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THE IMPACT OF URBANIZATION ON HEALTH

CONTENTS

SUMMARY

There has been an unprecedented increase in the urban population in the developing countries in the last few decades. This trend is expected to continue. Urban growth rates will also tend to outstrip the capacity of municipalities to provide basic services such as housing, energy, water, sanitation, security, transportation and health care. To compound the problem, this accelerating change is happening at a time when fewer financial resources are available to invest in infrastructure and services. Therefore, unlike the past, what makes rapid urbanization such a critical issue is the *enormity* of the task of responding to urban population needs.

The Eastern Mediterranean Region (EMR) has one of the fastest rates of population growth in the world and is experiencing a very rapid urban expansion.

A city is not a homogeneous entity; it is composed of high-, middle- and low-income population groups. Health among these groups also varies according to their life-styles.

The urban poor are most affected by the health hazards of urban life. As a result of their poverty, they suffer from communicable diseases, malnutrition, high maternal and infant mortality, poor housing and often lack of access to health care services. Among this group, there are also high incidences of cardiovascular diseases, cancer, drug and alcohol abuse, accidents, violence, sexually transmitted diseases, AIDS, etc.

Furthermore, as rural people migrate to the cities, the extended family structure and the informal social support system break down in the process. This increases anxiety, vulnerability and weakens the ability of migrants to cope with urban life, and can adversely affect their health and well-being.

Rapid urbanization in the EMR has caused a multitude of environmental and health problems. In many major cities, squatter settlements and shanty towns have grown rapidly, and green areas around cities have eroded or been destroyed. These cities suffer from congestion, air and industrial pollution, and inadequate sewerage and solid waste management systems. In some, the cost of water supply and sanitation has escalated to be among the highest in the world. Most cities suffer from a severe housing shortage, as urban land and housing prices have risen above the affordable income range of the average person.

While the infant mortality rate in the Region tends to be lower in those countries that have a higher percentage of urban population, these data mask the substandard health conditions of the urban poor.

Health and environmental data from different city neighbourhoods are not easily available. Urban health services have a strong curative instead of preventive bias, and are especially lacking in poor neighbourhoods.

Nutrition data from EMR Member States confirm the increase in urban stress in diet- and stress-related problems, so called "diseases of affluence" (e.g., diabetes, hypertension and cardiovascular diseases).

Needless to say, many health problems associated with urbanization in general, throughout the world, are present in all EMR cities, the exceptions being alcohol abuse and excessive promiscuity and prostitution. Islam, being the faith of an overwhelming majority of people in the Region, strictly forbids the use of alcohol, and similar to other religions rigidly prohibits excessive promiscuity and prostitution.

The formidable health and environmental challenges of rapid urbanization in the Region require matching responses from the health sector. In mobilizing its resources for effective responses, the health sector should recognize that there are two sets of priorities. The first is concerned with the status of the population's health and its health services in urban areas; the second is concerned with overall urbanization issues (e.g., rapid population growth rate, impact of national development plans on cities, imbalanced urban and rural development, poverty in urban slums and squatter settlements, long-term national development policies and plans). The immediate priority is to make sure that urban health and environmental services are *responsive* to the people's needs. This implies collecting data from different neighbourhoods in the cities, conducting situation analysis, and reorienting the health care system for more effective coverage, based on the primary health care (PHC) approach. Environmental services require also integrated management.

The "healthy cities" concept (first adopted by the WHO Regional Office for Europe in 1986) has received keen interest among the countries of the Region. It provides a good opportunity to involve urban dwellers in the health and welfare of their cities, and thus, of its citizens. It can also assist in the organization and promotion of primary health care at city and district levels. Through a "healthy cities" network in the Region, it will be possible to share successful approaches adopted in some countries to improve urban conditions. It can also help to mobilize resources for urban health and the environment.

Concerning wider urbanization issues, the health sector should assume a strong leadership role in *advocacy*, bringing important issues to the attention of decision-makers and the general public. It is important to ensure that all development activities have, at all stages, in-built health and environmental measures. And last but not least, it is essential to obtain political commitment for safeguarding health and the environment in all national urban development endeavours.

THE IMPACT OF URBANIZATION ON HEALTH

Agenda item 9

Introduction

In 1950 only 29% of the world's total population lived in urban areas. By 1990 the urban population had increased to more than 45% of the total population. By the year 2000, this figure will have reached 51%. Urban growth is expected to continue, and by the year 2020, 62% of world's then estimated 8.1 billion inhabitants will be living in cities [1].

This urban and peri-urban growth is the result of two factors: migration and the natural increase occurring as a result of an excess of births over deaths in the population.

Such demographic changes will continue to have an ecological, economic and social impact on the environment and, as a consequence, on human health. Growth rates of this magnitude will outstrip the capacity of municipalities to provide basic services such as housing, energy, water, sanitation, security, transportation and health care. What makes matters even more difficult is that this accelerating change is happening at a time when fewer financial resources are available to invest in infrastructure and services. Therefore, unlike the past, what makes rapid urbanization such a critical issue is the *enormity* of the task of responding to city dwellers' needs.

The Eastern Mediterranean Region (EMR) has one of the fastest rates of population growth in the world. With major cities being the centres of economic activity, they attract rural people seeking employment. As a result, in recent decades, countries in the EMR have experienced an unprecedented increase in their urban populations. Similar to other parts of the world, this population pressure has put a severe load on municipal services. Rapid urbanization not only produces pollution, congestion, noise and other undesirable effects, but the requirements of growing urban populations exceed the sustainable yields of surrounding land and water resources.

A characteristic feature of rapid urbanization in developing countries has been the growth of squatter settlements and shanty towns in and around the cities. Subsistence farmers and the rural poor are among the first to rush to towns and cities in hope of earning a better livelihood. Poor rural migrants, in increasing numbers, arrive in already crowded squatter areas, causing these settlements to proliferate.

In many cities, owing to the lack of financial resources, appalling housing conditions and a dearth of municipal services, the urban poor suffer from "traditional" diseases caused by poverty and under-development as well as chronic diseases associated with modernization.

The health problems of urban middle- and high-income groups differ somewhat from those of the urban poor. For example, while both rich and poor may suffer from overall environmental pollution, the higher-income groups, in general, are less affected from communicable diseases than are the poor. However, the middle- and high-income groups may suffer from dietary and lifestyle-related ailments, which are known as "diseases of affluence". The health of city people depends largely on the people's economic income level, the type of neighbourhood they live in, environmental conditions, their education, life-style, and many other factors. The situation is further complicated by the rapid urban growth that continuously affects these factors.

The present, traditional urban health-care system, with its strong curative bias, may not be suitable to provide coverage for *all* the people's health needs. Hence, a more responsive health care system and approach is called for. While the primary health care (PHC) concept in urban areas provides a good basis for such an all-encompassing care, it has not yet become fully operational. More attention is needed to develop urban health concepts and methodologies.

This paper aims to:

- examine demographic, economic and other factors that have contributed to the rapid urbanization in the Region;
- discuss the health and environmental impacts of urbanization in the Region, highlighting issues and some country experiences that have been effective in some Member States; and
- suggest some approaches and strategies to tackle health and regional environmental problems.

It is hoped that this paper will also stimulate discussions that will focus on major urban health issues confronting the Region.

1. Urbanization in the Eastern Mediterranean Region

1.1 Urbanization

Urbanization is brought about not only by rural people moving to cities, but is the result of the natural growth of the urban population, and the transformation of rural settlements into urban settlements. It is not only a demographic issue, but one of location, economics, social, cultural, physical and other factors.

1.2 Population

Population is a basic feature of urbanization and serves as a crude indicator of urban development. Countries in the EMR have experienced a wide range of urban growth. For its least-developed countries, the rate of

TABLE 1. Population growth in some major cities of the Region, 1960 and 1990

(with an annual population increase rate of between 3.2% and 9.5%)

City	Population in millions	
	1960	1990
Aleppo	0.5	1.7
Alexandria	1.3	3.7
Baghdad	0.4	4.0
Cairo	3.0	9.0
Casablanca	0.6	3.2
Damascus	0.5	2.0
Karachi	5.1	7.7
Lahore	1.4	4.1
Riyadh	0.3	2.0
Teheran	2.0	6.8

Source: Reference 3.

urban population increase is comparatively low. In contrast, in the richer countries the increase is very high (see **Figure 1**). In the middle-income countries, the growth rate is also large and the upward trend will continue (see **Figure 2**). The population growth patterns in the Region are shown in **Figure 3**.

The average population growth rates in countries of the Region are high, except in Cyprus. Of 24 countries in the world with average annual population growth rates above 3.5%, 12 are in the EMR. The 12 constitute 59% of the total population of the Region [2].

The total estimated population of the Region in 1990 was about 391 million. Approximately 44% of the total population is less than 15 years old. It is usually the younger age group (in their twenties and early thirties) that tend to migrate to the major cities. Therefore, with such a high proportion of youth in the total population, additional population increases in the major cities will be enormous in the years to come. The concentration of the urban population in a few primary cities is quite common throughout the Region. **Table 1** shows the population picture in the largest cities in the EMR [3].

