Economic and Social Commission for Western Asia

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# Population and Development Report
# Issue No. 8

## Prospects of Ageing with Dignity in the Arab Region

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Economic and Social Commission for Western Asia

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## Prospects of Ageing with Dignity in the Arab Region

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# Executive Summary

The population of the Arab region has recently been characterized by the demographic phenomenon of the 'youth bulge'; however, a demographic shift towards 'population ageing' is projected for the near future. Having faced the challenges associated with larger proportions of young people, Arab countries must now prepare for and adapt to growing numbers of older persons. Population ageing is occurring in the Arab region as a result of decreased fertility rates and increased longevity, largely due to development and health gains. Older persons (individuals aged 60 and above) have unique needs and abilities: the growing number and proportion of older persons means that countries and societies must be prepared to support their dependency and health, and recognize and promote their active, meaningful involvement in society.

The Arab region has one of the fastest growing populations in the world, which has more than tripled from 123 million in 1970 to over 400 million in 2017. The share of older persons as a proportion of the total population in the region is projected to increase to 15 per cent by 2050, with older women comprising more than half. These age structural changes carry important economic and social implications for countries and societies. Efforts to understand those implications can begin with countries considering how far the process of 'population ageing' has already progressed and the projected outcomes of that demographic change.

'Population ageing' is a demographic process where the number and share of older persons in a population increases, resulting from decline in fertility and improvement in life expectancy. A population is considered to be 'ageing' when the share of persons over the age of 65 is between 7 per cent and 14 per cent of the total population, and 'aged' when the share of older persons exceeds 14 per cent. The 'ageing transition' refers to the period of time in which the share of older persons shifts from 7 per cent to 14 per cent. The ageing transition has important economic and social implications for countries.

Countries in the Arab region are projected to begin the ageing transition at different times and different rates. Accordingly, the present report categorizes countries as fast, moderate or slow-ageing, according to the expected date of onset of the ageing transition. Algeria, Lebanon, Morocco and Tunisia are experiencing 'fast ageing', where the percentage of persons over the age of 65 will have surpassed 7 per cent by 2030. Djibouti, Egypt, Jordan, Libya, the Syrian Arab Republic and Gulf Cooperation Council countries are experiencing 'moderate ageing', meaning that they will begin the population ageing process before 2050. The Comoros, Iraq, Mauritania, the State of Palestine, Somalia, the Sudan and Yemen are experiencing 'slow ageing', meaning their populations will begin the ageing transition after 2050. Most Arab countries will complete the ageing transition over a period ranging between 13 and 40 years, which is considerably fast when compared with the 50-150 years it took OECD countries to complete the transition. Consequently, the Arab region requires timely and effective policy formulation and implementation to maximize the benefits of such unique population structures, while reducing potential social risks.

The poor socioeconomic conditions of older persons and those supporting them are already affecting older persons' ability to survive and thrive in old age. Interrelated development issues affect their wellbeing and protection

from vulnerability, including income security, health, education, employment and living arrangements. Those indicators are used to evaluate the situation of today's older population so as to project the status of older persons in the coming decades. Most Arab countries have some forms of social protection programmes that cover health, education and pensions, which are fundamental for the wellbeing of older persons and other individuals. However, expenditure on those sectors is low, resulting in coverage for only a small fraction of the population, with older persons suffering disproportionately from a lack of coverage. In most countries for which data are available, only military personnel and workers in the public sector and the formal private sector are entitled to social security benefits. Arab countries must therefore consider the current situation of older persons, and develop preventive measures to ensure that today's working-age population can age with dignity.

Income security is critical for older persons, but there is a considerable lack of formal pensions in the Arab region. Pensions prevent older persons from falling into poverty, especially those who are retired, unable to work, or do not have family support. In the Arab region, less than 30 per cent of the workforce, on average, enjoys pension coverage, with particularly low or no coverage for women, self-employed workers, agricultural workers, migrants and workers in the informal sector. Consequently, many older persons, especially women, live in poverty in the Arab region. To protect today's working-age population from a similar fate, countries must make changes to pension schemes and encourage other saving methods. Social protection reforms, such as universal healthcare and other measures to defray costs for older persons, should also be pursued.

As life expectancy increases, health becomes a pressing concern for older persons since they are more vulnerable to disease and disability. The expected growth in the number of older persons will therefore exponentially increase demand for health services and long-term care. Such services are currently lacking in the Arab region, especially those that focus on the specific health concerns of older persons. Demand for trained health professionals specializing in gerontology will rise; however, the region is not currently training or recruiting enough gerontologists to care for the increasing number of older persons. Furthermore, public health coverage is weak, so older persons are already facing high out-of-pocket expenditures. Ensuring that the current working-age population can access preventive medicine, good nutrition and healthy lifestyles could improve the health prospects of tomorrow's older population; however, government investment in health services is also necessary for older persons to enjoy full capabilities in their later years.

Older persons' level of education is also an important indicator of their capabilities. Today's older population will be replaced with larger numbers of older persons who, on average, have attained higher levels of education. Higher education levels correlate to better job opportunities and health, and lowered vulnerability in old age. The educational attainment of older persons in Arab countries varies but, on average, 18 per cent of that population has completed secondary school, while less than 13.8 per cent has a higher education degree. Although projections show significant improvement in the average education level of older persons, a significant number will not have a formal education as they enter old age, especially women, which increases financial vulnerability and limits access to health services and social support, thus resulting in a higher risk of poverty.

Social protection and support for older persons is vital to ageing with dignity. In the Arab region, the family remains the main care provider for older persons, especially given the limitations of public social protection. Family support can safeguard against isolation, neglect and destitution by providing financial, instrumental and emotional support. However, declining household size, changing living arrangements,

rising female participation in the formal labour market, increased migratory movements, declining fertility, and high youth unemployment are factors that put significant strain on a family's ability to provide care for older persons. Countries must recognize this changing structural dynamic in society to develop social protection systems that provide for older persons, especially those with limited or no family support.

Disparities in life expectancy, literacy and employment, as well as gendered social norms, make older women more vulnerable to ill health and poverty than older men. In general, women have little access to social security benefits because they tend to work in the informal sector or carry out unpaid work, which means they have no pension or health insurance when they age. Women in most Arab countries live longer, experience poorer health in old age, are more prone to disability, and have higher rates of limitations in daily activities. Women also have much higher illiteracy rates, and those living in rural areas are more vulnerable because of higher poverty rates and limited access to adequate medical care. Although projections show a reduction in the gender gap for women's employment, pension benefits, health and education, more needs to be done to eliminate the gap.

Recent and current conflicts further complicate the task of addressing older persons' needs. Conflict has a detrimental effect on the fabric of society, reflected in forced migration, increased health and social burdens, family fragmentation, and infrastructure destruction. The present report contains a case study on the impact of armed conflict on older persons in the Syrian Arab Republic, including the loss of financial and capital resources, destruction of their supportive environment, loss of family members and main caregivers, and increased morbidity and loss of life.

A fundamental shift in how ageing is viewed and understood is necessary across the region. Cohesive strategies and comprehensive policy action on ageing are urgently required to address current gaps in the health and social needs of older persons, as well as escalating future demands due to population ageing. Although there are major knowledge gaps, there is already compelling evidence and data for policymakers to act now. Societal and policy responses to population ageing must entail health and social-care reforms that move away from disease-based curative models towards person-centred policies and services that are integrated and follow a life-course approach. Such a shift requires the development of comprehensive and multisectoral social protection and long-term care systems, with active government involvement at all levels, so as to recognize and address the diversity of older persons and respond to related health and social inequities. It is essential to capitalize on existing population dividends and social capital, and secure new sustainable financing streams.

Population ageing cannot be ignored. Older persons are an asset and can contribute to families, communities and countries. They deserve to live with dignity, just as today's young people and working-age population desire to age with dignity in the future. As Governments engage with other stakeholders in a holistic, integrated approach to development planning and policymaking under the 2030 Agenda for Sustainable Development, it is vital to ensure that current and future older persons are not left behind.

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# Glossary

**Active working-age population:** Persons aged between 25 and 59.

**Age distribution:** The proportionate numbers of persons in successive age categories in a given population. Age distributions differ between countries because of differences in fertility levels and trends.

**Aged population:** A population is considered "aged" when the share of older persons exceeds 14 per cent.

**Ageing population:** A population is considered "ageing" when the share of older persons is between 7 per cent and 14 per cent.

**Ageing transition:** The period of time during which the share of older persons shifts from 7 per cent to 14 per cent.

**Dependency ratio:** The total dependency ratio is the ratio of the sum of the population aged 0-14 and aged 65 and above to the population aged 15-64. The child dependency ratio is the ratio of the population aged 0-14 to the population aged 15-64. The old-age dependency ratio is the ratio of the population aged 65 and above to the population aged 15-64. All ratios are presented as the number of dependents per 100 persons of working age (15-64).

**Emigration:** The process of leaving one country to take up permanent or semi-permanent residence in another.

**Fast-ageing countries:** Countries that will begin their ageing transition, meaning their population aged 65 and above will reach 7 per cent of the total population, before the year 2030.

**General fertility rate:** The number of live births per 1,000 women aged 15-44 or 15-49 years in a given year.

**Household:** One or more persons occupying a housing unit.

**Illiteracy rate:** The illiteracy rate of a particular age group indicates the proportion of persons in that group who cannot read with understanding and cannot write a short simple statement on their everyday life.

