the worldwide trend. In this region also, preventive care coverage is the lowest in the world and under-five child mortality is the highest in the world. The stagnation in the health profile of this region is due to a new burden of non-communicable disease, at the same time as the advent of the HIV/AIDS crisis has more than cancelled gains from the eradication of smallpox and other notable gains in the last 10 to 20 years. The persistence of childhood vaccine-preventable diseases, the re-emergence of tuberculosis, the spread of drug-resistant strains of malaria and man-made as well as natural disasters have further contributed to offsetting any progress made by sub-Saharan Africa[25].

49. With respect to different rates of health improvement, there was also uneven progress at the country level. Whereas developed countries and the majority of developing countries have seen improvements in the general indicators of health of their populations, some economies in transition have suffered setbacks. The countries where life expectancy declined over the past 10 years are listed in table XII 2. Of the 33 countries listed, 15 are least developed countries, 7 are economies in transition and 10 are outside Africa. Outside Africa, the breakdown of health-care systems in transition countries increased mortality related to circulation disease, accidents and violence (chap. I). The economies in transition experienced unusually serious

Table XII.1

Table XII.2

threats to their health systems. With the adoption of market-oriented reforms in the early 1990s, these countries reduced their public health spending and the number and use of hospitals that had been the fundamental anchors of the health-care system. This important shift is reflected in total expenditure on health as a percentage of GDP and per capita total expenditure, as shown in figures XII.1 and XII.2. In sum, just to safeguard past progress our world must address two major lifestyle and quality-of-life challenges: the HIV/AIDS epidemic and the economic vulnerability of health-care systems.

Globalization and its potential effects on quality of life and health

50. Economic globalization plays a role in the generation of new health risks from trans-border transmission of disease, including both infectious (food-borne diseases, drug-resistant infections, pandemic influenza and sexually transmitted diseases of all types) and non-communicable lifestyle diseases (related to tobacco, diet, traffic injuries, pollution and occupation). Multiple variables, such as international trade and finance, shifting patterns of production and consumption, rapid urbanization, political unrest, recreational and migratory travel and changes in the physical environment are some of the primary factors altering the distributional patterns of disease that influence human health globally. In this context, the following section focuses on the challenges and opportunities globalization creates for the continuing improvement of health for all.

Globalization and foodborne diseases: a case study

51. A decrease in trade barriers and an increase in consumer demand have facilitated the transnational movement of perishable food items, increasing the potential for exposure to food-borne pathogens. [26] The volume of foods and food products being imported and exported is increasing around the world. 40 per cent of fruits, 8 per cent of vegetables and 60 per cent of seafood that is consumed in the United States, for example, is imported.[27] An unintended consequence of this fusion of foods from around the world is that contamination resulting in an outbreak of food-borne illness can originate in multiple sites simultaneously.

52. Other factors altering the epidemiology of food-borne diseases are changing food sources and preferences, an increase in the proportion of susceptible individuals and a food industry of mass food processing. The global economy has encouraged consumers in industrialized and more affluent developing countries to consume fresh fruit all year, which requires food products to be transported across climate zones and has the potential to increase the points of contamination. The population of individuals susceptible to severe illness as a result of food-borne infection is increasing because of global ageing patterns, improved medical technology extending life expectancy for the chronically ill and an increasing number of HIV-infected and other immuno-compromised individuals. [28] Furthermore, the food industry has developed so that the steps from plough to plate including growing, harvesting, sorting, shipping, processing, distributing and food preparation – are performed by a network of individuals, farmers and multinational corporations, often located in different countries. This complex process also has the potential to increase the points of contamination, and facilitates fast and widespread distribution of any source contamination.[29]

53. The challenge food-borne diseases present is to safeguard the public health of the international community, while endeavouring not to stifle food distribution or hinder countries from promptly reporting food-borne illness due to its potential harmful impact on trade. This challenge requires cooperation, awareness and proactive action on a global level.

Globalization and occupational injury and disease

54. According to the World Health Organization and the International Labour Organization, the practice of transnational companies in shifting industrial production to low-cost sites in developing countries, in the search of cheap labour and new markets, has the potential to increase the incidence of occupational disease and injury. Global increases are attributed to limited or low labour and health protection standards. The ILO estimated in mid-1999 that 1.1 million people worldwide are killed each year because of work-related injuries and diseases. Other occupational conditions, such as respiratory and cardiovascular diseases and cancer,[30] can also result in mortality. Although reliable information on precise conditions in many developing countries is difficult to obtain, an estimated 160 million cases of work-related disease occur globally each year. Approximately 30 to 40 per cent of the 160 million cases lead to chronic disease and 10 per cent to permanent work disability. [31]

55. According to the WHO Declaration on Occupational Health for All, which was ratified in Beijing in 1994, hazardous exposures and workloads account for an estimated 68 to 157 million new cases of work-related disease annually.[32] The Declaration underscored the fact that in some economic sectors and countries, occupational health indicators manifest worse trends than in the past. Although the transfer of healthy and safe technologies has had a positive impact on development, the transfer of hazardous technologies, substances and materials to developing countries, which have insufficient capacity to deal with such problems,

figure 1

Figure 2

constitute a threat both to the health of workers and the environment[33]. For example, in 1995-1996, 21 million pounds of pesticides that were prohibited in the United States and 48 million pounds of other toxic pesticides were exported from United States ports. Despite sufficient evidence supporting the need to restrict such exportation for the health and safety of workers, most of these pesticides were shipped to developing countries [34]. Health and safety education of both employers and employees and the enforcement and improvement of public health laws are needed to uphold and improve international standards of occupational health and health services.