1.3 Impact of national economic development plans

Changes in a country's economic and employment base may be the most important determinants for an increase or a decrease in the urban population. In most countries, especially those with weaker economies, population movements are essentially towards areas where employment and education opportunities are concentrated, or where "survival" is more certain. The large cities and metropolitan areas have grown because they contain a higher proportion of non-agricultural jobs and income-earning or educational opportunities [4].

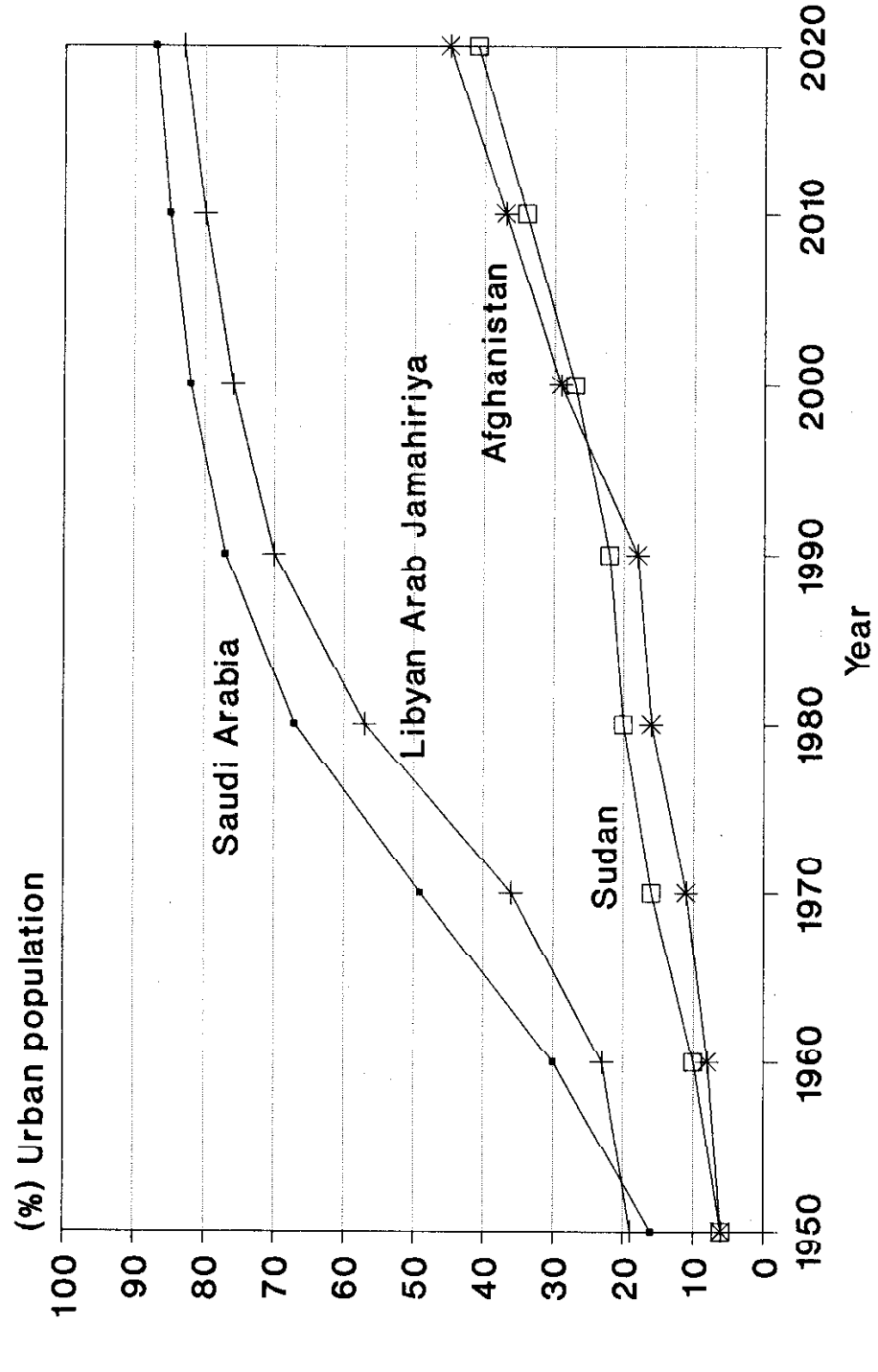
In the Region, in almost all countries, urban areas receive the highest share of economic benefits. Industrial development takes place either in or close to major cities. Also, centres of commerce, public services, construction activities, tourism, etc., are all based in major urban areas.

For example, in a large Member State in the Region, one of its major cities generates 42% of the industrial value-added revenue and holds 50% of all bank deposits, while its population accounts for only 6% of the national population [5]. Similarly, in another country, the pattern of development in the 1960s and 1970s favoured the major urban centres. As a result, even now, in the latter country more than 45% of investment for new industries is spent in the capital city and its surroundings. Also, 55% of the total number of doctors in the country and more than 50% of universities and higher education institutions are located in the same capital, which has only 16% of the country's total population.

In some countries, urban and rural development policies and plans have been formulated to provide an equitable balance of economic activities among the major cities, smaller towns and rural areas. However, these plans have not been successfully put into practice. Sometimes they are perceived as conflicting with the imperatives of national economic growth. Furthermore, there is evidence that attempts to limit the growth of very large cities and devolution of economic activities may damage prospects for overall economic growth. Therefore, the economies of most countries, in most instances, are clearly urban based. **Figure 4** shows the level of per capita GNP compared to the percentage of urban growth for low- and middle-income countries [6].

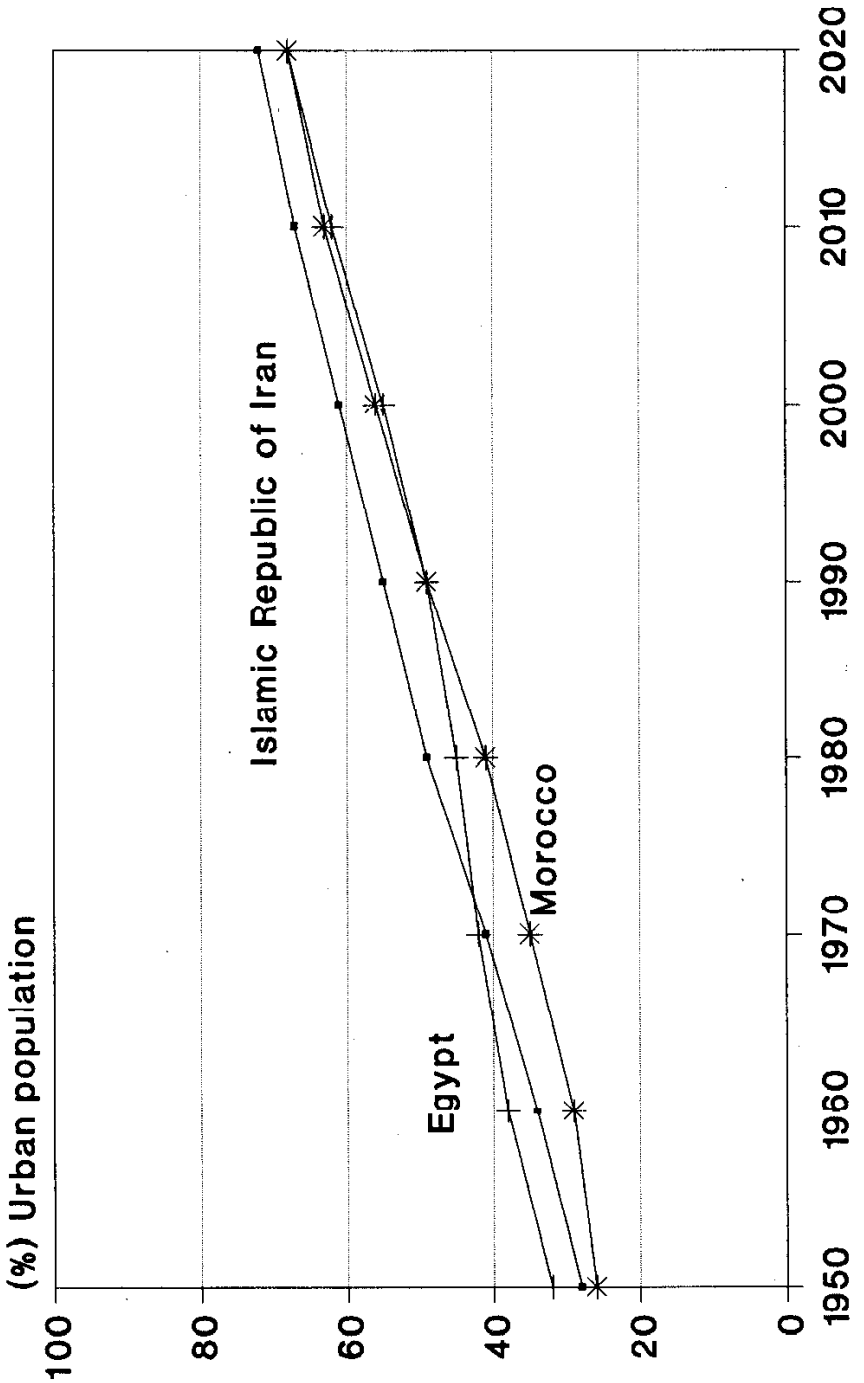
The urban economic pole attracts the surplus rural population. As agricultural practices become increasingly more modernized, less human labour is needed. Furthermore, poor planning, bad management, inability to use efficient agricultural techniques and high production costs in some countries, have forced agricultural workers, particularly marginal farmers, to leave the land and rush to the cities in the hope of better employment opportunities.