**Immigration:** The process of entering one country from another to take up permanent or semi-permanent residence.

**Migration:** The movement of a person or a group of persons across an international border. It encompasses any kind of movement of people, whatever its length, composition and causes; and includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, such as family reunification.

**Moderate-ageing countries:** Countries that will begin their ageing transition, meaning their population aged 65 and above will reach 7 per cent of the total population, between the years 2030 and 2050.

**Labour force participation:** Consists of the economically active population in a particular age group as a percentage of the total population of that same age group. The active population (or labour force) is defined as the sum of persons in employment and unemployed persons seeking employment.

**Life expectancy at a specific age:** The average number of years of life expected by a hypothetical cohort of individuals who would be subject during all their lives to the mortality rates of a given period.

**Mortality:** Deaths as a component of population change.

**Natural fertility:** The absence of parity-specific family planning, meaning that couples are not regulating their fertility based on their current parity.

**Older persons:** Persons aged 60 years and above. Some findings in this report are based on data that define older persons as those aged 65 years and above, in which case the report clearly indicates the age bracket used.

**Population:** De facto population in a country, area or region as of the year indicated.

**Population ageing:** A demographic process where the number and share of older persons in a population increases, resulting from a decline in fertility and improvement in life expectancy.

**Pension coverage:** The percentage of older persons above statutory pensionable age who receive periodic cash benefits (old-age pensions). Pension coverage is the total coverage, including contributory mandatory, contributory voluntary and non-contributory pension coverage.

**Population growth rate:** Average exponential rate of growth of the population over a given period.

**Replacement level fertility:** The total fertility rate (the average number of children born per woman) at which a population exactly replaces itself from one generation to the next, without migration.

**Sex ratio:** The number of males per one hundred females in a population. The sex ratio may be calculated for a total population or for a specific age group.

**Slow-ageing countries:** Countries that will begin their ageing transition, meaning their population aged 65 and above will reach 7 per cent of the total population, after the year 2050.

**Total fertility rate:** The average number of live births a hypothetical cohort of women would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period, and if they were not subject to mortality. It is expressed as live births per woman.

**Working-age population:** Persons aged between 15 and 59; however, some findings in this report are based on data that define the working-age population as those aged between 15 and 64.

# Introduction

The Arab region has one of the fastest growing populations in the world, and the proportion of older persons (individuals aged 60 and above) is also growing exponentially. The population has more than tripled from 123 million in 1970 to over 400 million in 2017, thus constituting around 5.5 per cent of the world's total population today. Over the same period, the population of older persons has more than quadrupled, increasing from approximately 7 million in 1970 to 29 million in 2017. Estimates show that the number of older persons is expected to reach 49.6 million by 2030 and exceed 100 million by 2050, constituting 15 per cent of the region's total population, with women comprising over half of the older population. This increase in the number and proportion of older persons in the Arab region is causing a new demographic transition: population ageing.

Population ageing is largely the result of development and health gains, often referred to as the demographic triumph of the twentieth century. Declining fertility, decreasing mortality rates and increased life expectancy have resulted in growing proportions of working-age and older persons in most Arab countries. However, population ageing is unfolding at different rates across the region because of several factors, including disparate fertility, mortality and migration patterns, thus resulting in varied demographic and socio-political priorities. Nevertheless, most Arab countries have been experiencing an overall increase in the proportion of older persons.

Demographic changes in the region have created two demographic trends. On the one hand, the region has been experiencing a 'youth bulge'. On the other, the region is now experiencing a demographic shift towards population ageing. Changing population structures can be harnessed to take advantage of the potential for demographic dividends. The first wave of demographic change creates a surge in the working-age population, which ideally increases a country's per capita income. The second wave results in a growing number of older persons who can potentially work past retirement age, and who have fewer dependents and more saving and investment options, which can boost national income. To profit from those demographic dividends, however, Governments must first develop effective policies that support the needs and rights of both the working-age population and older persons.

Arab countries must therefore take the time to prepare these policies, and Governments must acknowledge that some countries are farther along in the ageing process than others. Most Arab countries will experience the ageing transition (during which the share of persons aged 65 and above increases from 7 per cent to 14 per cent) over a period ranging between 13 and 40 years. This is an extraordinarily short time span when compared with other regions where the ageing process took place gradually, allowing ample time for Governments and societies to formulate and implement ageing policies and adjust their resources and interventions accordingly. For example, European countries experienced this transition over a period of 50-150 years. This rapid ageing transition in the Arab region has created an unprecedented urgency to address the consequences of demographic changes. Some Arab countries have already developed strategies and implemented public policy measures to improve the situation of older persons. However, given the shortness of the ageing transition, Arab Governments and societies will have to adapt much faster to the ageing phenomenon. Fulfilment of older persons'

human rights is a societal responsibility and a State duty. Given the weak social protection systems currently in place, Arab Governments must adopt stronger holistic strategies and implement policies and programmes to ensure the social, economic, psychological and physical wellbeing of older persons.

Older persons' prospects of ageing with dignity are threatened if current social protection, socioeconomic and security conditions persist in the Arab region. Women, who often live longer than men, are more vulnerable as they become older given their low education and employment rates, weak social protection systems, and higher incidences of long-term and chronic diseases. To support older persons' right to age with dignity, a paradigm shift in how Governments and societies view older persons is required. The perspective that older persons are burdens who depend on State and family assistance must be replaced with a rights-based approach to protecting and empowering older persons, which also values them as active citizens who can engage in various socioeconomic activities and make valuable contributions to their families and communities.

For this shift to materialize, Governments must provide social and financial security, adequate health care, access to relevant public goods and services, and platforms for meaningful socioeconomic participation. For Governments to better address the needs of older persons, more specific data on that demographic is required, including data disaggregated by age, sex and geographic location (rural/urban). Currently, most age-disaggregated census and population data are limited to a single age bracket of 60 and above, without offering much detail about the lives of individuals in different age ranges above 60. Significant improvement in data collection and sharing is therefore required to build evidence-based strategies, policies and programmes for older persons.

Now more than ever, Governments are prompted to take action to "leave no one behind" as they pledge to achieve the 2030 Agenda for Sustainable Development. It is therefore not only an ethical imperative to ensure that ageing with dignity is possible for all persons, but also a precondition to achieving inclusive sustainable development. The universality and interdependence of the Sustainable Development Goals (SDGs) necessitate the adoption of a holistic approach to ageing that incorporates different dimensions of the life-course perspective. Achieving the SDGs also requires the engagement of all stakeholders, including government institutions, civil society and the private sector.

In addition to the 2030 Agenda, two other policy frameworks focus on the nexus between the rights of older persons and development, and offer guidance on addressing ageing issues, namely the Programme of Action of the International Conference on Population and Development (ICPD), held in Cairo in 1994, and the Madrid International Plan of Action on Ageing of the Second World Assembly on Ageing, held in Madrid in 2002. Furthermore, the Arab region has been proactively focusing on ageing for almost two decades. The Arab Plan of Action on Ageing was developed in February 2002 in preparation for the Second World Assembly on Ageing. Since then, a series of national and regional efforts have been made to increase the visibility and centrality of older persons' issues across the region. In 2013, Arab countries adopted the Cairo Declaration, which reaffirmed their commitment to achieve the unfulfilled goals of ICPD.

The eighth issue of the Population and Development Report focuses on exploring the prospects of ageing with dignity in the Arab region. Anchored in a human rights-based approach, the present report affirms the principle of "leaving no one behind" and supports all global frameworks and regional mandates to protect the human rights, wellbeing and development of older persons. It argues that given the fast-paced ageing phenomenon in the region, swift interventions and medium and long-term planning are needed to ensure that people in the region

can age with dignity. To support this argument, the present report uses a mixed-methods approach to examining demographics and socioeconomic trends, incorporating quantitative statistical analysis of national censuses and surveys, United Nations data, and detailed qualitative analysis by drawing on primary and secondary data sources.

Chapter 1 presents the demographic trends leading to changes in age structures in Arab countries. It illustrates past and future trends in population size and growth rates, as well as fertility, mortality and migration patterns as determinants of age structure composition. The analysis shows the overarching trend of population ageing in the region and by country.

Chapter 2 examines the socioeconomic conditions of older persons in the Arab region, including interrelated development issues affecting their wellbeing and protection from vulnerability, such as income security, health, education, employment and living arrangements. The analysis of older persons' socioeconomic conditions assesses their situation and the resources and protections provided by the State, civil organizations and families so as to highlight their current and future experiences, challenges and risks.

Chapter 3 discusses present trends in older persons' living arrangements as an important mode of social protection. It then focuses on two-way intergenerational support through a case study on Lebanon, the fastest ageing country in the Arab region. The case study offers a detailed analysis on the effects of this type of support on older persons' vulnerability. It also highlights both the material and social contributions of older persons to their families and societies, which often go unnoticed and underappreciated.

Chapter 4 builds on current population ageing trends in the region to provide an evidence-based projection of older persons' needs by 2030 and 2050. Since some older persons have limited access to education, health care, pension coverage and family support, and given the expected future demographic, social and economic changes, the chapter provides insight into the needs of older people in the coming decades.