Further implications of globalization: tobacco trade

56. A growing area of public health concern has been the marketing in developing countries by multinational corporations of harmful products, such as tobacco, as trade barriers come down. In the past 20 years, transnational tobacco conglomerates have been shifting their focus to the markets of low and middle-income countries in Africa, specifically sub-Saharan Africa, Asia, eastern Europe and Latin America, benefiting from the globalization of trade and the relative openness of markets.[35] Accordingly, marketing often relies on the current situation in most developing countries, whereby information campaigns relating to the negative effects of tobacco lag behind those in industrialized nations. Consequently, in contrast to the decline of tobacco consumption in industrialized countries (where per capita consumption of cigarettes has fallen by at least 10 per cent since 1970), cigarette consumption has doubled worldwide over the same period, up from 3,000 billion cigarettes per year to 6,000 billion; in developing nations, consumption has increased by 67 per cent.[36] In Haiti, Indonesia, Nepal, Senegal and the Syrian Arab Republic, per capita tobacco use has doubled, and in Cameroon and China tobacco consumption has tripled.[37]

57. According to WHO, worldwide mortality from tobacco is likely to rise to 10 million deaths by 2030, compared to 4 million deaths in 1998. Death rates as a result of tobacco-related disease, such as lung cancer, emphysema and ischaemic heart disease, are high in developed countries and are already high in China, particularly among men, due to past tobacco use. Based on current global trends, death rates in developing countries are expected to surpass those of developed nations.

Globalization, movement of people and related public health concerns

58. A further manifestation of globalization and the search for quality of life is the increase in the movement of people across and within national borders, facilitated in part by cheaper modes of transportation. Every day, 1.4 million people travel internationally by air. [38] The pace and volume of international travel are factors contributing to the global emergence and re-emergence of infectious diseases. Furthermore, human movement to urban or other settings through migrations of refugees, workers and displaced persons has led to increased population density and attendant increased potential disease transmission.

59. Such population shifts have been ideal conduits for the global spread of new and emerging infections. With improving technology and transportation, virtually any location in the world is accessible within 36 hours, fewer hours than the incubation period for most infectious diseases, allowing the spread of viruses/infections to occur, without observation and consequently unchecked. Infectious agents can be transmitted from person to person directly, such as in the cases of HIV/AIDS and tuberculosis, or through vectors at the traveler's destination, as in the case of malaria and dengue. Infectious agents and vectors may be spread by aircraft, ships and other transport vehicles.

60. Population relocation and migration has led to the global resurgence of malaria and the emergence of drug resistance to this disease. In Brazil, for example, the number of malaria cases in the 1950s was reduced from 5 million annually to fewer than 50,000 due to aggressive malaria control programmes. In the 1970s, the Amazon region was opened for development and there has been a massive migration of people without immunity to malaria, such as cattlemen, seasonal laborers and prospectors. By 1991, over 700,000 cases of malaria were reported and malaria is now the leading cause of death among immigrants to the region. [39] In Cambodia, some miners settling near the jungles of the Thai border to work in gem mines were located far from medical services and plagued with malaria. Many of those workers returned to Thailand and Myanmar, spreading infection in regions that had been relatively free of malaria. [40] Due to the high mobility and poverty of these workers, they often terminate malaria treatment, which has the potential to increase drug resistance, making South-East Asia now the focus of concern of multiple drug-resistant malaria. There is also increasing concern that malaria will be spread back to industrialized nations. The incidence of "airport" malaria in some international gateway cities in the United States and Europe supports the view that malaria may be introduced or reintroduced into an area by recreational travel.[41]

61. The spread of the HIV/AIDS virus presents a further example. Although it is difficult to trace its exact path, several factors have lead to the rapid international and intercontinental dissemination of the disease, notably the increased pace and volume of international travel for commerce, migration and recreational purposes.

Another factor is the long latency period of the virus, during which infected individuals are asymptomatic but can infect others. The HIV/AIDS virus is likely to have spread rapidly down the East coast of the African continent along the major routes due to truck drivers transporting goods from nation to nation and place to place. In Thailand, the Philippines and India, the spread of HIV/AIDS may have been primarily due to the "sex tourism" industry. Once HIV/AIDS is established in a new area where condom use is low, it disseminates rapidly in the sexually active population, as well as by vertical spread from infected mother to child, by parental transmission from blood transfusion and by needle-sharing among abusers.[42] Travellers may increase the spread of infectious agents, but their experience can serve to alert health officials to the emergence or introduction of an infectious agent to a new community. Public health agencies can contribute to infectious disease surveillance programmes by monitoring travellers, migrants and vehicles of transport, particularly since international travel is currently increasing by more than 10 per cent each year and population shifts are continuing due to political, economic and social instability.[43]

62. Unplanned and uncontrolled urbanization often results in a public health infrastructure that cannot keep up with rapid population growth. This can lead to deterioration of water and waste management systems.

Urbanization and disease

63. Despite the availability of modern technology, urban development in developing countries often combines the traditional problems of poverty, overcrowding, poor sanitary conditions and related diseases with poor housing, unregulated industrialization and environmental pollution.

64. Deterioration of waste and water management systems can lead to increases in water-borne illnesses, such as cholera. Overcrowding and improper waste water and rain drainage associated with rapid urbanization have created conditions for increased mosquito-borne diseases, such as malaria, yellow fever and dengue.[44] Furthermore, crowded living conditions and a population with limited immunity increase the potential for airborne transmission of such disease as tuberculosis and meningitis.[45]

65. Urban populations play a predominant role in intensifying the pressure on the world's ecosystems. While urban living does exhibit economies of scale in the use of some resources (for example, land area for housing, public transportation and resource recycling), there are also substantial externalities since resource consumption by urban residents is often disproportionate to their share in total population, and urban areas tend to be the main emission centres of greenhouse gases, while they place a demand on the global life-support systems of land, water and air.