Figure 1. Urban population growth in some high- and low-income countries in the EMR, 1950-(2020)



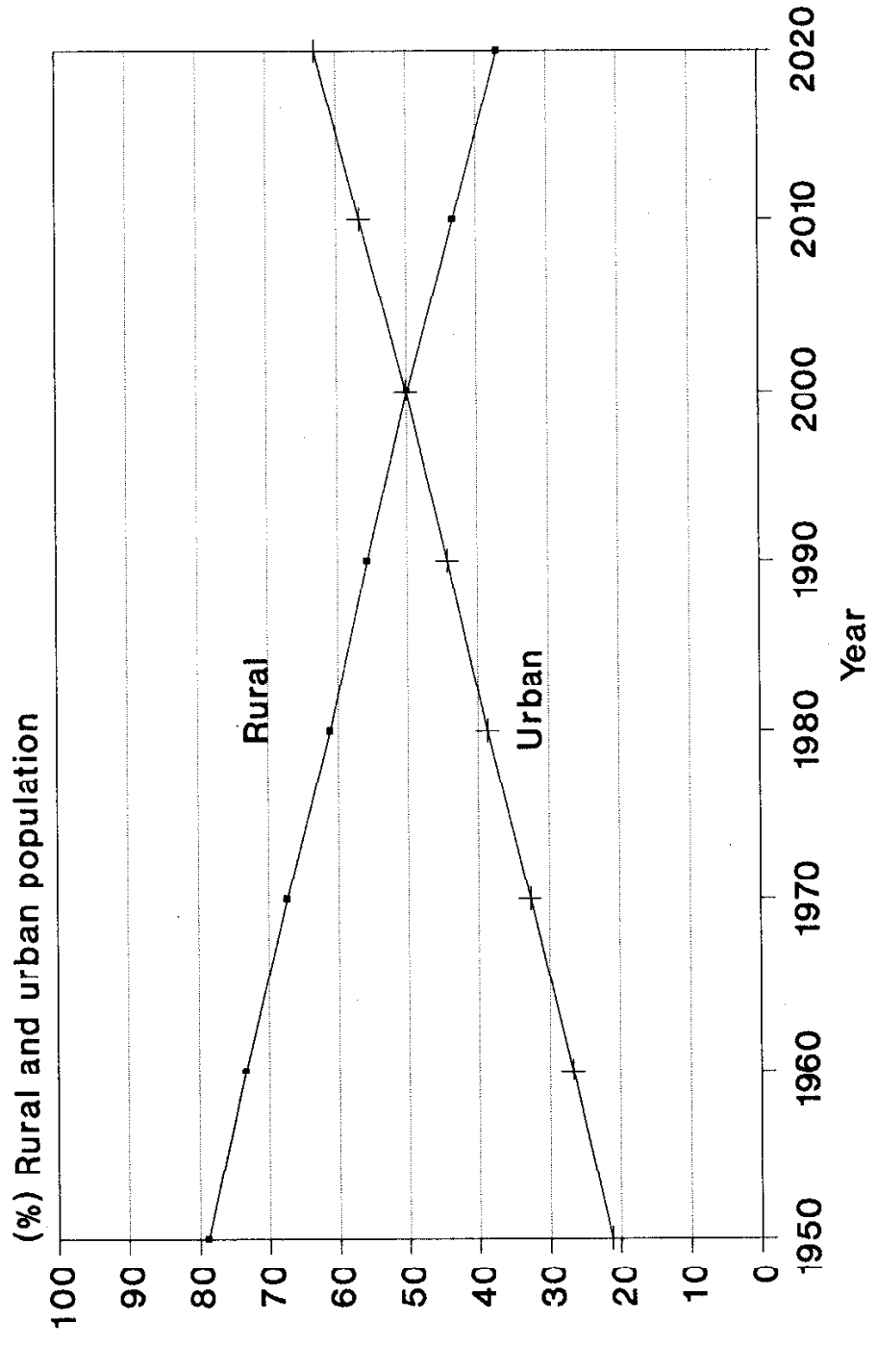
Source: reference 1.

Figure 2. Urban population growth in some middle-income countries in the EMR, 1950-(2020)



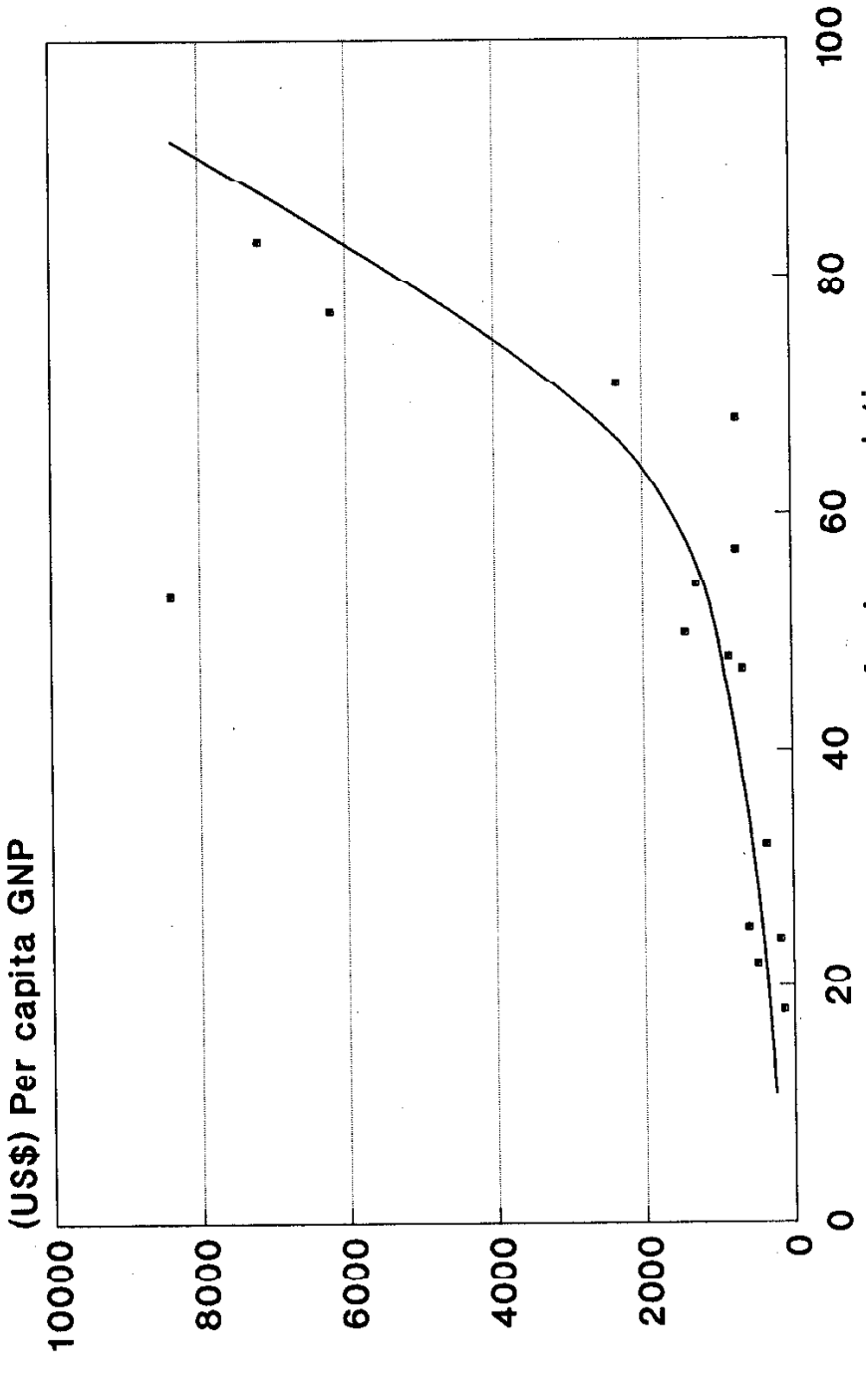
Source: reference 1.

Figure 3. Rural and urban population growth patterns in the EMR, 1950-(2020)



Source: reference 1.

Figure 4. Per capita GNP compared to percentage of urban population in some Member States



Source: reference 6.

2. Health in an Urban Environment

2.1 Different views

Urbanization is usually associated with the development of a productive economy and it has the potential to bring health benefits to urban dwellers. Compared with their rural counterparts, people who live in cities usually have better work opportunities, access to better health care services and educational facilities, and more access to religious centres, art and cultural amenities. City dwellers, however, are also at a higher risk of exposure to pollution, congestion, accidents, stress, space confinement, and can be more vulnerable to communicable diseases and mental illness. The health of people in cities is influenced by, among other things, environmental, ecological, economic, social and political factors [7].