Based on current and future challenges facing older persons, chapter 5 highlights the need for countries to develop comprehensive social protection mechanisms and sustainable long-term care. It also discusses the factors that contribute to the successful design and implementation of such policies. To maximize the present report's utility for policymakers, chapter 5 outlines basic principles to guide policymaking for older persons, including embracing a human rights-based and gender-sensitive approach to ageing issues, and a life-course approach to population policy development in line with international frameworks, including the 2030 Agenda. It offers a sequenced approach to policies that meet short, medium and long-term goals, and provides policymakers with concrete, actionable and feasible policy interventions.

The ageing transition in the Arab region is advancing, albeit at different rates. The situation of older persons presents an urgent need for policymakers to develop solutions to improve social and economic conditions for nearly 27 million older persons today, and over 100 million by 2050.

# 1. Demographic Overview of Ageing in the Arab Region: Trends, Patterns and Prospects

The Arab region is currently experiencing a historic demographic change from a society with high fertility and mortality, to one with reduced fertility and mortality rates. This change is leading to a gradual shift in the population's age structure towards a greater proportion of older persons, thus resulting in population ageing.

Although most countries in the Arab region will begin ageing in the next few decades, they will do so at different rates. For example, Lebanon and Tunisia have already started their ageing transition, whereas Mauritania, Somalia and Yemen will begin experiencing population ageing after 2050. The present chapter sets out the most recent demographic evidence on ageing in the Arab region, including demographic trends in 22 Arab countries[1] over the period 1970-2050, with the aim of analysing determinants of population ageing as a consequence of changes in population size, growth, fertility, mortality and migration. It then discusses changes in population age structures and dependency ratios in Arab countries, with a focus on the ageing phenomenon.

## A. Definitions, sources and methodology

Population ageing is a demographic process where the number and share of older persons in a population increases, resulting from decline in fertility and improvement in life expectancy.[2] This report follows the United Nations Population Division of the Department of Economic and Social Affairs (DESA) definition of 'older persons' as the population over the age of 60. However, depending on data availability, some of the data in the present report are from studies that define older persons as individuals age 65 and above. In such instances, a clear reference is made to the definition of older persons used.

Another indicator used to analyse the trends and impact of population ageing is the total dependency ratio (TDR), which is the sum of the youth dependency ratio and the old-age dependency ratio: the youth dependency ratio is the number of persons aged 0-14 per 100 persons aged 15-64; and the old-age dependency ratio is the number of persons aged 65 and above per 100 persons aged 15-64.

The 'ageing transition' is calculated based on the proportion of persons in a population aged 65 and above, which is in line with demographic research methodologies on population projections.[3] A population is defined as 'ageing' when the share of persons aged 65 and above is between 7 per cent and 14 per cent of the total population. The 'ageing transition' refers to the period of time in which the share of older persons shifts from 7 per cent to 14 per cent.

Data on demographic trends used in the present chapter are primarily taken from the *World Population Prospects: The 2017 Revision*.[4] These data comprise estimates and projections of population size (disaggregated by age and sex) and population determinants (fertility, mortality and net migration), prepared biennially by DESA. The *World Population Prospects* report provides a consistent set of population figures used throughout the United Nations system to inform activities requiring population data, which are mostly drawn from censuses and national data.[5] The present report supplements those data with statistics from other United Nations sources.

The present chapter uses medium variant population projections until 2050, as that year

represents the median of several thousand projected trajectories of specific demographic components for each country. The use of the medium variant, as opposed to the low, high or constant-fertility variants, is judged to yield more accurate and relevant projections that are closest to the development of population structures across the region (annex I).

The medium variant in United Nations population projections assumes a decline in fertility rates in the Arab region similar to other regions. However, some evidence shows that some Arab countries might experience a reversal in fertility trends, causing significant deviation from those projections. This uncertainty increases as we move further away from the base year, 2015, especially at the country level.[6] While the projections used in the present report focus principally on varying hypotheses about fertility, it is possible that the other demographic determinants (mortality and migration) will show different trends in the future than those predicted, and that their deviation from projections can affect the extent and the pace of population ageing (annex II).[7] Furthermore, ongoing conflict and migration trends in some countries of the region might impact demographic change in ways that the data cannot yet predict. For example, ageing trends predicted for some Arab countries might reverse after 2050, given that recent data show an increase in fertility levels after periods of decreased fertility in some countries, such as Algeria, Egypt and Tunisia.

Demographic data were analysed for each of the 22 countries in the Arab region. Countries in the Arab region are projected to begin the ageing transition at different times and different rates. Accordingly, the present report categorizes countries as fast, moderate or slow-ageing, according to the expected date of onset of the ageing transition. 'Fast ageing' countries will begin the ageing transition before 2030, namely Algeria, Lebanon, Morocco and Tunisia. 'Moderate ageing' countries will begin the ageing transition between 2030 and 2050, namely Djibouti, Egypt, Jordan, Libya, the Syrian Arab Republic and the Gulf Cooperation Council (GCC) countries.[8] 'Slow ageing' countries will begin their ageing transition after 2050, namely the Comoros, Iraq, Mauritania, the State of Palestine, Somalia, the Sudan and Yemen.

## B. Population size and growth

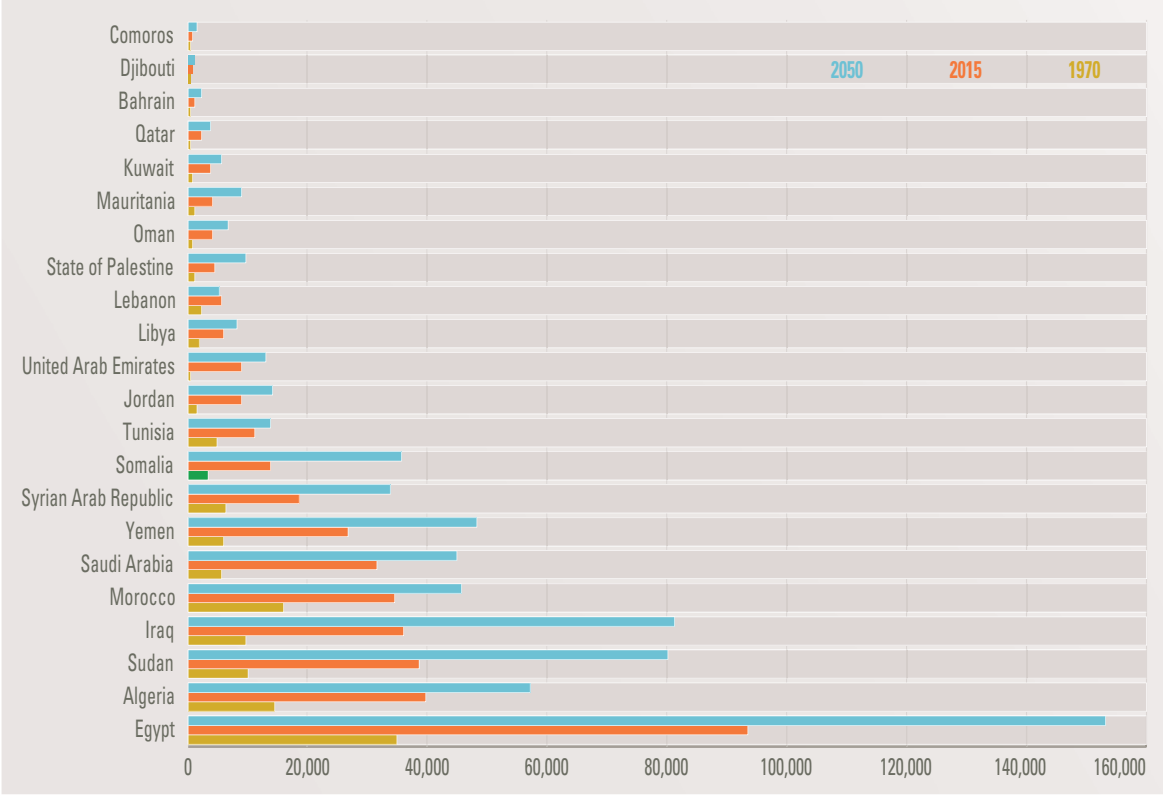
Population growth refers to the increase in the number of inhabitants of a given place. Regional and national trends in population growth are vital to policymakers when preparing for the various development effects of anticipated population change. Awareness of the size of different age groups within a population is particularly critical to policymaking.

Population change, including age structure transitions and population ageing, touches upon virtually every aspect of life. It has profound implications for the economy, labour market, employment, pensions, healthcare systems, social protection, education, housing, sanitation, water, energy, food, consumption, the environment and human mobility. Population growth occurs at different rates according to variations in fertility, mortality and migration. The trends of these three causal factors also determine the extent of population ageing.

*Since 1970, the size of the population in the Arab region has more than tripled. Today, 1 in 20 people live in the Arab region.*

Figure 1 shows that population size has been growing exponentially in the Arab region, albeit at varying rates across countries. Since 1970, the total population in the region has more than tripled, from 123.5 million in 1970 to 284.1 million in 2000 and to 398.5 million in 2015. In 2015, the Arab region comprised around 5.4 per cent of the world's population, compared to 3.3 per cent in 1970 and 4.6 per cent in 2000.