War, unrest and the public health

66. Political factors, such as war and civil disorder, have led to a significant increase in the number of refugees over the last decade, from 38 million to 60 million. [46] Similar to the impact of rapid urbanization, the movement of large numbers of individuals in a short period of time places inordinate demands on the public health infrastructure of the host country, thereby increasing the potential emergence and spread of infectious diseases.[47] At the same time, political unrest disrupts health facilities and diverts government expenditures away from social services to cope with immediate crises.

Trade liberalization and health

67. The World Trade Organization (WTO) agreement in 1994 expanded the scope of intellectual property rights protection to pharmaceutical products and processes under the framework of the Agreement on Trade Related Intellectual Property Rights (TRIPS) at the conclusion of the Uruguay Round of multilateral trade negotiations. All member States are obligated to modify national legislation to grant inventors exclusive marketing rights for at least 20 years, and developing countries were to comply by 2006.[48] This extension and standardization of intellectual property rights protection has implications for public health through its contribution to the price of pharmaceutical products in developing countries. Some developing countries such as Argentina, Brazil, Egypt, India and Thailand, had developed domestic pharmaceutical industries, producing generic versions of patented drugs at significantly lower cost. In these countries, the cost of drugs is expected to increase, often by more than 100 per cent to factors several times greater, when the TRIPS Agreement is implemented. Lower-income developing countries that rely on imports would also be cut off from cheaper import sources to comply with TRIPS stipulations, raising their costs. Although WTO rules allow "compulsory licensing" and parallel import in case of national health emergencies or when otherwise justified by general public interests, the ongoing controversy over the marketing of generic HIV/AIDS drugs in poor African countries demonstrates the complexity involved in actually invoking such provisions. The decision by 39 multinational drug companies to unconditionally withdraw their lawsuit against the Government of South Africa in the spring of 2001 was a victory for the campaign to make cheaper life-saving drugs available in poor countries. However, the final impact of the developments in court on the lives of HIV/AIDS patients

will depend on concerted efforts to distribute, administer and monitor these drugs to ensure their effective use.

68. Another agreement topic under the Uruguay Round concerns trade in services, including health services. The production of health care, which is a service, is inseparable from the persons who provide it or the patients who receive it. Thus, trade in health services takes place in the form of the movement of either health personnel or the consumer across national boarders. Movement of health personnel from less developed to more developed countries arise because of better pay, better living and working conditions, access to higher professional credentials and exposure to advanced techniques. Short-term movement for skills acquisition can be beneficial to countries of origin, but generally there is a permanent drain on the pool of health professionals and the countries' overall health capacity.

69. The search for low-cost or otherwise unavailable medical care in developing countries by developed country nationals has grown in recent years. A global trend of rising medical costs and reductions in public financial support for the health sector have probably contributed to an increase in cost-based international trade in health services. This trade in health services can benefit developing countries if revenues are used to strengthen national health systems to serve the population at large and expand the domestic health system.

70. Other factors are increasingly contributing to the overall picture regarding trade liberalization and health, such as health education provided to students from more developed countries in less developed countries on a commercial basis, and foreign presence in the operation or management of hospitals, the provision of health insurance or the establishment of educational facilities, all based on foreign direct investment (FDI) that often takes the form of joint ventures.[49] Such investment bears the same potential benefits and disadvantages to the developing country as FDI in general. Foreign presence can upgrade technical and managerial dimensions while increasing desirable competition, with a resulting improvement in quality and quantity of health services.[50]

71. On the other hand, there is no guarantee that transfer of technology and managerial know-how would take place.[51] An additional concern relates to the influence of foreign presence on equity and access in health. Foreign for-profit commercial operations often cater to groups with higher incomes, who can afford high-cost private services. In addition, there is a tendency for qualified personnel to leave public sector establishments for private facilities operated with foreign investment, often at higher pay. Consequently, access for the most vulnerable population in need of basic services does not necessarily improve with greater foreign presence unless the affluent switch over to the private services and resources in the public sector are not depleted. This has proved to be a difficult goal. External liberalization is typically associated with declining support for the public health sector, leading to privatization and/or user fees, pricing the poor out of the market and worsening the equity of health services. It is therefore important for health policy-making to assess the balance between the potential benefits and drawbacks of foreign investment in health and health sector liberalization in general. There are measures that can be taken to avert potential imbalances so that equity in access to health care is not sacrificed in the interests of cost-efficiency and liberalization. The Indian Government, for example, reserves the option to provide land for private hospitals in exchange for a specified number of beds available to the poor.

Telecommunications technology and health

72. Recent advances in telecommunications technology have also influenced health sector development. Telemedicine, entailing interactive audio, video and data transmission of medical and health-care information, is gaining ground as technology improves and costs decline. It eliminates travel costs, facilitates professional consultations and offers a cost-effective means to strengthen the health sector capacity, provided access infrastructure is in place. Tele-conferencing between medical institutions in Canada, Kenya and Uganda, for example, was used to enable African health professionals to continue their education and update their knowledge with the latest technical information[52]. Accordingly, this trend in the health sector can benefit from international assistance.

Health systems

73. The enhancement of health-care systems by promoting equitable access to preventive and curative health services as well as nutrition has been made an important policy goal in recent decades.