There are, however, divergent views on the impact of urban living on health. Referring to overall mortality and morbidity rates in the cities, which for many developing countries are almost half those for rural areas, some people believe life in the city leads to better health. On the other hand, there are those who argue the contrary [8, 9].

Environmentalists are unanimous in their opinions that the modern urban life-style, which results in over-utilization of resources and over-generation of waste, is the main cause of the current ecological crisis of the ozone layer depletion and global warming. They further believe that the urban environment is an "artificial ecology" that adversely affects the natural ecosystem, as well as the physical and social environment.

While the above views are worth considering, within a broad ecological and human settlement context, more specific examination of health in an urban setting is called for.

2.2 Health of different groups in an urban environment

The health in a city can be best seen within the host, environment and the interaction of the host with the environment. The "host" in this analogy is the urban dwellers. The "environment" represents the physical and social environments. The "interaction" between the host and the environment is the "life-style". All three factors are determinants of health in an urban setting.

A city is not a homogeneous entity. It is composed of low-, middle- and high-income groups. Health among these groups also varies, according to their physical conditions, environment and life-styles.

The urban poor are at the interface between under-development and industrialization, and their life-style and disease patterns reflect the problems of both. They have "inherited" poverty, unemployment, malnutrition, communicable diseases, poor shelter and lack of social and health amenities. They experience not only industrial pollution and other health hazards, an unhealthy life-style and stress, but envy, by observing the comfortable and plentiful life-style of the affluent, a way of life they cannot afford.

Safe water, proper sanitation, disposal of solid waste, acceptable housing, and adequate transportation are particularly deficient in marginal urban areas. Also, while environmental pollution affects all urban dwellers, its adverse impact is more severe on the urban poor. Most poor people live around the city's periphery, in abandoned lowlands near industrial sites where environmental protection is often weakest [10]. Hence, the urban poor suffer from a heavy burden of communicable diseases, high maternal, perinatal, infant and child mortality [11]. Also, the health consequences of urban poverty include a high incidence of cardiovascular diseases, cancer, drug and alcohol abuse, accidents, violence, sexually transmitted diseases, AIDS, etc. [12].

Children. The health of children among the urban poor is especially critical. The urban environment can be particularly hostile to children. Poor children have to struggle with malnutrition, acute respiratory infections, diarrhoea and waterborne diseases, high environmental risks, lack of parental supervision and even child abandonment. Also, lack of opportunities for formal or even informal education, child labour, child abuse, street children, etc., are among many problems and conditions that poor children are exposed to in an urban environment.

Women. A significant and increasing number of women are head of urban households, who must seek work to support their families. Because of high unemployment in many cities and, in general, women's limited education and skills, they are usually confined to low-income occupations and the service sector. The long working hours deny their families, particularly younger children, their care and protection. Women can suffer mental stress due to worries of maintaining employment and can be targets of sexual and social harassment. Also, long working hours tend to force these women to ignore their own health, which, in many cases, is in a poor state to begin with. And as usual, women tend to put their family's interest before their own.

While the "rich" neighbourhoods of cities tend to suffer least from communicable diseases, environmental pollution and social ills, they suffer, as mentioned earlier, from "diseases of affluence", resulting from excessive and imbalanced food intake and a sedentary life-style.

2.3 Causes of ill health in urban areas

Boxes 1 and 2 show some factors influencing communicable and non-communicable diseases and psychosocial health problems. There is a serious lack of data on the health impact of urban living in developing countries. However, **Box 3**, which shows the summary of results of over 100 studies, provides some clues on the impact of the urban environment on health. (These summaries were prepared for the WHO Commission on Health and Environment.)

BOX 1

Communicable diseases

Communicable diseases flourish where the environment fails to provide barriers against pathogens. The risks are increased by overcrowding and the importation of pathogens to which people are not resistant to. Environmental conditions that promote the spread of communicable diseases are described below.

Lack of an adequate and safe water supply is associated with typhoid fever, cholera, hepatitis, gastrointestinal diseases, a number of parasitic diseases, trachoma and skin infections. Many exposures to disease organisms occur in peri-urban settlements where safe water may not be adequately available.

Insanitary disposal of excreta is a major cause of infant diarrhoea, gastrointestinal infections, cholera and parasitic diseases, including schistosomiasis. Improper excreta disposal encourages the breeding of insect vectors.

Inadequate disposal of solid waste *is a major factor in the* spread of gastrointestinal and parasitic diseases and leptospirosis, primarily as a result of the proliferation of insect and rodent vectors.

The absence of drainage of surface waters results in stagnation of rainwater, flooding and wastewater accumulation, which encourages vector breeding and infections. The urban poor are at risk of acquiring mosquito-borne diseases (e.g., malaria, dengue fever, Japanese encephalitis and filariasis).

Inadequate personal and domestic hygiene increases the risk of faecal-oral, skin, eye and vector-borne infections, while poor food safety practices increase the risk of gastrointestinal and diarrhoeal diseases and malnutrition.

Structurally inadequate housing and overcrowding contribute to the incidence of tuberculosis, pneumonia, influenza, bronchitis, rheumatic fevers, diarrhoea, measles, rubella and pertussis, as well as gastrointestinal and meningococcal infections.

Source: Reference 7.

BOX 2

Noncommunicable diseases and psychosocial health problems

1. Noncommunicable diseases

Noncommunicable diseases are associated with exposure to toxins and other hazards that are often intensified by unhealthy living conditions and life-styles in urban areas.

The transport system, the workplace and structural hazards in houses and buildings, all increase the incidence of accidental deaths and injuries, poisoning and burns. Also, people in urban areas are more prone to hazards of fire, explosion and chemical accidents.

Exposure to pollutants, chemicals and hazardous substances results in acute and chronic health impairments. Among such exposures, the effects of air pollution are of special concern. For example, lead from automobile emissions can affect the nervous system. Also, carbon monoxide generated by vehicles in dense traffic, and dust and gaseous sulphur compounds discharged into the air by power plants and industries can cause respiratory complications, especially among the elderly.

Furthermore, an urban life-style can affect diet. A stressful and sedentary urban life-style, and associated dietary patterns, can lead to obesity as well as other noncommunicable diseases such as diabetes, cancers and cardiovascular diseases.

2. Psychosocial health problems

While urban living can offer increased opportunities for meeting other people and for participating in cultural, recreational and artistic activities, it can also, paradoxically, increase the isolation of both the individual and the family. Social and emotional stresses are likely to be greatest among those newly arrived, particularly the poor. More broadly, urban stress often finds expression in depression, anxiety, suicide, alcohol dependency, drug abuse, and disabilities due to mental illness. Increases in mental disorders among the older age groups living in cities are well documented, including increases in such problems as juvenile delinquency, violence, and various forms of maladjustment in which psychosocial factors play a major role.

Source: Reference 7.

BOX 3

Health impacts caused by environmental problems in urban areas in developing countries*

Selected findings

These studies present a general picture of the urban population in developing countries suffering the "worst of both worlds". These urban people experience (a) the problems of the underdeveloped populations (deaths from infectious diseases and a predominance of post-natal deaths over neonatal deaths) and (b) the problems of industrialized populations (deaths from lung cancer, heart disease and accidents). The study on Brazil provides a good example of mortality data, owing to more complete registration of deaths in the country, when disaggregated, the data show that there are large intra-urban differentials in mortality patterns.

1) Examination of intra-urban differentials in mortality from all causes points to the link between increased mortality and poverty. The same is true for morbidity.

2) Too much focus has been placed on communicable diseases, particularly those transmitted through the gastrointestinal tract. Too little attention has been given to examining urban differentials in mortality and morbidity figures due to respiratory infections and accidents.

3) Infant mortality studies from communicable diseases show access to individual water supply as an important variable.

4) Death from communicable diseases affects poor urban groups, with infants and children being at higher risk.

5) The main picture that emerges from an analysis of overall mortality is one of noncommunicable degenerative diseases in urban areas having a significant impact as the predominant cause of mortality in the total population, and as the main cause of death across socioeconomic groups for adults. The link between poverty and higher mortality from noncommunicable diseases, with and without reference to intermediate variables, is evident.

6) Evidence of intra-urban differentials as regards nutrition is plentiful and shows poorer groups (particularly women and children) to be at a distinct disadvantage.

7) Urbanization is implicated as a determinant of mortality from noncommunicable diseases, e.g., heart diseases, malignant neoplasms and hypertension-related conditions.

Poverty, as a composite index of deprivation extending from command over economic resources, access to education, social support and self-esteem to control of housing and physical environmental quality, remains the most significant predictor of urban morbidity and mortality.

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* Based on 100 studies reviewed by a team of experts from the London School of Hygiene and Tropical Medicine, in connection with the work of the WHO Commission on Health and Environment.

Source: Reference 11.

3. The Impact of Rapid Urbanization on Environment and Health in the Region

Rapid urbanization has a profound impact on the environment, health, and on all aspects of people's life in general. Such an impact is all the more pronounced owing to the ecological characteristics of the Eastern Mediterranean Region. With its dry climate, its lack of sufficient water resources, vegetation and arable land, etc., the Region's ecosystem is indeed fragile. Any rapid shift or growth in one direction or another can create serious problems.