**Figure 1.** Population size by country in the Arab region (thousands)




**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision* (New York, 2017). Available at https://esa.un.org/unpd/wpp/Publications/.

Despite the significant increase in population size in the Arab region, the annual rate of population growth has slowed recently from 2.82 per cent over the period 1970-2000 to 2.28 per cent over the period 2000-2015. However, the Arab region's population has grown more rapidly than the global average (1.7 per cent between 1970 and 2000, and 1.23 per cent from 2000 to 2015) and that of the less developed regions[9] (2.05 per cent from 1970 to 2000 and 1.43 per cent from 2000 to 2015).[10] Moreover, the number of older persons in the Arab region almost quadrupled between 1970 and 2015, from 7 million to nearly 27 million. The proportion of the older population to the total population has increased over this period from 5.7 per cent to 6.7 per cent.

Analysis of projected data for the period 2015-2050 reveals that those demographic trends are expected to continue. The region's population will increase to over 520.7 million by 2030 and to 676.4 million by 2050. This growth will occur at a rate of about 1.52 per cent per year, which is slower than the rate from 1970-2015 but faster than the anticipated global average of 0.8 per cent. As a result, the region's share of the world population is projected to increase to 6.9 per cent by 2050.

*The number of older persons in the Arab region is estimated to reach 49.6 million by 2030, comprising 9.5 per cent of the total population. By 2050, this number will exceed 102 million, or 15.1 per cent of the total population, indicating an ageing boom driven mainly by high fertility in the 1970s.*

Within the region, population sizes (annex III) and growth rates (annex IV) are expected to

vary widely across countries. As figure 1 shows, by 2050, Egypt will continue to have the largest population in the region (153.4 million), followed by countries whose populations are projected to more than double in size, including Iraq (81.5 million), the Sudan (80.4 million), Algeria (57.4 million) and Yemen (48.3 million). The variance and fluctuation in growth rates over time and between countries can be attributed to variations in socioeconomic development, instability and armed conflict, and international migration and refugee movements.[11]

## 1. Fertility

Fertility has a significant impact on population growth and ageing. It is therefore important to understand both its determinants and effects. Fertility is measured by the total fertility rate (TFR), which refers to the expected number of live births a woman has over her reproductive life, given age-specific rates.[12]

*Fertility decline is the main driver of population ageing in the Arab region.*

The two principal direct determinants of fertility in the Arab region are marriage (age at marriage and duration of marriage) and birth control (contraceptive practices). Although the Arab region has witnessed very high fertility levels in the past, they have been steadily declining since the 1980s in all Arab countries, except Somalia. The rising age of marriage in many countries is well documented as the primary determinant of fertility decline in the region.[13] Contraception use has also contributed to this decline.[14] The drop in fertility is one of the main causes of population ageing in the Arab region, except for GCC countries where international migration also constitutes a major component of demographic change.

The projected size of the older population by 2030 and 2050 depends on fertility rates prior to 1970 and 1990, respectively, since only those born before those years will be over 60 by 2030 and 2050, respectively. Therefore, projected levels of fertility after 2015 will not affect the size of the older population by 2030 or 2050; they will only affect it after 2050. However, while fertility rates from 2015 to 2050 will not influence the number of older persons by 2030 or 2050, they will affect the proportion of older persons within the population. The faster the decline in fertility combined with reduced mortality, the higher the percentage of the population aged 60 and above, especially in the long-term. Countries that have already begun their ageing transition, like Lebanon and Tunisia, are experiencing increases in the relative share of older persons sooner than those that have not yet started their transition, such as the Comoros and Djibouti. Furthermore, the decline in total fertility rates has contributed to slower population growth rates. In the future, most Arab countries will experience further drops in fertility rates to below replacement level,[15] meaning there will be fewer births than there had been in the past, causing the proportion of children and young people to decrease and that of the older population to increase.

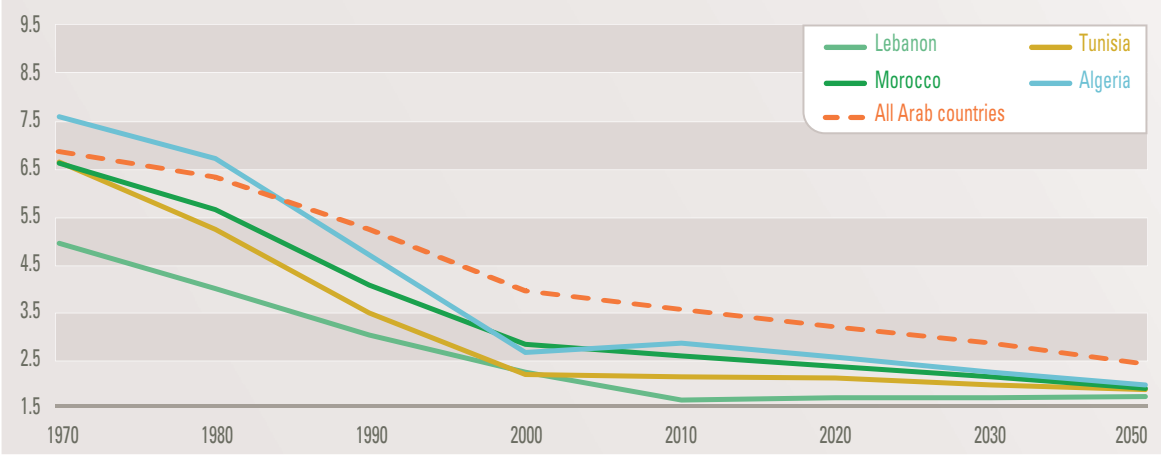
Figure 2 shows that the TFR level in 1970 was very high in all Arab countries, ranging from 4.9 children per woman (CPW) in Lebanon to 8 CPW in Libya. Countries with quasi-natural fertility[16] in 1970 included Algeria, the Comoros, Iraq, Jordan, Kuwait, Libya, Oman, the State of Palestine, Saudi Arabia, Somalia and the Syrian Arab Republic, all with fertility rates above 7 CPW.

Since 1980, fertility has begun to steadily decline in all Arab countries, except in Somalia where it only started decreasing in 2000 and in Algeria where it increased over the period 2000-2010 before declining again. By 2010, six of the 22 Arab countries had near replacement or below replacement levels of fertility: Lebanon (1.6 CPW); the United Arab Emirates (1.9 CPW); Qatar and Tunisia (2.1 CPW); and Bahrain and Kuwait (2.2 CPW).

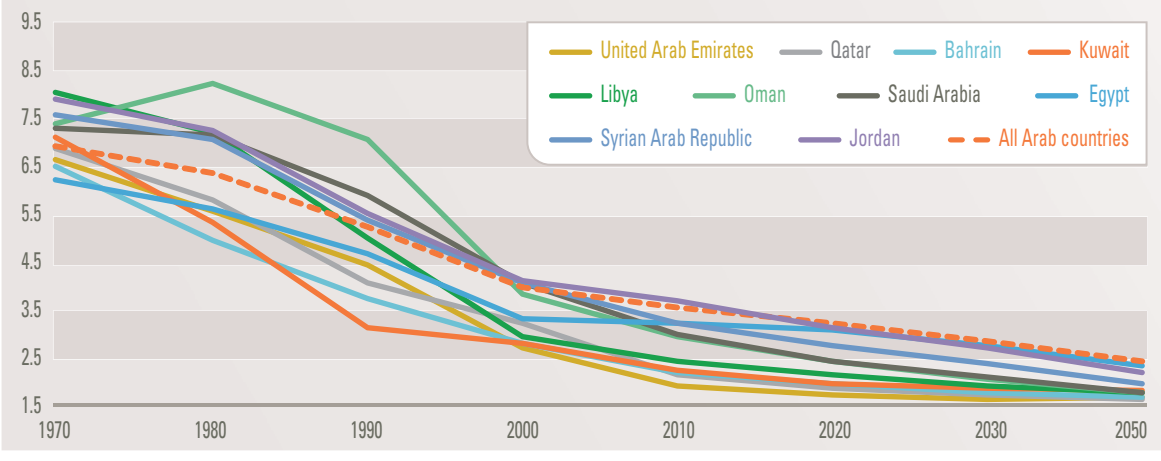
These trends are not linear. In the Arab region, fertility rates started to rapidly decline in the 1980s and 1990s, but have slowed since 2000. In the most recent decade, fertility rates have