74. National health systems are defined to include all activities whose primary goal is the promotion, restoration or maintenance of health. They include public and private health providers, usually financed through general taxation (public provision), payroll taxes (mandatory social insurance) or pre-paid plans according to individual- or group-defined contributory premiums (private insurance). Other health-care activities are funded by either direct out-of-pocket payments or donations. Many poor countries have small public and contributory systems, and a large portion of health care comprises out-of-pocket expenses. In Sierra Leone and Cambodia, for example, out-of-pocket expenses represented 90 per cent of total expenditure on health; in Cameroon, India, Myanmar, Pakistan and Viet Nam,

they represented approximately 80 per cent.[53] In India, the private sector plays a dominant role in the provision of individual curative care through ambulatory health services.[54] These findings are in contrast to the situation in developed countries, where a small portion of health costs is financed directly by households. Out-of-pocket expenses are regressive because they expose families to large up-front expenditures at the moment of use of services and those least able to contribute pay proportionally more than the better off.[55] Measures to discriminate clients according to their income levels may be the only way to make out-of-pocket payments less regressive, neutral or progressive.

Health sector reforms

75. Reform of the health sector is called for to redress such problems as excessive concentration and centralization, serious coverage issues and strong inequities, inefficient and deteriorating organization, inadequate quality of services and severe financial restrictions, wherever they occur.[56] Although it has become an issue for many countries, few have actually implemented reforms.[57] Important goals of health sector reforms are to decentralize services, provide universal coverage and shift the institutional emphasis from public to private sector health-care provision, under new organizational and financial arrangements, and consequently to achieve greater efficiency and quality.

76. A major concern of policy makers in developing countries has been the expansion of health-care coverage to achieve universality. The goal is difficult because of the extent of poverty and the fragility of public finances in many poor countries. A study for Latin America and the Caribbean found that nearly half (46 per cent) of the population had no health insurance coverage; one quarter of the population had no geographic accessibility to health facilities; over half (55 per cent) faced shortages of beds; and one third of the population was without access to drinking water and/or sanitation.[58] In China, for example, the capacity to cope with serious illness is beyond the resources of many.

77. Illness and chronic poor health can be major causes of poverty because of inability to work or because of catastrophic health expenditure. Health-care costs can worsen the situation of laid-off workers and of the elderly on fixed and insecure pensions. Thus, effective insurance schemes with provision for pre-payment or subsidization are necessary components of health sector reform proposals.[59]

78. Further to structural problems, some countries have been affected by specific shocks, such as the Asian financial crisis of 1997. In Thailand, a substantial proportion of households suffered large reversals as a result of the crisis, and the health sector was broadly affected. Public budgets were disrupted, whereas an immediate result of the crisis was a shift of 15 per cent of health-care demand from private medical services to public clinics and hospitals. The World Bank supported the Thai Government's policy of a free health card entitling those below the poverty line to free care at public institutions. Persons just above the poverty line could purchase an inexpensive health card entitling the holder and family to public health services.[60]

79. In recent years, self-financing social insurance schemes have emerged as alternative options to out-of-pocket payments and private insurance, relying on mutual support through pooling of resources on the principle of insurance. A range of self-finance social insurance schemes arose, from informal and unwritten systems within small groups to formal and complex arrangements,[61] many related to credit projects or micro-businesses. In India, for example, the Self-Employed Women's Association organizes 75,000 women into trade- or occupation-based groups, offering an integrated social security package, covering illness, widowhood, maternity, accident, fire, communal riots, floods and other calamities that cause loss of work and income, for a small annual payment.[62] The Gonoshasthaya Kendra community-based insurance scheme, implemented in 1971 in Savar, Bangladesh, has expanded into a two-tier health-care provider and four sub-centres. The scheme allows greater access to health care by the poor through voluntary membership, and has been replicated in other sites in Bangladesh.[63]

80. It is likely that many workers now in such schemes are in the informal sector, and prior to joining did not pay premiums but received free albeit often inadequate care from public services, when and where accessible. An assessment of 11 case studies of microinsurance in Latin America and the Caribbean indicates that workers experienced an improvement in terms of the cost, timeliness and quality of benefits after joining.[64] The financial sustainability of these schemes may, however, be precarious because their income base is low-income poor populations who may not be able to sustain the system through regular payment of premiums.

Health expenses

81. The proportion of world GDP expended on health was 7.9 per cent in 1997.[65] Developed countries spent the highest proportion – 8.2 per cent of GDP; countries in transition spent 5.9 per cent; and developing countries spent 5.2 per cent (see figure XII.1). East Asia, sub-Saharan Africa and the Arab States, with 4.3 per cent, expended the smallest proportion. In contrast, among developed countries, Australia, Canada, Japan, New Zealand and the United States spent twice the proportion, at 9 per cent of GDP on health, and the United States three times and over, at 13 per cent. These

figures support the proposition that the proportion of GDP spent on health increases with the level of GDP.

82. It is reasonable to argue that the health system is fair when the risk of health-care costs faced by each household are related to ability to pay rather than to the risk of illness[66] (see also chap. 22). When individuals are forced into poverty because of health expenses or they cannot access medical services because of inability to pay, the system is unfair. This can characterize the current situation in countries where the population is inadequately protected or inadequately covered. Dividing health-care finance into public and private flows (see figure XII.1), one can observe that in more developed countries strong public national health systems and mandatory social insurance schemes can ensure that three quarters of the expenditure befalls the public sector.[67]

83. Countries in transition have a similar pattern to that in developed countries, with approximately three quarters of health expenses accounted for by the public sector, due to the traditional strong role of Government in social services. This situation is changing, however: in Georgia, for example, public health expenditure has been drastically reduced, to 9 per cent of the total.[68] In contrast to most developed countries and economies in transition, in developing countries the public part of health expenditures is about half. Regionally, public expenditures are lowest in South-West Asia, at about 40 per cent.

84. Total expenditure on health per capita (see figure XII.2 and table XII.3), is a rough indicator of the level and scope of coverage of health-care systems.[69] The range of per capita health expenses is substantial. More developed countries spend more per person and reach a larger portion of the population. Countries in transition and developing countries spend less, but in developing countries large portions of the population are frequently excluded from access to health care.