As the definition of "health" has evolved away from its narrow medical meaning to include a wider ecological dimension, the situation in the EMR becomes even more critical. In this context, "ecology" refers to natural and social human ecology. This implies that good health does not only depend on access to health services, it also relies on a clean and safe environment, comfortable and congenial living conditions, gainful employment, the sense of social belonging, a social support system, as well as physical and mental well-being.

Rapid urban population growth and the accelerated expansion of cities continue to cause drastic changes in the Region's ecology. Hence, the health and well-being of a majority of people in the Region who live in urban areas are inevitably affected.

A detailed review of the state of urban populations' health and environmental services in urban areas was undertaken by the WHO Regional Office for the Eastern Mediterranean (EMRO). The findings of this review have been used to assess the health and environmental impact of rapid urbanization in the Region. However, there is a serious shortage of socio-economic data available on urban health, especially on the urban poor.

3.1 Impact on the environment

In many major cities in the Region, except in high-income countries, squatter settlements and shanty towns have grown rapidly. The rapid increase in population density, reduction in living space, traffic congestion, coupled with the growth of industry, have exposed many people to environmental hazards.

Highly populated urban areas have the potential of lessening the cost of providing water supply and waste management services. However, the cost of water supply and sanitation in some cities of the Region has escalated, and is now among the highest in the world. One of the main reasons is the lack of adequate water resources. This condition necessitates desalination of sea water, which is an expensive and complex technology, as well as transportation of water for long distances to serve the cities. Also, heavy dependency on foreign technologies for sewerage system design and construction is another factor for the high cost.

Congestion and lack of space have compounded solid waste collection and disposal. In some cities, garbage trucks have to make a considerable journey to solid waste disposal sites. As these cities cannot provide efficient services because of complex financial and institutional problems, the refuse is dumped along the roads in city peripheries. Often domestic as well as industrial wastes are discharged close to poor settlements, creating an unsightly mess and a serious health hazard.

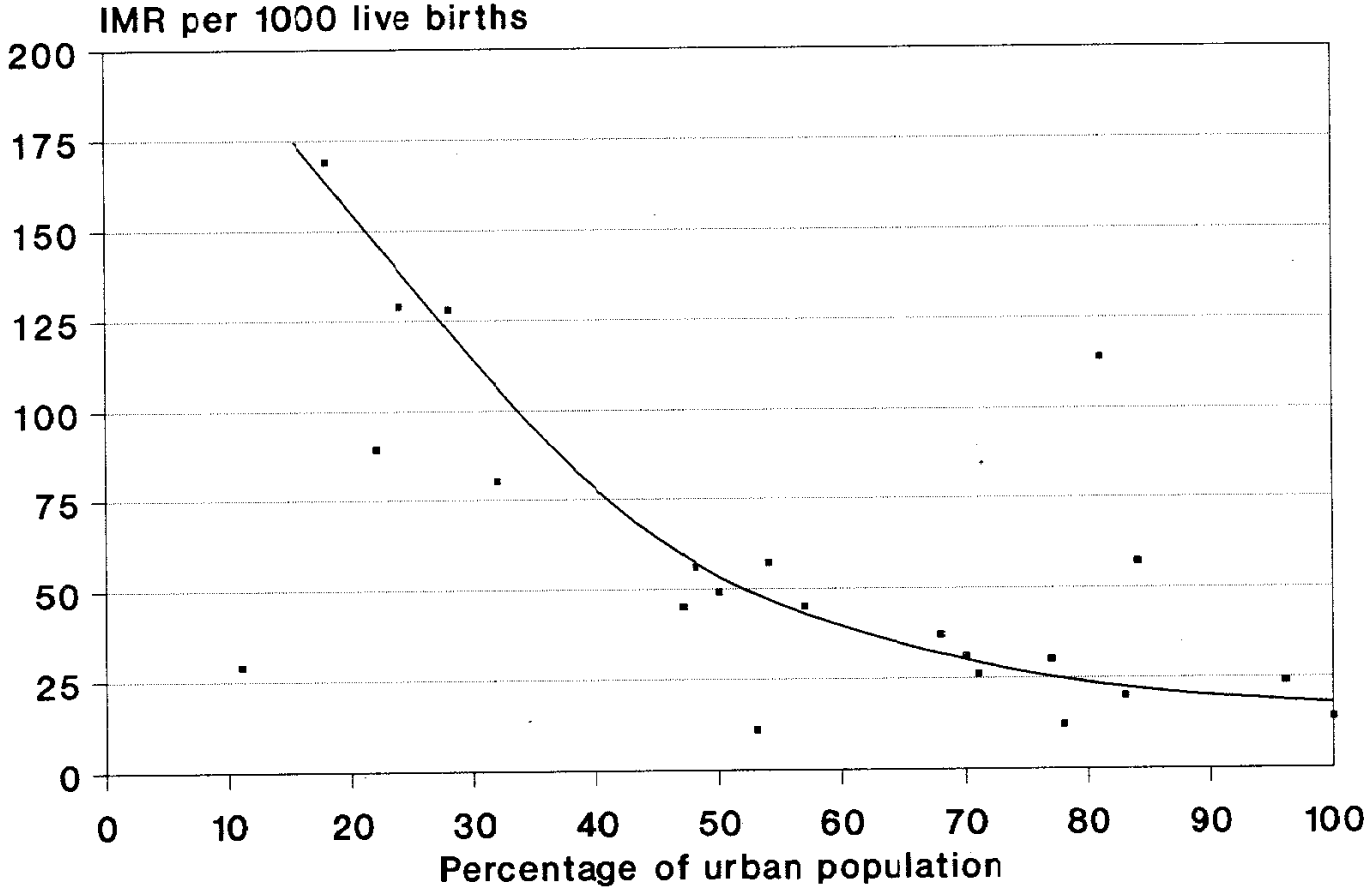
Furthermore, pools of dirty water, caused by lack of sewerage systems and drains in low-income sections of some cities, can become breeding grounds for disease vectors.

Air pollution is already a significant health problem in the largest urban areas of the Region. The levels of air pollution in one or two major cities in the Region are among the most severe in the world. The predominant air pollution problems in major cities, which may vary according to meteorological and topographical conditions, are caused by ubiquitous pollutants such as particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, photochemical oxidants and lead. In specific locations, other air pollutants such as hydrogen sulphide near septic water lagoons or sewage treatment plants, also cause problems. In residential zones adjacent to industry, the problem is becoming more serious. The number of primary sources of pollution--industries, energy facilities and automobiles--increases as the population grows, worsening the problem.

Water pollution. Municipal wastes of many cities in the Region are not properly treated, and therefore, when they reach the receiving streams, they cause severe water pollution. In some instances, the polluted water of these streams is used for drinking-water supply with minimal treatment. Obviously, such cases pose a serious public health hazard. Environmentally, because of the semi-arid or arid nature of the Region, rivers and streams have a limited pollution assimilative capacity. The wastewaters from cities put a heavy pollution load on a relatively short stretch of receiving streams and rivers, causing environmental "shock and trauma", and disrupting the ecology of these water bodies. Also, municipal and industrial wastewater from cities, in some situations, have contaminated the groundwater aquifers. In terms of recovery from contamination, these have a much more permanent adverse impact than the pollution of surface waters.

Furthermore, many of the most populated cities and nearby industrial zones are situated along the coastline. As a result, the pollution of coastal waters is already quite severe in many areas, and because of population growth, tourism and industrial expansion, the potential for worsening the situation is substantial and the impact on tourism could be serious. There is a danger of spreading infectious diseases, including skin diseases, through pollution of coastal bathing waters and shellfish grounds. Chemical contaminants are accumulating in marine life and in edible seafood near marine outfalls of municipal and industrial wastes. Coastal water quality is of major concern where desalination plants for potable water supplies are located [13].

Figure 5. Infant mortality rate (IMR) compared to percentage of urban population in 22 EMR Member States



Source: reference 6.

As mentioned, green areas around cities are being eroded or destroyed, and urban sprawl is extending into desert and dry lands, creating an inhospitable living environment. Furthermore, most cities suffer from a severe housing shortage, as urban land and housing prices have risen above the affordable income level of the average person. The housing shortage also has resulted in young people delaying marriage and has created social problems.

A further impact of the high cost of rapid urban growth on housing has been the gradual change of the types and styles of housing in many cities. There is often no town planning, and even when there is, there is generally little or no harmony in the architectural style of the buildings. This incompatibility has resulted in the absence of an "aesthetic" architecture. These and other environmental shortcomings have created what can only be described as "sight pollution". Traditional houses, which are more compatible with the culture and ecology of the Region and provide natural insulation from the cold and heat, are supposedly too expensive to build.

3.2 Impact on health

When comparing data from different countries of the Region, the average infant mortality and overall crude death rates tend to be lower in countries with a higher percentage of urban population (see **Figures 5 and 6**). However, these data mask the health conditions of the urban poor, which, in many cases, may be worse than those of people living in rural areas. It is assumed that in squatter settlements and shanty towns, the prevalence of communicable diseases is relatively high, especially in the cities of low-income countries. Also, because of the marginal nature of these areas, the delivery of health-care services is difficult. For example, coverage by the Expanded Programme of Immunization (EPI) in these areas is lower than in rural areas.