**Figure 2.** Total fertility in Arab countries by ageing rate, 1970-2050

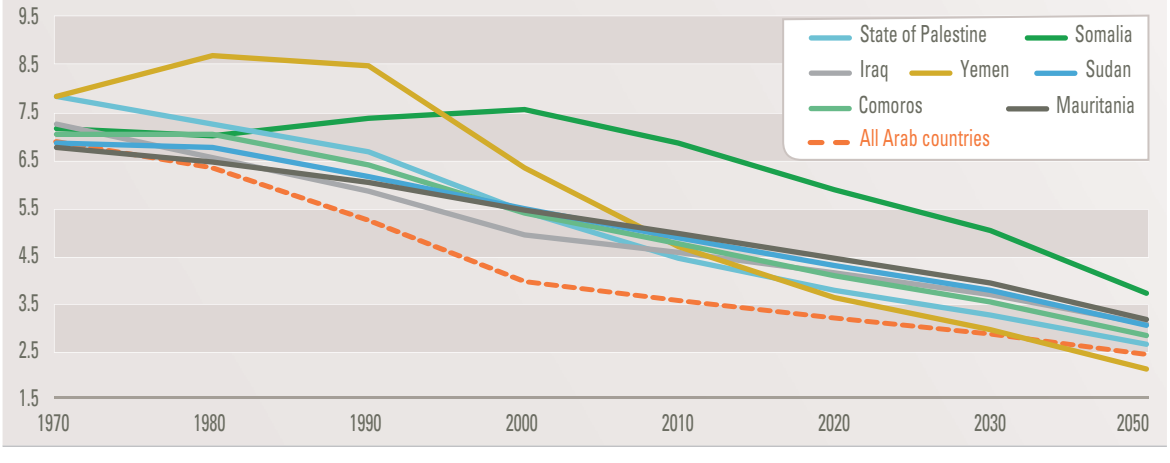
**A: Total fertility in fast-ageing countries (number of children per woman)**




**B: Total fertility in moderate-ageing countries (number of children per woman)**




**C: Total fertility in slow-ageing countries (number of children per woman)**




**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision* (New York, 2017).
**Note:** The total fertility rate for the Arab region is computed using population weights.

been slowing even further in some countries, while rising in others. The latter situation is referred to as a 'demographic counter-transition'.[17] Available national data for three countries shows an increase in the total fertility rate between 2008 and 2014: from 3 to 3.5 CPW in Egypt,[18] from 2.8 to 3 CPW in Algeria,[19] and from 2.1 to 2.4 CPW in Tunisia.[20] Fertility rates remain high in the Comoros, Iraq, Mauritania, the State of Palestine, Somalia, the Sudan and Yemen at above 4 children per woman in 2015 (annex V).

However, United Nations medium variant hypotheses assume that in the future, fertility is likely to decline across all Arab countries, as shown in figure 2. By 2050, the total fertility rate is projected to range between 1.7 and 2.9 CPW in most countries, with several countries reaching below replacement fertility levels.

These fertility figures demonstrate that countries in the Arab region are moving towards ageing populations at varying rates. The period of high fertility and births in the 1970s, followed by a decrease in fertility rates and an increase in life expectancy over the past couple of decades, has resulted in an increase in the overall number of older persons.

## 2. Mortality

In addition to fertility, population growth and ageing in the Arab region can also be attributed to another important factor: mortality decline. People in the region are now living longer, especially women, with many living beyond 80. This trend of greater longevity is expected to continue, leading to demographic shifts. Improved life expectancy across the developing world has occurred mainly because of declining child mortality rates over the past four decades. Factors such as income growth, public spending on basic health services, immunization, better hygiene and sanitation, expanding infrastructure, greater awareness, urbanization and better nutrition have all contributed to this decline and to increasing life expectancy at older ages.[21]

The effect of declining mortality rates between 2015 and 2030 will not have as much of an impact on population ageing as high fertility in the past. Even with constant mortality rates, the number of people aged 60 and above is projected to reach 49.6 million by 2030. However, by 2050, declining mortality rates will start to have significant impact, particularly for persons aged 75 and above (annex VI).

The impact of mortality decline depends on whether it occurs mainly in young or old age. During the first wave of demographic change, mortality decline usually occurs at a young age, particularly among infants and children, which often makes the population younger by increasing the number of young persons. Later on, mortality rates at young ages are already low, and declining mortality among adults and older persons begins to contribute to population ageing as the number of adults and older persons increases in both relative and absolute terms.

### (a) Life expectancy at birth

*Life expectancy at birth in the Arab region improved by 10 hours per day, on average, between 1970 and 2015.*

From 1970 to 2015, the Arab region witnessed significant decreases in mortality as measured by life expectancy at birth, which increased by an equivalent of 10 hours per day, on average, for both men and women (or by 0.4 years annually). This upward trend is projected to continue (annex VII). Life expectancy at birth in the region is projected to improve from 71 years in 2015 to 76.4 years in 2050, on average. While it was estimated at below 60 years in 16 countries in 1970, it significantly improved and reached historic records of 70 years or more in 15 countries in 2015. However, there is still concern that life expectancy in Somalia remains very low at less than 60 years.

Factors including poverty, conflict and the re-emergence of certain infectious diseases,

such as malaria, tuberculosis and cholera, have contributed to low life expectancy in some countries, including the Comoros, Djibouti, Iraq, Mauritania, Somalia, the Sudan, the Syrian Arab Republic and Yemen.

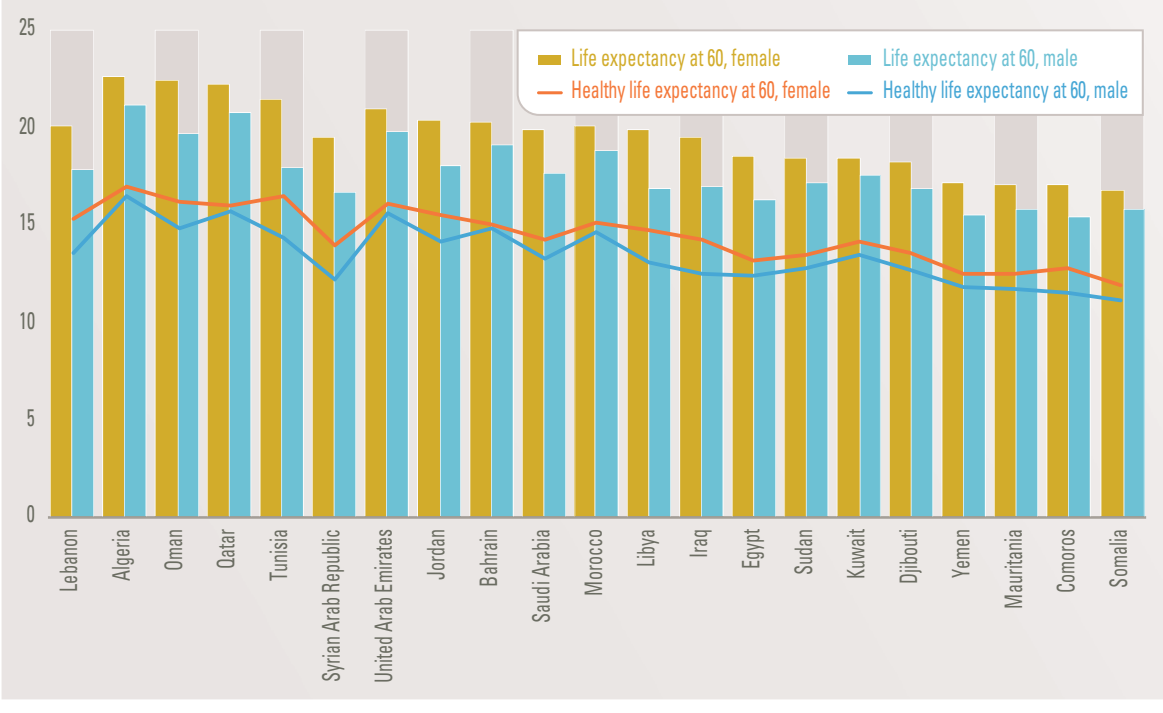
Projections expect significant gaps in life expectancy at birth to continue between Arab countries. However, the gap between the highest and the lowest life expectancy is projected to shrink significantly, from a difference of 27.3 years in 1970 (the gap between life expectancy in Somalia, 40.9 years, and in Qatar, 68.2 years) and of 23.5 years in 2015 (the gap between Somalia, 55.9 years, and Lebanon, 79.4 years), to 18.4 years in 2050 (the gap between Somalia, 66.8 years, and Lebanon, 85.2 years).

At the regional level, women have longer life expectancy than men, which has increased from a difference of 2.5 years in 1970 to 3.9 years in 2015, and is expected to reach 4.1 years by 2050. However, at the country level, projections indicate that in a few countries this gap will narrow between older women and men by 2050 (annex VIII). This difference in life expectancy by sex translates into a higher number and proportion of female older persons, both currently and in the future. Since 2010, the greatest gender gap in life expectancy has been in the Syrian Arab Republic (8.6 years); projections indicate that by 2020 this gap will increase to 8.9 years. However, the ongoing conflict could influence those disparities.

### (b) Life expectancy at age 60

Life expectancy at age 60 provides an even stronger estimate of survival within the adult life course, particularly for low and middle-income countries.[22] Between 1970 and 2015 in the Arab region, life expectancy at age 60 increased substantially from 15.5 years to 18.9 years, rising by

**Figure 3.** Life expectancy and healthy life expectancy at age 60, by sex




**Source:** World Health Organization, "Life expectancy and healthy life expectancy 2000-2015", Global Health Observatory data repository. Available at http://apps.who.int/gho/data/node.main.688 (accessed 25 March 2018).
**Note:** *World Population Prospects* data does not include data for healthy life expectancy. Therefore, for consistency, World Health Organization data is used for both healthy life expectancy and life expectancy.

3.4 years or almost 28 days annually (annex IX). It is projected to reach 20.2 years by 2030 and 22 years by 2050.