C. Shelter

85. Housing is in many ways related to equitable and sustainable socio-economic development and is an integral component of quality of life. At the individual and household level, access to decent shelter is vital for personal health and security, and its location near centres of economic activity and transportation networks influences access to income-generating opportunities. The health and safety costs of poor quality housing can be significant because inhabitants may lose income through days off work and medical expenses. Many infectious and parasitic diseases, as well as respiratory diseases, are associated with sub-standard housing, overcrowding and inadequate provision of water, sanitation, drainage and garbage management. Furthermore, low-income groups more often live on marginal land, such as flood plains or steep slopes, and therefore are the first to suffer the effects of natural hazards, such as earthquakes, landslides, cyclones and floods.

86. With sufficient housing for higher income groups amid a pressing need for quality housing among the poor, the global housing situation both reflects and reinforces the sharp inequities in income distribution, access to education and health that are described in other parts of the present report. While developed market economies generally have been able to provide adequate housing to the majority of their populations, many developing countries and economies in transition have not been able to close the gap in improving access to affordable and physically adequate housing and related infrastructure services as compared to the pressing needs in this field. Overcrowding, poor quality housing and lack of adequate water and sanitation, especially in the large number of informal settlements, create tremendous health, safety and environmental hazards in many of these countries. At the same time, homelessness is on the rise in many localities, including high-income countries, contributing to social polarization and tension.

87. Macroeconomic developments clearly influence housing conditions and policy options, since without economic growth there is little support for policy measures on either the supply or the demand side. But the way in which housing is produced and exchanged also has a large impact on economic growth, poverty reduction and environmental sustainability. The discussion of this other direction of the relationship between housing and the economy, i.e., the contributions that housing can make to macroeconomic goals, received an important impetus at the United Nations Conference on Human Settlements (Habitat II), which was held in Istanbul in 1996.

88. The challenges for the provision of adequate shelter for all are many, as described below in terms of the quantity and quality of housing and related infrastructure services in different regions, distinguishing between urban and rural areas and social groups, where data are available. Recent developments in thinking about housing policy – including the shift to a more holistic approach and the emphasis on an enabling environment, partnerships and participation – and different factors that influence access to and affordability of housing are also addressed.

Taking stock of the housing situation

89. While high-income countries are facing the challenge of addressing the change in housing demand caused by ageing populations and smaller households, the acute problem in developing countries is the

Table 3

enormous shortage of housing and infrastructure in both urban and rural areas as demand continues to increase, especially in the cities. In many countries with economies in transition, such as in western Europe and North America, the main issues regarding shelter are conservation, renovation and modernization, although the quantity and quality of housing and of basic infrastructure services also remains a problem in some countries.

90. The rapid rates of urbanization in developing countries have led to an enormous increase in the demand for urban housing and related services that most Governments have not been able to meet, leading to the proliferation of slum and squatter settlements where people live in crowded conditions, often without access to water and sanitation and under the constant risk of eviction. Indicators of housing quality show enormous differences in urban housing characteristics between countries of different income levels, such as the number of persons per room, the available floor area per person and the percentage of permanent structures and illegal housing stock.[70]

91. Obscured in city averages for these indicators, however, are large differences between high- and low-income groups. For instance, in the informal settlements (katchi abadis) that house approximately 40 per cent of Karachi's population, people are housed in 2 to 3 square metres (m^2) per person, while those living in larger town houses and bungalows have between 23 and 33 m^2 of space per person.[71]

92. In most cities in the developing countries, between 30 and 60 per cent of housing units are illegal or informal, in the sense that they contravene either land ownership laws (squatting) or building and planning regulations, causing insecure tenure for a large part of the low-income population. Security of tenure is of vital importance because without it people will not invest in their housing. Security of tenure can be affected in different ways and titles do not have to be permanent, legal or individual in order to prompt investment; often it is the sense or conviction of security that is crucial and which can be conveyed through collective organization or political support and a policy that secures prevention of evictions. Also, a de facto security of tenure that arises from public investments in utilities may suffice to trigger owners' investment in their dwellings and to increase their value.

93. However, according to the Commission on Human Settlements, while many initiatives have been successful and clearly demonstrate that the granting of secure tenure provides the basis for substantial investments by the urban poor in improving their immediate living environments, the lessons learned are rarely used to make the necessary adjustments to policies and legislation, on the one hand, and to changing administrative and bureaucratic procedures, on the other.[72]

94. Notwithstanding the obvious differences in housing conditions between cities in high- and low-income countries, regional and worldwide trends in urban housing quality and quantity as well as their relation with trends in economic growth and poverty are often difficult to assess due to the scarcity of good quality comparable data. At the aggregate level, while trends in urban poverty are fairly clear, housing conditions on the ground are highly variable, and according to the United Nations Centre for Human Settlements (Habitat) there appears to be no simple correlation between rising poverty and declining housing standards, nor between high rates of economic growth and housing improvements across the board.[73] Possible explanatory factors include the indicators used and the lack of data that allows for accurate comparisons, but housing policy is believed to play an important role, as do rising income inequalities within cities.

95. The shortage of good quality and up-to-date information on the quality and quantity of housing and related infrastructure makes it very difficult to adequately assess the situation and to support planning. Technological developments and capacity-building for data collection and analysis have brought some improvements in this area. The wider availability of computers and adequate software, for example, makes it possible for local government to use census data to assess the quantity and quality housing at a very detailed geographical level, as illustrated by an analysis of the housing deficit at the community level in Santiago, Chile.[74] Another development is the use of satellite images to support urban planning. The information provided by SPOT-XS imagery, for example, provides information on large-scale changes of cities and directions of growth. However, it is not detailed enough to identify socio-economic properties of city quarters. In recent years, higher resolution images have become available that would allow for a more detailed analysis.[75]

96. In rural areas of developing countries, despite a larger area of land available for housing overcrowding also remains a problem because households are generally larger and the incidence of poverty higher than in urban areas, so that many households can not afford to spend on bigger housing. As in the poor slums in city districts, many rural inhabitants live in insecure and sub-standard dwellings. In many cases, farmers, pastoralists and hunter-gatherers have been victims of eviction from land they traditionally own or manage to give way to development projects, such as reservoirs and construction works. The more pressing housing problem in rural areas of developing countries, however, is access to safe water and sanitation.