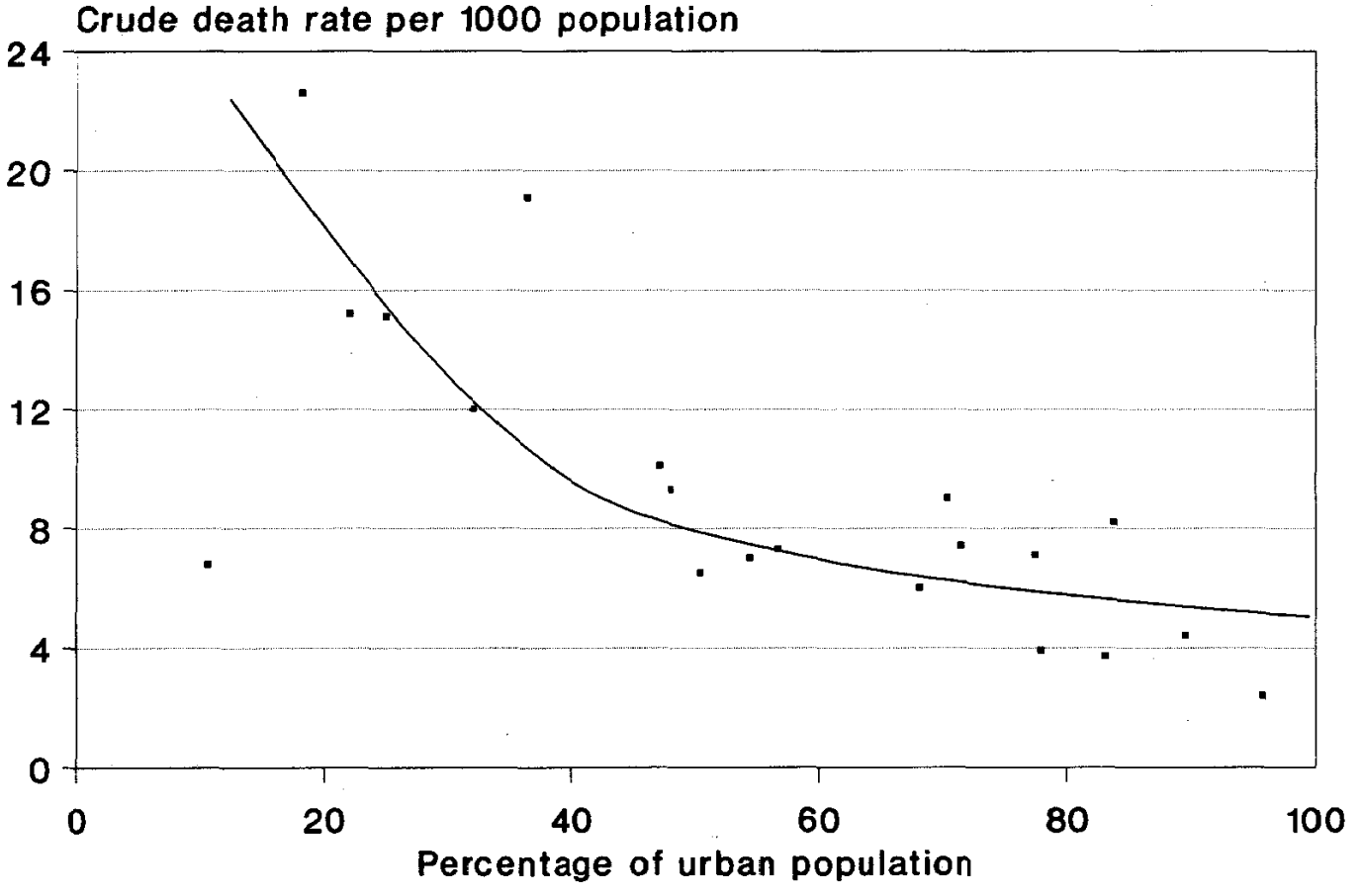
Some vector-borne diseases such as malaria and schistosomiasis, which had been absent in some urban areas, have been brought to some city fringes by rural migrants.

In the Region, nutrition data confirms the increase in diet- and stress-related problems in urban areas, such as diabetes, hypertension and cardiovascular diseases. Furthermore, social ills such as drug abuse, tobacco-smoking and alcoholism are problems that affect city dwellers more owing to many convoluted reasons, including higher population density.

For example, in the EMR, tobacco smoking is a major threat to human health. In the last decade, tobacco smoking has doubled. The problem is generally found more in urban areas and affects mostly males. However, recently there has been a marked increase in tobacco-smoking among women in the Region.

The health of low-income urban women in the Region suffers from additional burdens. Because of the necessity to work and supplement family income, many rural migrant mothers, on arrival in the cities, tend to

Figure 6. Crude death rate compared to percentage of urban population in some EMR Member States



Source: reference 1.

abandon breast-feeding of their infants. Leaving their baby in the care of a "substitute mother" can have an adverse effect on the infant, and can add to the mother's stress as well, who has also to adapt to changes involved in an urban life-style.

Apart from the many hazards of city life that threaten poor children, one of the major problems of rapid urbanization that affects a large number of children are the deplorable conditions of inner-city schools. Often schools cannot cope with the large number of children attending them. They often lack sufficient classrooms, sanitary facilities and playgrounds, let alone properly trained teachers and suitable curricula. Furthermore, many schools are located in the midst of polluted areas, noise and congestion.

Needless to say, many health problems associated with urbanization in general, throughout the world, are present in all EMR cities, the exceptions being alcohol abuse and excessive promiscuity and prostitution. Islam, being the faith of an overwhelming majority of people in the Region, strictly forbids the use of alcohol, and similar to other religions rigidly prohibits excessive promiscuity and prostitution.

4. Urban Environmental Health Management and Health Services in the Region

4.1 Environmental health management in cities

The management of environmental health, while differing from city to city, has certain common characteristics. Usually a host of ministries, provincial and municipal commissions, boards, authorities and agencies are involved, either directly or indirectly.

Urban water supply and sanitation, despite receiving most funds and attention, suffer from lack of autonomy, policy and management difficulties. For water supply, cost-recovery is not properly exercised in almost all cities. Also, there is a serious problem with operation and maintenance in many cities. Municipal authorities in most secondary cities do not have a sufficient budget, infrastructure, nor machinery to cope effectively with solid waste management.

Municipalities do not have the required technical staff for pollution monitoring and control. In regard to air pollution control, collaboration and links between technical national agencies and municipal departments are well below required levels. Also, environmental legislation and regulations, for many complex reasons, are often not enforced. Municipal programmes are also subject to administrative regulations and clearance by many national and local authorities.

4.2 Urban health care services

The overall coverage of the population in the Region with health care services has reached an estimated 82%. In urban areas, the coverage is estimated at 97%. Average urban water supply and sanitation coverage are 98% and 86%, respectively. The average percentage of pregnant women (both urban and rural) in the Region who are attended at delivery by trained

personnel, is 57%; the corresponding urban average is 75%. The average overall infant mortality rate (IMR) for the Region is 70 per 1000 live births; the urban IMR average is 57 per 1000 live births. These are general types of data and not specific. In most cases, those living in shanty towns and hovels are not included. Proper health care systems should be able to define the specific health needs of people in different communities and provide specific responsive coverage.

The above figures and many other data reflect the mounting problem of health care delivery in the cities. The use of mortality and morbidity rates and health care coverage rates can, to a certain extent, reflect the health status of rural areas. This is because rural communities, in a country or a region of a country, share many similarities. However, a city has many neighbourhoods and many different income groups. As mentioned earlier, the health status of people and the availability of services differ from neighbourhood to neighbourhood. Sometimes these variations show such extreme conditions that an average health indicator figure for a city does not reveal much.

Health data according to various neighbourhoods and communities within cities in the Region are not readily available. Even when these are available, they are not always analysed nor made readily available to those concerned. Also, the urban health care system is too preoccupied with curative services while preventive measures are often over-shadowed. Similarly, promotive aspects are not as visible as they should be. Referral hospitals are heavily used for first-referral contact care, which is an inappropriate use of expensive specialized facilities and skills. Also, services tend to be weakest for the most vulnerable groups in the areas that lack appropriate infrastructure. The irony is, that despite most doctors and specialized services being concentrated in the major cities, the urban poor tend to be in a poor state of health.

In general, communities are not involved in their own health care. Universities and teaching institutes are not being adequately utilized outside academia in promoting health care. Urban health care services are not geared to forcefully advocate healthy life-styles and health-awareness programmes. Health personnel tend to be rigidly focused on traditional, curative services and, as such, often not involved in environmental issues, social care or other health-related areas. Apart from Bahrain, the Islamic Republic of Iran, Kuwait, Saudi Arabia and United Arab Emirates, which all have good urban primary health care programmes, in most of the other countries in the Region, urban health care is fragmented among different facilities and is mainly curative, with only some elements of prevention.

The Expanded Programme of Immunization, which is a high-profile health programme in many countries, is a good example, demonstrating the difficulties of preventive health care in urban areas.

4.2.1 Expanded Programme on Immunization (EPI)

Many EMR Member States have placed a high priority on their national EPI programmes. Reported regional coverage of children before their first birthday who received DPT3/OPV3 increased from 59% in 1986 to 78% in 1991.