*Life expectancy at age 60 in the Arab region improved at a rate equivalent to almost 28 days annually between 1970 and 2015.*

This gain in life expectancy will be accompanied by a gender-based life expectancy gap in all Arab countries: women are expected to live considerably longer than men. Figure 3 shows the differences in life expectancy and healthy life expectancy at age 60 for men and women in the Arab region. Healthy life expectancy projections take into account the health issues experienced by older persons thus increasing their mortality rates, which is discussed further in chapter 2.

In 2015, while the highest average life expectancy for men and women aged 60 was almost 22 years (Algeria), the highest average healthy life expectancy was around 16 years (Algeria, Qatar and the United Arab Emirates). Furthermore, while the average life expectancy at age 60 for women in the region was around 20 years, the average healthy life expectancy was barely 14 years.

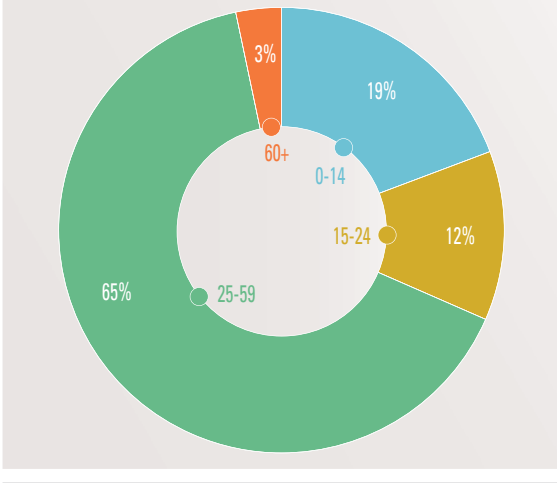
## 3. Migration

Migration can significantly affect population dynamics; however, in the Arab region, the impact is minimal. The effect of migration on population ageing largely depends on whether migration is temporary or permanent, and on the age of migrants. For example, high numbers of working-age migrants can slow down population ageing. When migration is temporary, return migration of older migrants following retirement might occur, meaning that most migrants are almost always working-age individuals. In this case, migration can delay ageing, but not prevent it or contribute to it. However, the degree to which migration delays population ageing depends on the rate of growth of net migration over time.

The size of the migrant population in the Arab region has increased by 150 per cent, from under 15 million in 1990 to nearly 35 million in 2015. The number of international migrants has increased in 17 of the 22 Arab countries over the same time period:[23] the number of migrants more than doubled in seven countries and more than quadrupled in four, namely Bahrain, Oman, Qatar and the United Arab Emirates (annex X).[24]

Data for 2015 show that only 3 per cent of the migrant population in the Arab region was aged 60 or above, while 65 per cent of the migrant population was part of the active working-age group (figure 4). However, Arab countries have significantly disparate migration patterns. The GCC subregion is one of the main destinations for international migrants worldwide. Nonetheless, GCC countries' immigration policies allow only temporary migration, meaning that older migrants are replaced by younger ones, and are not permitted to become naturalized or continue living in the country in old age. As a result, migration is unlikely to contribute to ageing in those countries; it might instead postpone ageing given the decrease in the ratio of older persons to the total population.

**Figure 4.** International migrants in the Arab region by age group, 2015




**Source:** DESA, Population Division, "International migrant stock, the 2015 revision", International Migration database. Available at www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml (accessed on 15 December 2017).

In contrast, Mashreq countries[25] have high levels of emigration because of ongoing conflict. For example, by 2017, more than 5.2 million Syrian refugees had fled to neighbouring countries.[26] In these situations, evidence suggests that such forced movements have an impact on population age structures. Nonetheless, there is an urgent need for more data to assess the demographic and socioeconomic consequences of conflict on older persons.

*The number of international migrants in the Arab region has nearly doubled over 20 years, which could impact population ageing in some of the countries.*

In other countries, the impact of migration on population growth might be temporary. During the last decade, Jordan and Lebanon have had positive net migration rates, mainly as a result of forced migration caused by conflicts in neighbouring countries. However, in the future, those countries might have negative net migration rates because of the often-temporary nature of displacement and forced migration. In contrast, the Syrian Arab Republic, which has experienced the highest negative net migration rate since 2011, is expected to experience high return migration after 2020. Migration trends in Iraq also show a similar pattern over time, with periods of moderate negative net migration (1980-1990 and 2000-2010) alternating with periods of positive net migration rates (annex XI). The State of Palestine, however, is marked by persistent negative net migration rates.

Since 2000, Maghreb countries[27] have experienced negative net migration rates. This pattern is projected to continue in the future, but its scale is expected to decrease. This is also the case in Egypt, Somalia, the Sudan, Yemen and, to a lesser extent, the Comoros. On the other hand, Djibouti and Mauritania have small positive net migration rates, which are likely to continue into 2050 (annex XI). Consequently, migration does not play a large role as a determinant of population ageing in the Arab region as a whole.

## C. Changing population age structures

Population determinants in the Arab region have caused some countries to undergo significant changes in age structures over the last three decades, which are projected to continue in the next 30 years. This trend is represented by a decrease in the demographic weight of children and an increase in the demographic weight of older persons, resulting in an ageing population in the region.

Changes in age structures are measured by the age distribution of four broad population groups:

- Children and young adolescents (aged 0-14);
- Young people (aged 15-24);
- Active working-age persons (aged 25-59);
- Older persons (aged 60 and above).

The following section seeks to measure the pace of demographic change and examine dependency ratio trends.

**Table 1.** Proportion of the population in the Arab region by age groups (percentage)

| Age group | 1970 | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|
| 0-14 | 44.9 | 44.3 | 42.9 | 38.4 | 33.7 | 32.6 | 29.4 | 26.8 | 25.2 |
| 15-24 | 18.3 | 19.4 | 19.5 | 20.5 | 19.8 | 17 | 17.7 | 16.8 | 15.4 |
| 25-59 | 31.1 | 30.8 | 32 | 35.2 | 40.2 | 43 | 43.4 | 44.3 | 44.3 |
| 60+ | 5.7 | 5.5 | 5.6 | 6 | 6.2 | 7.4 | 9.5 | 12.1 | 15.1 |

**Source:** ESCWA calculations based on data from the United Nations Department of Economic and Social Affairs (DESA), *World Population Prospects: The 2017 Revision.*

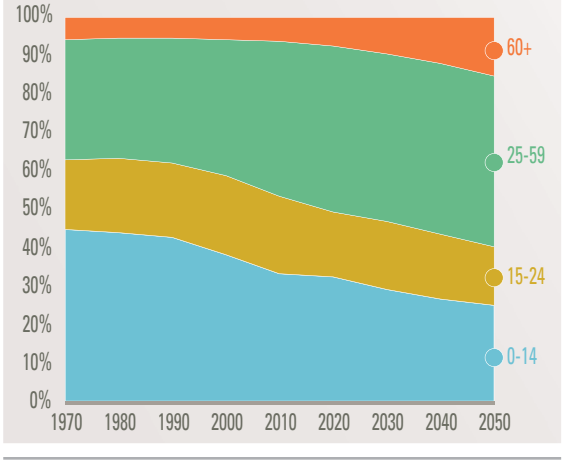
## 1. Proportional age distribution

The proportion of the 0-14 age group has been decreasing in the Arab region since 1970 (table 1 and figure 5), resulting in a decrease in the demographic weight of young people since 2000. In contrast, the proportions of the active working-age population and of older persons are growing in all countries (table 2).

Table 2 shows that these changes vary between countries. From 1970 to 2015, in four countries where fertility has declined most rapidly (Algeria, Lebanon, Morocco and Tunisia), the increase in the proportion of older persons has exceeded 50-100 per cent, while the share of people under 15 has declined significantly by 37-48 per cent. This demographic shift demonstrates fast ageing. Egypt and Libya have experienced a similar trend, but not as significantly as the other four countries. As such, Egypt, Libya and several other Arab countries are experiencing moderate ageing.

In all GCC countries, the proportions of older persons slightly declined from 1970 to 2015 (except in Kuwait, which had an increase of 1.1 percentage points, and in Bahrain, where the proportion stayed the same). For all GCC countries, the proportion of children declined significantly, by 41-61 per cent. At the same time, the proportion of working-age persons increased significantly, by over 36 per cent in Saudi Arabia and over 52 per cent in Oman, mainly because of high positive net migration rates combined with recent fertility decline.

**Figure 5.** Population composition in the Arab region by age group




**Source:** ESCWA calculations based on data from DESA, *World Population Prospects: The 2017 Revision.*

By 2030, the proportion of older persons in the total population is projected to exceed 15 per cent in three countries: Lebanon (19 per cent), Tunisia (17.7 per cent) and Morocco (15.7 per cent). By 2050, those three countries are expected to have more older persons than individuals under the age of 15. Moreover, by 2050, older persons in Algeria, Kuwait, Libya, Oman and Saudi Arabia are expected to constitute over one-fifth of the total population.

In contrast, by 2050, the older population is expected to represent under 11 per cent of the total population in very youthful countries, namely the Comoros, Iraq, Mauritania, Somalia, the State of Palestine, the Sudan and Yemen. The demographic composition in most of those countries has not undergone major transformation since 1970, and is not projected to change by 2030 or 2050.