97. Access to water is practically universal in high-income countries but remains a serious health threat in

both rural and urban areas in low-income countries. On a global scale, about 94 per cent of urban dwellers have access to water in the year 2000, compared to 71 per cent of the rural population. For the countries of Africa, Asia and Latin America and the Caribbean as a group, coverage increased during the 1990s by 6 per cent, but there are large differences between and within regions and in Africa; in particular, the expansion of services was not able to keep up with population growth.[76]

98. Considerable differences exist between households living in the same area, since those who can afford it invest in private systems, wells or pumps to supplement inadequate water supply. In the absence or shortage of treated water, low-income households resort to unsafe groundwater or purchase from water sellers. According to estimates, in Bangkok some 100,000 individuals obtain water directly from canals and waterways that are grossly polluted by human and industrial waste. As piped water connections are sparsest in low-income neighbourhoods, the poor often have to buy from vendors and end up paying on average 12 times more for their water than higher-income groups, exacerbating poverty and inequality[77].

99. The global pattern with regard to sanitation is similar to that for water supply; in Asia, Latin America and the Caribbean, and Africa together, some 800 million people gained access to sanitation facilities during the 1990s, but approximately 2.4 billion still lacked access at the end of the decade and infrastructure for proper waste disposal in low-income countries remains grossly inadequate[78]. In many poor areas, sewage is discharged directly into rivers and surface drains, causing serious contamination of groundwater. The subsequent poor water quality and the unsanitary environment serve as a breeding ground for the spread of such diseases as malaria, cholera and dengue fever.

Homelessness

100. As noted above, homelessness is increasing in both developing and developed countries. Different definitions exist of homelessness, ranging from having no shelter at all (rooflessness) to living in insecure, inferior or substandard housing.[79] It is estimated that in 1995, about 100 million people worldwide, had no shelter at all.[80] Widely differing estimates reflect both different definitions for homelessness and the difficulty of measuring the number of homeless people. The so-called service-statistics paradox (which leads to those countries with the best-developed service systems recording the highest levels of homelessness), undercounts, double counts, hidden homelessness, and differences in time periods used when measuring homelessness all cause homelessness estimates to be uncertain and they should therefore be treated with caution[81].

101. Chronic poverty, coupled with physical and other disabilities, have combined with rapid changes in society, the workplace and the local housing markets to make many people vulnerable to homelessness.[82] Several million people are estimated to be homeless in Europe and North America at any given point in time, a growing proportion of them being women – many of whom become homeless because they are fleeing domestic violence – and an increasing number being under 40 years old. Research in the United States found homelessness to be concentrated in the largest cities among certain groups.[83] Quite often, vulnerable groups in North America and Europe include people with mental illnesses, persons with disabilities, drug addicts or the elderly poor. According to some estimates, in the mid-1990s the homeless population of the United States (people sleeping in shelters, bus and train stations, abandoned buildings) was estimated to be 500,000 to 750,000.[84]

102. At the beginning of the new millennium, in New York City, one of he largest and most prosperous cities in the world, the number of homeless people has risen to the highest level since the late 1980s, the increase of the last few years consisting mainly of women and children. For instance, on a typical night in February 2001 the system provided beds for a total of 10,177 children and their 8,024 adult family members, as well as 7,492 single adults.[85] The increase is said to be part of a national trend, and probable explanations include sharply rising housing costs due to the economic boom, campaigns that encourage victims of domestic violence to seek help, more court orders for evictions and declines in subsidized housing. Analysis of the data from the shelter systems of New York indicated that large disparities existed among age groups and across racial/ethnic groups in shelter utilization. Children under age five have the highest shelter utilization rate among the age group studied, while the overall rate for Afro-Americans was 2.3 times that of the overall population.[86]

103. In many cities of Europe, homelessness is a pressing social issue. For instance, in Germany, one of the biggest and most prosperous European economies, there is approximately one homeless person for each 900 housed persons.[87]

104. In countries with economies in transition, although data are sparse and scattered, it is clear that the risk of homelessness has increased, as housing is increasingly being privatized and housing prices and utility fees have started to grow towards market levels, while for many people real income levels have declined. For instance, the incidence of homeless in the Russian Federation has increased substantially since the start of the transition period. According to some estimates, at present the number of homeless people is near 1 million and growing; there are 580 to 980 homeless people per 100,000 citizens in the big Russian cities.[88]

105. For most developing countries, not even estimates are available. India probably has the most comprehensive data, resulting from a homeless census carried out in 1981, the results of which indicated an estimated 2,342,000 homeless people, and the 1991 census, which showed a figure of 1.2 million. Yet there are also large numbers of people living in shelters made of temporary materials in places where they have no hope of remaining, including the "pavement dwellers", of whom there are an estimated 250,000 in Mumbai and 130,000 in Delhi.[89] When using the broadest definition of homelessness, including the population living in insecure and substandard accommodation, the number for Africa, Asia and Latin America would run to the hundreds of millions, not only in cities but also in rural areas, including such groups as plantation workers, tenant-farming households and temporary or seasonal workers.