In 1991 immunization coverage in the EMR with BCG was 86%, measles 75% and TT2/Bst was 50%. This has resulted in an overall decrease of all EPI target diseases in the Region.

There are, however, communities with low immunization coverage in many Member States, especially in poor urban areas. In many countries, immunization coverage in urban areas, especially poor neighbourhoods, is lower than in rural areas. Providing effective EPI services to the *urban poor* is one of the major challenges of national EPI programmes in the 1990s. Out of an estimated total of 15 million children under one year of age in the EMR, 33% are estimated to live in urban areas, and at least one-third are estimated to be poor.

EPI managers face enormous problems in providing immunization services to the urban poor. Many urban dwellers are inadequately served and act as continuing foci for the spread of EPI target diseases to other areas of the city and beyond. In some countries, municipal health services do not even come under the responsibility of the Ministry of Health, but are part of the Ministry of Interior; thus, raising additional communication problems for national EPI managers.

5. Major Urban Health and Environmental Issues and Concepts

5.1 Issues

The major urban health and environmental issues can be divided into two categories: one addresses the overall aspects of rapid urbanization, and the other is more concerned with planning, management and delivery of health care and environmental protection. Both categories are interrelated and include:

- How to protect people's health, including that of future generations in the face of continuing urbanization? What long-term health and environmental policies and strategies are needed?
- How to achieve more manageable population growth?
- How to achieve mutually supportive and balanced rural and urban development?
- How to bridge the gap between (a) the precarious health status of the urban poor and (b) the urban concentration of medical care facilities, doctors and economic activities.
- How to finance urban health care?
- How to provide adequate urban environmental health services and housing in the face of unprecedented demand and rapidly escalating costs?
- How to make the general public and decision-makers more aware of the health, environmental and ecological consequences of rapid urbanization?

- How to encourage and promote community participation and action for health?

- How to overcome institutional difficulties and achieve inter-sectoral collaboration and decentralization of authority?

- How to develop long-term urban development plans? What social and political approaches are needed?

5.2 Approaches

There have been some innovative and forward-looking approaches in dealing with urban issues in the Region. These range from community-based action with low budgets to deal with problems of the urban poor, to large investments in infrastructure and provision of services. Most of the successful experiences and achievements have been guided by forceful leadership. Sometimes the forward-looking strategies and plans have been guided by the highest level of national political leadership (e.g., Jordan and Oman). In other cases, the prime movers or factors behind the success have been interested university staff, individual mayors, concerned citizens, external assistance, etc. Sharing experiences, learning from each other and city networking are crucial for solving urban health and environmental problems. Unfortunately not many community-based actions have been documented. Even successful large-scale achievements in cities of the Region have not been, in general, properly documented.

6. Strategies and Programmes to Promote Urban Health

The basic tenet inherent in health-for-all strategy and in the primary health care approach is comprehensive health development that brings together environmental change with appropriate preventive and therapeutic interventions, especially for vulnerable groups such as children, mothers, the elderly and the disabled [14].

Based on the above principle, the development of responsive health and environmental services in urban areas can be categorized into (a) strategic approaches and (b) strategic concepts and programmes.

6.1 Strategic approaches

- Promote urban primary health care;

- Organize the health care system in neighbourhoods and in urban administrative districts, and adapt the concept of the district health system to suit urban localities;

- Aim to achieve equity in access and quality of health care and health-related services among all citizens of a city;

- Mobilize resources to assess the health of people in urban areas, especially in urban poor neighbourhoods;

- Promote health systems research (HSR) in urban areas;

- Mobilize resources, including money, people and imagination;

Aim to orient, educate and train health personnel at all levels and the general public.

6.2 Strategic concepts and programmes

6.2.1 "Healthy cities"

The WHO Regional Office for Europe developed a project in 1986 called "healthy cities", the objective of which was to bring together political and community leaders, local citizens, community organizations, professional associations and national and international agencies in a collaborative, intersectoral and community-based effort to achieve "health for all" at the local level.

By putting health on the social and political agendas of local governments, and by creating new structures and innovative approaches for achieving health for all, the "healthy cities" project has made it easier for municipal governments to: (a) develop "healthy" public policies; (b) encourage urban environmental health services to address not only pollution control, but the wider issues of sustainable development; and (c) encourage the reorientation of urban health services. Because of the "healthy cities" project being accountable to the community, the project seeks to encourage people to be more involved in their own health promotion. It also recognizes that people's health is determined by a broad range of factors extending far beyond the health care system [14].

6.2.2 "Healthy cities" in the EMR

The "healthy cities" programme in the Eastern Mediterranean Region aims at helping cities to strengthen urban institutions for health promotion through environmental management.

"Healthy cities" activities in the EMR started in 1987. After a series of consultations, studies and a regional seminar on "Housing and Urban Development", a major "healthy cities" conference was held in Cairo in November 1990. At this conference, which was attended by mayors and senior health and environment officials from 10 EMR Member States, the basic "healthy cities" strategy for the EMR was agreed upon. Countries of the Region are increasingly showing a keen interest in this timely concept.

In the Islamic Republic of Iran, a high-level national "healthy cities" symposium was held in which deputy governors and mayors of 24 cities and senior health officials participated. The symposium was a milestone achievement and, as a consequence, a "healthy cities" project was launched in southern Teheran.

A similar high-level national "healthy cities" meeting was held in Pakistan and was hosted by H.E. the Governor of Punjab, in which mayors and officials from different cities and federal and provincial agencies attended. Dr Hussein A. Gezairy, the Regional Director of EMRO, addressed the meeting.

BOX 4

Successful action for health and the environment in cities of the Eastern Mediterranean Region

1. Community action in urban poor areas

The **Orangie pilot project in Karachi, Pakistan,** is an example of using environmental sanitation as an "entry point" to improve people's quality of life in poor urban areas. **Orangie Township** is the largest squatter colony in Karachi, with 700 000 people in 2000 hectares. The project started with community action to solve the problem of disposing of human excreta. Community action has mobilized community financial resources, with voluntary technical support from the College of Engineering in Karachi. The project has succeeded in developing a sewage system on a self-help basis. The project has now moved into women's health, kitchen gardens and income-generation, enabling women to play an active role.

2. Urban primary health care (PHC)

In **Saudi Arabia,** PHC centres, in collaboration with municipalities, undertake monitoring of food hygiene, water sampling and sanitation, as well as implementing health education, besides preventive and curative services.

In the **Islamic Republic of Iran,** urban PHC is provided through polyclinics, ensuring that only patients who need referral care are sent to hospitals.

3. Urban Development and Housing Policies

Amman (Jordan) and Muscat (Oman) provide excellent examples of far-sighted urban development and housing coordinated plans. In these cities, orderly and harmonious physical development has been achieved with a positive impact on the surrounding ecology. In Amman and Muscat, green areas have been created. Also, sufficient roads and access networks have been established and water supply, sewerage, and other services run properly.

Similarly, in **Saudi Arabia** most of the new development schemes in cities has been very efficiently planned and properly built. Also, the cities of **Rabat (Morocco) and Islamabad (Pakistan)** have been planned well with good housing and environmental services.

4. Sewerage schemes

In **Cairo,** one of the world's largest sewerage schemes is under construction. Also, **Al Samara stabilization ponds in Amman (Jordan)** is an example of the successful use of appropriate and cost-effective technology on a large scale.

5. Solid waste management

Efficient solid waste management in **Teheran (Islamic Republic of Iran), Amman (Jordan), Jeddah and Riyadh (Saudi Arabia) and Damascus (Syrian Arab Republic),** provides examples of improvement and development of efficient city services.

6. Preservation of cultural heritage in urban development

In **Muscat (Oman) and Sana'a (Yemen),** the traditional architectural styles have been blended into modern housing designs. Also, in **Lahore (Pakistan)** and many cities in **the Islamic Republic of Iran, in Fez (Morocco) and in Tunisia,** diligent efforts have been made to preserve the architectural and cultural heritage of the towns and cities.

7. "Healthy cities"

Major efforts are ongoing in **the Islamic Republic of Iran, Pakistan and Tunisia,** where national meetings have been held on the "healthy cities" concept. Similar activities are being undertaken in **Egypt, Morocco, Saudi Arabia and Yemen.**

"Healthy cities" project proposals for UNDP funding have been prepared for the Islamic Republic of Iran and Pakistan. With WHO support, a "healthy cities" project was initiated for Sana'a, Yemen, including the establishment of a high-level "healthy cities" coordinating council.

Projects are under preparation in Morocco, Saudi Arabia and Tunisia. The aim is to create a national and regional "healthy cities" network and to establish multisectoral "healthy cities" committees. The city-level committees will be attached to mayors' offices. "Healthy cities" projects also strive to enlist the support of the community, nongovernmental organizations, universities and citizen-interest groups for health and environment improvement in the city. The "healthy cities" concept encourages dialogue and contact among all sectors.

A "healthy cities" project does not involve a large financial investment. It is of a promotional and catalytic nature, mobilizing the community to, in turn, mobilize the resources necessary. It promotes a "horizontal" public health approach as opposed a vertical approach, shifting the location of action and focus of activities from central to community level.