In absolute terms, however, the number of persons in each age group has increased and will continue to do so in the future (table 3). Even in countries where the proportion of older persons in the total population will not dramatically increase over the next few decades, the number of older persons will still increase. While the proportion of individuals aged 0-14 and 15-24 is decreasing, the number of children under 15 increased from 55.4 million in 1970 to 132.6 million in 2015, with an average annual growth rate of 1.96 per cent, and the number of young people increased from around 22.6 million to 71.6 million over the same period, with an average annual growth rate of 0.72 per cent. However, in the future, their numbers are projected to increase less rapidly: by 2050, the population of children is likely to total 170 million and the youth population is expected to reach 104 million.

**Table 2.** Population share by country and age group (percentage)

| Country | 1970 | | | 2015 | | | 2030 | | | 2050 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0-14 | 15-59 | 60+ | 0-14 | 15-59 | 60+ | 0-14 | 15-59 | 60+ | 0-14 | 15-59 | 60+ |
| Algeria | 46.9 | 47.4 | 5.7 | 28.7 | 62.4 | 8.9 | 24.7 | 62.1 | 13.3 | 19.9 | 57.1 | 23.0 |
| Bahrain | 44.8 | 51.1 | 4.1 | 20.8 | 75.0 | 4.1 | 16.7 | 74.1 | 9.2 | 13.5 | 69.2 | 17.4 |
| Comoros | 44.6 | 50.3 | 5.1 | 40.1 | 55.1 | 4.7 | 35.6 | 58.3 | 6.1 | 30.1 | 60.8 | 9.1 |
| Djibouti | 45.4 | 50.6 | 4.0 | 32.0 | 61.8 | 6.2 | 26.5 | 64.4 | 9.1 | 20.7 | 63.7 | 15.6 |
| Egypt | 42.0 | 51.4 | 6.6 | 33.1 | 59.2 | 7.7 | 29.5 | 60.7 | 9.9 | 25.4 | 59.1 | 15.4 |
| Iraq | 44.6 | 48.8 | 6.5 | 40.7 | 54.3 | 5.0 | 37.2 | 56.9 | 6.0 | 32.4 | 58.5 | 9.1 |
| Jordan | 46.0 | 49.1 | 4.9 | 36.0 | 58.4 | 5.5 | 29.8 | 61.5 | 8.7 | 23.9 | 60.8 | 15.4 |
| Kuwait | 44.1 | 53.0 | 3.0 | 20.9 | 75.0 | 4.1 | 19.1 | 68.9 | 12.1 | 17.1 | 62.4 | 20.5 |
| Lebanon | 41.9 | 50.6 | 7.5 | 24.0 | 64.5 | 11.5 | 18.9 | 62.1 | 19.0 | 13.8 | 55.0 | 31.2 |
| Libya | 46.2 | 48.9 | 4.8 | 28.6 | 64.9 | 6.5 | 22.5 | 66.5 | 11.0 | 18.2 | 59.1 | 22.8 |
| Mauritania | 46.0 | 49.7 | 4.3 | 40.2 | 54.8 | 4.9 | 36.6 | 57.2 | 6.2 | 31.7 | 59.5 | 8.8 |
| Morocco | 47.6 | 47.1 | 5.3 | 27.7 | 62.4 | 10.0 | 23.4 | 60.9 | 15.7 | 18.6 | 57.3 | 24.0 |
| Oman | 46.3 | 48.5 | 5.2 | 22.2 | 74.0 | 3.8 | 18.9 | 73.9 | 7.1 | 14.8 | 64.9 | 20.3 |
| Qatar | 36.1 | 60.7 | 3.2 | 13.8 | 83.8 | 2.3 | 13.2 | 78.2 | 8.6 | 11.4 | 70.4 | 18.2 |
| Saudi Arabia | 44.2 | 50.4 | 5.4 | 26.0 | 68.8 | 5.2 | 21.9 | 67.0 | 11.0 | 16.8 | 60.3 | 22.9 |
| Somalia | 43.3 | 51.4 | 5.3 | 46.7 | 49.0 | 4.3 | 44.2 | 51.4 | 4.5 | 38.1 | 56.6 | 5.3 |
| State of Palestine | 49.4 | 46.3 | 4.3 | 40.1 | 55.3 | 4.5 | 35.5 | 58.2 | 6.3 | 28.5 | 61.0 | 10.5 |
| Sudan | 46.3 | 48.9 | 4.8 | 41.5 | 53.1 | 5.4 | 36.7 | 56.8 | 6.5 | 31.5 | 60.2 | 8.3 |
| Syrian Arabic Republic | 48.1 | 46.9 | 5.1 | 38.1 | 55.5 | 6.4 | 28.1 | 62.5 | 9.3 | 21.9 | 62.0 | 16.1 |
| Tunisia | 45.5 | 48.8 | 5.7 | 23.7 | 64.6 | 11.7 | 21.4 | 60.9 | 17.7 | 17.8 | 55.7 | 26.5 |
| United Arab Emirates | 35.1 | 62.6 | 2.3 | 13.8 | 84.3 | 2.0 | 12.1 | 79.8 | 8.1 | 12.0 | 69.3 | 18.7 |
| Yemen | 44.7 | 50.3 | 4.9 | 40.6 | 54.9 | 4.5 | 34.1 | 60.7 | 5.2 | 25.6 | 64.5 | 9.8 |
| Arab Region | 44.9 | 49.4 | 5.7 | 33.3 | 60.0 | 6.7 | 29.4 | 61.1 | 9.5 | 25.2 | 59.7 | 15.1 |

**Source:** ESCWA calculations based on data from DESA, *World Population Prospects: The 2017 Revision.*
**Note:** See annex XII for country-level data for additional years.

The size of the active working-age population grew from 38.4 million in 1970 to 167.5 million in 2015 and is projected to increase to about 300 million in 2050. However, the growth rate of this age group is projected to slow from 3.3 per cent over the period 1970-2015 to 1.7 per cent over the period 2015-2050. In contrast, the size of the population of older persons is projected to continue to increase with an unprecedented growth rate, up from 3 per cent over the period 1970-2015 to 3.8 per cent over the period 2015-2050 (annex XIII). As a result, the number of older persons in the region will rise to just above 102 million by 2050.

Overall, in the past and future, the 0-14 age group shows the lowest growth rate followed by the 15-24 age group, while the 60 and above age group displays the highest growth rate followed by the 25-59 age group. These trends imply that even in medium and slow-ageing countries, while the proportion of older persons to the total population might not increase dramatically, the number of older persons will still increase.

**Table 3.** Population in the Arab region by age group

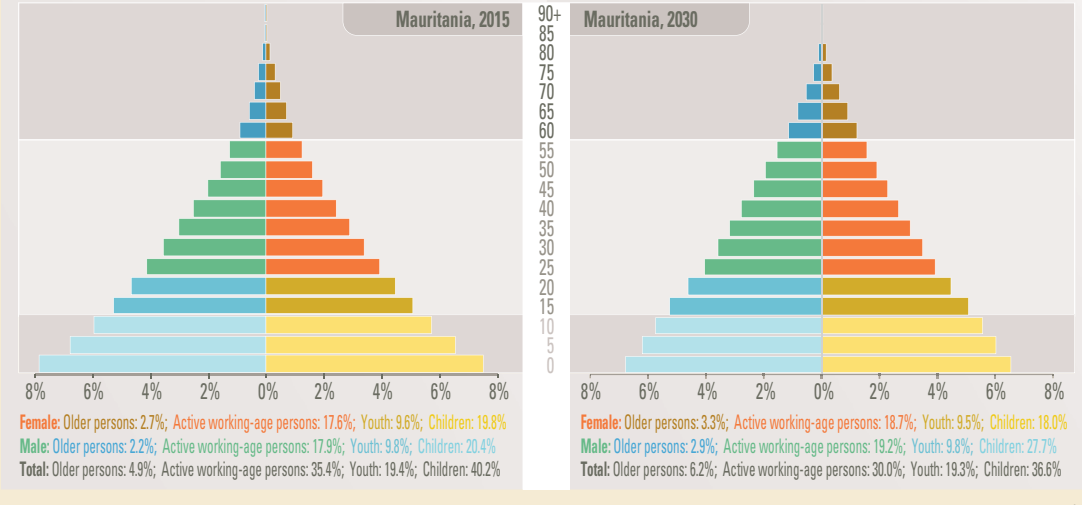
| | 0-14 | 15-24 | 25-59 | 60+ | Total |
|---|---|---|---|---|---|
| 1970 | 55 413 000 | 22 575 000 | 38 440 000 | 7 095 000 | 123 523 000 |
| 2015 | 132 562 000 | 71 598 000 | 167 560 000 | 26 826 000 | 398 546 000 |
| 2030 | 153 179 000 | 92 023 000 | 225 980 000 | 49 594 000 | 520 776 000 |
| 2050 | 170 404 000 | 104 144 000 | 299 715 000 | 102 087 000 | 676 350 000 |