Housing policy

106. Important changes have taken place over the last decades regarding strategies, policy measures and the roles and responsibilities of the actors involved in achieving the goal of providing adequate shelter for all. Already in the early 1970s a tendency towards less direct government involvement became visible, after the focus on physical planning and large-scale public housing construction, dating from the 1950s and 1960s, proved to be too costly for Governments in the South. From the mid-1970s to the mid-1980s, housing policies in developing countries focused on state support for self-help ownership on a project-by-project basis. Eradication of informal settlements made place for squatter upgrading, sites-and-services projects and subsidies to land and housing. Households in the lowest income groups, however, did not always benefit from this approach as they often didn't meet project eligibility criteria or were forced out of their neighbourhoods because of rising costs of living after upgrading had taken place.

107. By the late 1980s, most Governments had withdrawn from the direct provision of housing and increasingly relied on the so-called enabling approach, trying to expand housing supply through market forces. This approach is characterized by the involvement of a wide range of non-state actors that engage in partnerships with the state.

108. Partnerships are a crucial element of the enabling approach to housing, in which each actor – the state, the private sector, civil society and NGOs – is believed to have its own set of comparative advantages. The commercial private sector, markets, small-scale producers and individuals are believed to be best at producing housing, and NGOs and community groups are deemed necessary as intermediaries to assist low-income groups in benefiting from markets. Governments, within this framework, are held responsible for elaborating and enforcing an enabling fiscal, legal and regulatory environment that includes, among other things, clear property rights regulations, realistic building codes and standards, expedient granting of permits and land-use planning.

109. While the different actors need each other to perform effectively and their cooperation permits them to perform better than individually, partnerships are difficult to operate in practice because of inequalities between partners in terms of power and resources, and experience has shown that partnerships are not a panacea for solving housing problems. Experiences show that successful operation of partnerships tends to involve strong (government or non-governmental) involvement to facilitate interactions between private firms and community groups, address a broad range of housing and related issues simultaneously, deliver concrete benefits to all parties, address macroeconomic and political factors in the wider context, and focus on programmes, policies and resource flows rather than heavily administered project-based partnerships.[90]

110. In spite of the overall consensus reached during the 1990s on what the key issues of a successful housing policy are – including a holistic approach, integration of housing policy into the wider macroeconomic, social and environmental policy framework, decentralization and local ownership over policy decisions, capacity-building for improved local government, the key role of NGOs and other civil society groups, gender equity and other "issues-of-difference"– important differences do remain. These include the extent to which market forces should be relied upon to deliver both efficiency and equity goals, and when and how Governments should intervene to address market failures. Moreover, within the general consensus there is ample room for differences at the micro level, with the right mix of policies, regulations and the kind of institutions needed, depending on the local context, and it is not always easy to decide which actor is responsible for what in the context of globalization, as becomes clear from the radical changes taking place along Mexico's northern border since the signing of the North American Free Trade Agreement.

Access to housing

111. In line with the above-mentioned tendency regarding housing policy, few countries currently maintain large public housing programmes. Although public housing still makes up a significant proportion of the housing stock in many cities,[91] it has been declining from the late 1970s/early1980s for most countries with market or mixed economies, and from the late 1980s or early 1990s for many countries with economies in transition. The reasons for this decline include increased

adherence to market forces, reductions in public spending due to recessions, debt crises and structural adjustment programmes, as well as difficulties in the public housing programmes themselves, such as their inability to meet diversified demand, low maintenance records, high unit costs and the failure to build the planned number of units despite the often large sums of money spent. Because of high unit costs, even with subsidized or controlled rents a large proportion of low-income groups in the developing countries could not afford to live in public housing and eligibility criteria often excluded the poorest households, especially women-headed households.[92]

112. However, access to housing through the market may be even more difficult for the lowest income groups; market imperfections, including supply constraints, land speculation and highly skewed income distributions are among the factors that make commercially produced housing unaffordable for many people in developing countries and – as income inequality augments – in developed countries. One of the most common measures for the affordability of housing – the house price to income ratio, i.e., how many years of income is needed to purchase a house, shows that, contrary to other housing indicators, such as floor area per person, the house price to income ratio is largely independent of a country's income level.[93] While a ratio of between 2 and 3 generally implies that a large part of the population could afford to purchase a house, in many cities the ratio is 5 or more.[94]

113. The price of rental housing, of particular importance for those with low-paid jobs in central city locations or people with casual or temporary employment that requires frequent moves, is highly variable among cities in the South compared to cities in the North, and rent levels per square metre appeared to be highest relative to the country's per capita income in cities in low-income countries. A preliminary analysis of the indicators for cities surveyed in the housing indicators programme of Habitat and the World Bank suggested that cities with a rapid growth in the number of households have relatively high rent-to-income ratios.[95]

114. Variations in the costs and availability of inputs including land, construction, building materials and housing finance explain the large differences in the affordability of housing between cities with comparable per capita incomes. In industrialized countries, formal financial institutions have proven to be effective vehicles in putting ownership within reach of a large part of the population; in the South, most housing financing comes from non-institutionalized sources (family savings, friends, informal credit groups), as in many countries formal housing finance institutions are non-existent, moribund or inaccessible to low-income groups. Access to credit from formal lending institutions is particularly limited in sub-Saharan Africa and South Asia. Although some form of new housing finance systems have been established in many countries with economies in transition, case studies indicate that the availability of credit for urgent maintenance and renewal is limited as public funds are generally small, and commercial banks are often reluctant to engage in housing loans without state guarantees.[96]