A "healthy cities" project can include a range of actions from health education, accident prevention, improvement of environmental conditions, school health, improvement of health and the environment (e.g., slums and shanty towns). The concept promotes and motivates action and contact among policy- and decision-makers and the community.

6.2.3 Basic minimum needs (BMN)

The "basic minimum needs" approach offers an alternative option for improving the conditions of the poor in general. This approach was first developed in Thailand.

7. Conclusions

1) Lack of awareness of urban problems. Rapid urbanization in the Region already has had, and will continue to have, a serious impact on people's lives and well-being. It will drastically affect economic, social and political life with far-reaching consequences on human health as well as on the natural ecology. However, the full dimension and enormous challenge of rapid urbanization have not been fully understood, or indeed considered in its totality by national authorities. Notwithstanding some attempts, the level of attention, debate and awareness to confront urban problems is far below what is needed to combat effectively urbanization's adverse effects.

2) Rapid urban population growth. The Region's rapid overall population growth is the "engine" accelerating urbanization. Family planning and fertility regulation must receive much higher priority on national policies and social agendas.

3) Lack of an integrated urban development plan and a management framework. A number of policy and institutional shortcomings have hastened the pace of urbanization and have caused it to expand unchecked. Some of these major inadequacies, in a majority of the countries, include:

- lack of a comprehensive national urban development and housing policy and plan and institutional deficiencies to implement them when they do exist;

- an unbalanced national economic-development plan which is more urban-based, with less attention to rural areas;

- an inappropriate administrative framework providing too much control to national agencies and deterring decentralization (administrative and financial) and inhibiting the cities and local-level government to deal with city problems.

4) Orientation of urban health services. While the conceptual framework of urban primary health care has been developed, with the exception of a few countries in the Region, it has not been followed forcefully. Health services in urban areas are, more or less, of a traditional nature, being preoccupied with curative and specialized medical care. Insufficient efforts have been made to orientate urban health personnel to the primary health care approach.

5) Health data and definition of health needs. There is a dearth of urban health data. As a result, the health needs of different socioeconomic income groups, localities, neighbourhoods, etc., have not been properly identified. This causes difficulties in developing a specific plan and local-level action to deal with these problems.

6) Urban poor. The health of the urban poor is one of the most urgent priorities of urban areas. While they need health services more than any other group, they have the least access to them, let alone money to afford private care.

7) Vulnerable groups. The health and welfare of women, children, the elderly and the disabled deserve special attention. Among these, that of women and children in underprivileged urban areas is a high priority.

8) Environmental services. In many cities of the Region, environmental health facilities cannot provide the required level of service. As rapid urbanization puts a severe additional load on these facilities, it becomes even more critical to develop strategic plans and approaches to deal with existing and future problems. The difficulties with environmental services include:

- severe air pollution in many of the major cities;

- low sewerage coverage and insufficient drainage systems in many cities;

- poor solid waste management in almost all secondary and some major cities;

- intermittent water supply services in some secondary cities, even in some sections of major cities;

- a severe housing shortage in many cities;

- food safety problems, especially because of street food vending.

9) Ecology. Rapid urbanization has caused a severe ecological imbalance in the Region. In many cases, water has to be transported from far away to service the cities, causing disruption to agriculture and to the natural ecology where water has been taken from. It is not at all certain whether the natural resources around the cities can support such a continuous massive expansion. A harmonious and congenial living environment must also not be neglected in urban planning and development.

8. Recommendations

1) Health leadership to advocate political commitment and public awareness. The health sector has an urgent mandate, among other things, to inform the public about the adverse health effects of rapid urbanization. This includes advocacy and an awareness campaign targeting national decision-makers and the general public.

The health sector should seek a mandate from the government to ensure that health and environmental impacts of development projects in urban and rural areas are assessed properly, and that health measures are incorporated in all projects at all levels.

To support the above actions in regard to rapid urbanization, the health sector should undertake situation analysis, defining and identifying problems and priorities concerning health and the environment.

2) "Healthy cities". The "healthy cities" concept has great appeal to a large cross-section of the Region's population. Based on the keen interest of EMR Member States, it is strongly recommended that the environmental and health sectors both promote and support this concept as forcefully as possible.

3) Reorientation of health services. Health and environmental services should be geared to respond to the health needs and environmental conditions of each city. There are certain basic criteria, among other things, that can be used, which include:

- health and environmental services should be accessible to all, based on principles of equity and social justice;

- poor urban areas should receive high priority, and national and local authorities should assist in the development of urban primary health care services in these areas;

- representative health indicators should be developed and health needs in different neighbourhoods of cities should be assessed, and information should be made available to all concerned. Universities, teaching and research institutions, hospitals and nongovernmental organizations (NGOs) can play a useful role in carrying out research and studies;

- the concept of the district health system should be promoted, and hospital services within the district should be reoriented to assist in community and preventative health care.

4) Community participation and motivation. Without full community participation, it is difficult to build a reliable political and legal basis for improving health and the environment in the city. Therefore, an active programme of community participation and community-based approaches are needed to bring the people into the mainstream of activities. These may include:

- promoting healthy life-styles;

- mobilizing NGOs and social welfare associations to assist low-income women and children; and

- developing community-based drug prevention and rehabilitation programmes.

5) Strategic environmental plans and programmes. In view of the critical nature of environmental and ecological damage that rapid urbanization is causing, there is an urgent need to develop long-term strategic environmental plans and programmes. These should look at the "total picture" in a holistic and integrated way. These programmes should cover long-term policies, strategies, implementation options and financing of services. Policies and legislation concerning land use, housing, industry, the environment, etc., will also need to be developed.

To move these from policy formulation to the implementation stage, massive efforts will be needed to enlist the support of everyone, from the ordinary citizen to the highest political authority.

6) Financing of health and environmental health services. Provision of urban environmental services is a large investment undertaking. Without cost-recovery and cost-sharing by beneficiaries, it will be extremely difficult for cities to continue to rely only on government subsidies. Therefore, the challenge lies with the environmental sector's professionals, managers and municipal authorities to cut waste and devise cost-effective schemes that people can afford. Innovative approaches for cost-recovery and cost-containment should be diligently encouraged.

The same is true for the health sector. Fund-raising by committees and through charity and self-help groups can play an important part in releasing additional resources for primary health care. Also, equity can be enhanced by the development of health insurance schemes through non-profit organizations, or through compulsory insurance.

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Alexandria, Egypt, 3-7 October 1992

Agenda Item 9

THE IMPACT OF URBANIZATION ON HEALTH

Introductory Paragraph

In 1950, only 29% of the world's total population lived in urban areas. By 1990, the urban population had increased to more than 45% of the total population, and by the year 2000, this figure is expected to reach 51%. Urban growth is expected to continue, and by 2020, 62% of the world's then estimated 8.1 thousand million inhabitants will be living in cities.

These demographic changes will continue to have ecological, economic and social impact on the environment and, as a consequence, on human health. Growth rates of this magnitude will outstrip the resources and capacity of municipalities to provide basic services, such as housing, energy, water, sanitation, security, transportation and health care. What makes matters even more difficult is that this change is happening at a time when fewer financial resources are available to invest in infrastructure and services.

The Eastern Mediterranean Region of WHO has one of the fastest rates of population growth in the world. In recent decades, countries in the EMR have experienced an unprecedented increase in their urban populations. This population pressure not only produces pollution, congestion, noise and other undesirable effects, but the requirements of growing urban populations exceed the sustainable yields of surrounding land and water resources.

The health conditions of the urban poor among urban dwellers are a cause for concern. They suffer from "traditional" diseases caused by poverty and underdevelopment, as well as chronic diseases associated with modernization. The higher-income groups, in general, are less affected by

communicable diseases than are the poor. However, the middle- and high-income groups may suffer from dietary and lifestyle-related ailments, which are known as "diseases of affluence".

The present traditional urban health-care system, with its strong curative bias, may not be appropriate to provide coverage for all the health needs of the people. Hence, a more responsive health care system and approach is called for.

To consider the above in a holistic manner, it is necessary to:

- examine demographic, economic and other factors that have contributed to the rapid urbanization in the Region;

- discuss the health and environmental impacts of urbanization in the Region, highlighting issues and some country experiences that have been effective in some Member States; and

- suggest approaches and strategies to tackle health and regional environmental problems.

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Agenda Item 9

THE IMPACT OF RAPID URBANIZATION ON HEALTH

Summary of recommendations

It is recommended that Member States:

1. Promote an effective advocacy campaign in order to increase public awareness of the adverse social, ecological and health impacts of rapid urbanization, with the health sector assuming leadership for such advocacy and with the active involvement of other sectors;

2. Seek mandates from their governments to involve the Ministry of Health in the development of long-term policies and strategic environmental plans and programmes in order to minimize the environmental and ecological damage that rapid urbanization is causing, and to adopt a holistic approach covering policies, legislation, land use, housing, industry, the impact of economic development plans, etc., on urbanization;

3. Reorient and further develop urban health services by strengthening urban Primary Health Care and whenever possible adopting an urban Basic Minimum Needs approach;

4. Promote the concept of "Healthy Cities" to minimize the adverse environmental and ecological impacts of urbanization;