115. Where formal market-based financial institutions do exist, access is usually limited for low-income groups, particularly for women, because they have no stable source of income, they lack collateral or because they are perceived not to be creditworthy. NGO-sponsored financial housing initiatives have in some instances filled the financing gaps, showing the capacity of the poor to save and to achieve repayment rates often better than those of higher-income groups. However, the scale of these initiatives is too small to provide for the enormous demand, and mainstreaming of reforms into the formal financial systems is not yet common practice, although there is some positive experience in this regard. For instance, FURPROVI in Costa Rica aims to integrate poor people over time into the formal housing finance system (to promote sustainability), but recognizes that they need special help for a number of years before they can graduate in this way. Borrowers therefore spend time in a separate credit programme on easier terms, while they build up their incomes and creditworthiness. Another example is a system of dual-indexed mortgages in Mexico that are both sustainable (indexed to inflation) and affordable (indexed to wages), with payments fixed at a maximum percentage of household income and repayment periods adjustable beyond 15 years. The success of the programme has led to an expansion in commercial bank lending to shelter overall. The triguna programme in Indonesia provides special finance from the National Savings Bank to help housing cooperatives and associations acquire property in three stages (land acquisition, site development and house construction). The scheme was adopted as part of the national shelter strategy in 1993.[97]

116. The price and availability of land for housing is an important factor in housing prices in both urban centres and rural areas. As cities grow in size and wealth, increased competition for the best quality and best-located land sites reduces the possibilities for low-income groups to acquire a land plot and forces them into inconvenient and/or hazardous locations. The commercialisation of land markets, land hoarding and speculation restrict the availability and affordability of land for housing in many places. In the case of the housing market in Taiwan Province of China, for example, rising prices occur simultaneously with the over-supply of housing stock, which is attributed to its land tax system that encourages speculation.[98]

117. Governance also plays an important role in the

accessibility and affordability of housing, as illustrated by the time and cost of transactions needed to acquire a plot or obtain approval of development applications. These continue to obstruct access to housing in many places; in Cameroon, for instance, registration of titles can take up to seven years; in Lima, approvals for subdivisions take three years or more.[99] In Mexico, where an average of 117 bureaucratic steps may precede the purchase of low-cost formal housing and regulatory costs charged by local governments added as much as 35 per cent to the cost of a house in some cities, a national campaign for state-level reforms started in 1992, including specific targets, regulatory cost surveys to monitor progress and publication of the results.[100]

118. As mentioned before, unequal access to housing is certainly not exclusive to the developing countries; many cities in Europe and North America have been witnessing rising inequalities and rising prices in housing that exceed inflation and growth rates, making housing less affordable to low- and lower-middle-income households. This rising concern has not yet elicited widespread policy responses, although some local authorities or non-governmental organizations have taken action to limit the displacement of owners and tenants from gentrification and to avoid evictions. In Vienna, for example, assistance by FAWOS, a non-governmental organization that provides counselling services for those threatened with eviction, has allowed the majority of tenants at risk to solve their problems[101].

Concluding remarks

119. In spite of progress achieved in the provision of adequate housing and related infrastructure, the number of people that have to do without remains unacceptably high. Differences between socio-economic groups are growing, and even in some of the highest-income countries homelessness is increasing among the more vulnerable groups of society.

120. Within the new strategy towards housing policies, the role of Governments has changed from being a provider of services to establishing the enabling framework that ensures access for all to adequate shelter and basic services, which in effect means that the task for Governments has become more complicated. Governments are taking up this task by engaging in partnerships with civil society, NGOs and the private sector, decentralization of authority and resources, capacity-building for improved governance and adopting a holistic approach that addresses housing issues within the broader socio-economic context.

121. Some of the difficulties encountered are described have, but many valuable lessons have also been learned that are increasingly being documented. The exchange of best practices through databases, e-conferences, national competitions and exhibitions has proven to be an effective means to raise awareness of policy issues.

122. However, moving from theory to practice and applying lessons learned is a difficult process, and in most developing countries the enabling approach has not yet been translated into national strategies. Success stories often show the leading role adopted by communities, NGOs and civil society organizations, but these are insufficient to address the enormous demand for adequate shelter, and there is an urgent need for Governments to expand such efforts.

NOTES

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[49] Host country, both developing and developed, regulations often require foreign operators to form joint ventures with local companies. On the part of foreign companies, joint venture also ensures easier access to qualified local personnel with greater cultural and linguistic connection to customers, which is very important in health services.

[50] For example, since Brazil opened its insurance sector to joint venture with foreign companies, four multinationals established operations in the country. Based on information provided by managers of a consultancy company specializing in the Brazilian insurance sector, the companies were offering packages with better coverage, and administrative costs started to decline.

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[69] A note on the measures used for the comparisons is important. Expenditure on health per capita are calculated in national currency and are converted into US dollars at the prevailing market exchange rates. They are appropriate for the overall comparison of per capita total public and private expenditures, however, countries vary in types of care that is provided (level, professionals, procedures, use of medicines and other inputs, etc.), price and cost-effectiveness of health care, accessibility and coverage, and so on. In addition, measures do not indicate relative living standards of workers or the purchasing power of their incomes. Prices of goods and services may vary greatly among countries and market exchange rates may not neither reliably indicate relative differences in prices or the "correct" price of the exchange rate. Therefore, international comparisons should be regarded as illustrations of general trends and taken with caution.

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[90] UNCHS *Shelter for all*, op. cit., Chapter III, Section d.

[91] Most cities included in the Housing Indicators Programme had over ten percent of total housing stock in public ownership and nine cities over 25 per cent; social housing makes up 17 per cent of all housing units in France, 21 per cent in Britain, 24 per cent in Germany and Austria and 36 per cent in the Netherlands.

[92] UNCHS Global Report 1996, op. cit., p. 219

[93] UNCHS *The state of the world's cities: 1999*, HS/C/17/2/Add.1, Habitat, Nairobi, 1999, par. 107.

[94] UNCHS Global Report 1996, op. cit., p. 200.

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