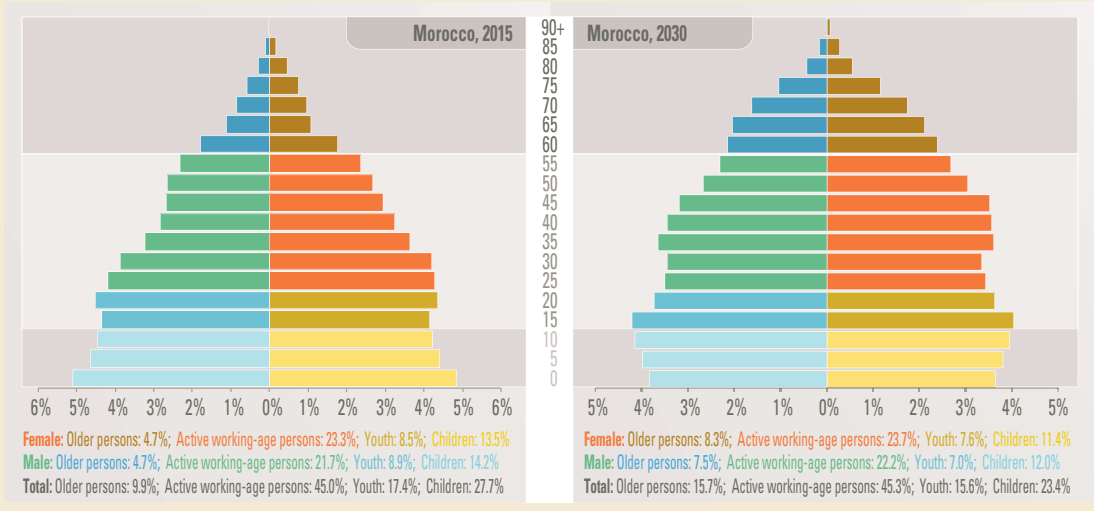
**Source:** ESCWA calculations based on data from DESA, *World Population Prospects: The 2017 Revision.*
**Note:** See annex XII for country-level data.

## **Box 1.** Age-sex population pyramids for slow and fast-ageing countries

The pyramids below illustrate the different demographic scenarios of the age-sex population pyramid in 2015 and as projected for 2030 for a slow-ageing country, Mauritania, and a fast-ageing country, Morocco. This comparison shows the relative demographic weight of different age categories, with notable differences between children, working-age persons and older populations between the two countries. Age structure pyramids for slow-ageing countries, like Mauritania, show a broad base representing large populations in younger age groups, and a narrow top representing a small older population. This age structure indicates a population with high fertility and mortality rates. As a result of the slow rate of its demographic change, the pyramid remains relatively constant in the 15-year gap between 2015 and 2030, as do the proportions of children, working-age persons and older persons. In contrast, age structure pyramids for fast-ageing countries, like Morocco, have a more even distribution between the child and working-age groups, while also showing larger populations of older persons. This age structure indicates a reduced fertility rate; the increasing size of the older population relative to the other age groups results from a decrease in older persons' mortality rates. The pyramids show a significant change between 2015 and 2030, particularly a smaller proportion of children, a larger proportion of older persons, and a small increase in the proportion of older women relative to older men.

### Comparison of population age structures between a slow and fast-ageing country in the Arab region, 2015 and 2030






**Source:** ESCWA calculations based on *World Population Prospects: The 2017 Revision*.

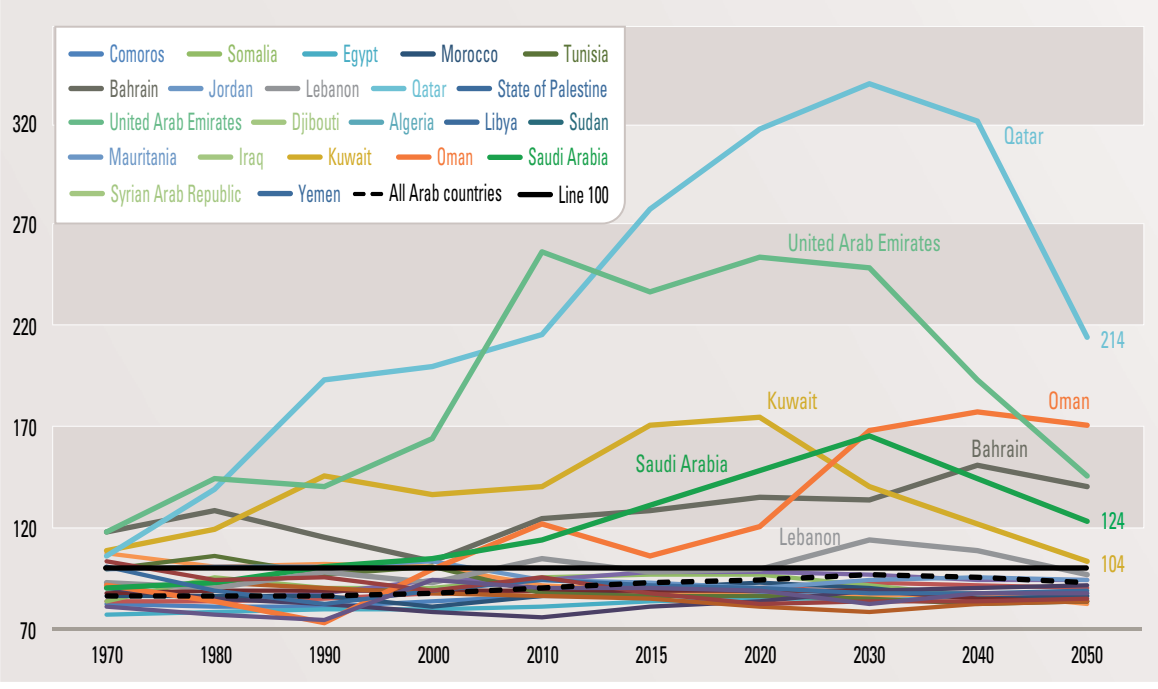
Over the period 2015-2050, countries that will likely experience the fastest growth in the population of older persons are (in ascending order of growth): Saudi Arabia, Bahrain, Kuwait, Oman, Qatar and the United Arab Emirates, with rates ranging from 5.2 per cent to 7.5 per cent (see annex XIV (table AXIV.2) for country-level data). In contrast, the population of older persons in countries that experienced an early decline in fertility rates is expected to grow more slowly, with projected annual growth rates ranging between 2.6 per cent in Lebanon and 3.3 per cent in Morocco. In Somalia and the Sudan, the population of older persons is also projected to grow slowly at a rate of 3.3 per cent, mainly because of high mortality levels.

Migration also influenced the growth of the older population in some countries over the period 1970-2015: the older population increased 35-fold in the United Arab Emirates and almost 19-fold in Qatar. The active working-age population in those countries has also experienced significant growth, increasing by slightly under 67-fold and 39-fold, respectively, during the same period. Hence, the growth of the active working-age population relative to the growth of the older population explains why, in relative terms, their populations were not ageing over that period.

## 2. Age and sex distribution of the older population

In the Arab region, women live longer than men; this trend is projected to continue in the future. However, the ratio of men to women varies between Arab countries. Women outliving men means that there are often more females than males in a country's population of older persons. Available data indicate a female predominance in the older population in 16 of the 22 Arab countries in 2015 (figure 6 and annex XV). GCC countries are a notable exception, where male older persons outnumber females. For example, in 2015, there were 278 older men per 100 older women in Qatar and 236 older men per 100 older women in the United Arab Emirates. The proportion of males to females among older persons will continue to decrease into 2030 and 2050, even in some GCC countries. For example, while Saudi Arabia is projected to have 166 older men per 100 older women in 2030, this ratio is expected to decrease to 124 older men per 100 older women by 2050. Non-GCC countries are projected to have older male-to-female ratios ranging from 79:100 in Iraq to 96:100 in Algeria in 2030, and from 83:100 in Iraq, Libya, Somalia and Tunisia to 96:100 in Lebanon in 2050.

**Figure 6.** Sex ratio (males per 100 females) of older persons in Arab countries




**Source:** ESCWA calculations based on data from DESA, *World Population Prospects: The 2017 Revision*.

## 3. Changes in age distribution

The population of older persons in the Arab region has quadrupled since 1970, increasing from approximately 7 million in 1970 to nearly 27 million in 2015. Despite this increase, older persons still constituted the smallest age group as a proportion of the total population, increasing from 5.7 per cent in 1970 to 6.7 per cent in 2015.

Within the older persons age group, only 4.3 per cent were older than 65 and 1.5 per cent were aged 75 or above in 2015, as shown in table 4. When compared to other regions, the share of the population of older persons in the Arab region is still small. For example, the share of the OECD population aged 65 and above varied by country from 15 per cent to 23 per cent in 2010.[28]

This conclusion holds true when we compare individual countries in the region. Only Tunisia and Lebanon had relatively significant proportions of the population aged 65 and above in 2015 (7.6 per cent and 8.1 per cent, respectively) while shares of the total population aged 75 and above were much smaller (3.1 per cent and 3.2 per cent, respectively). Nevertheless, the number of older persons is increasing rapidly, which highlights the urgency of ageing in the Arab region, its consequences on societies, and its implications with regard to policies, resources and services.

As a result of a sharp decline in fertility rates, Morocco, Lebanon and Tunisia have already started their ageing transition: the share of older persons was 10 per cent, 11.5 per cent and 11.7 per cent of the total population in 2015, respectively. By 2020, this age group is expected to constitute 11.9 per cent of the population in Morocco, 13.1 per cent in Lebanon and 13.4 per cent in Tunisia.

### Pace of change in age distribution

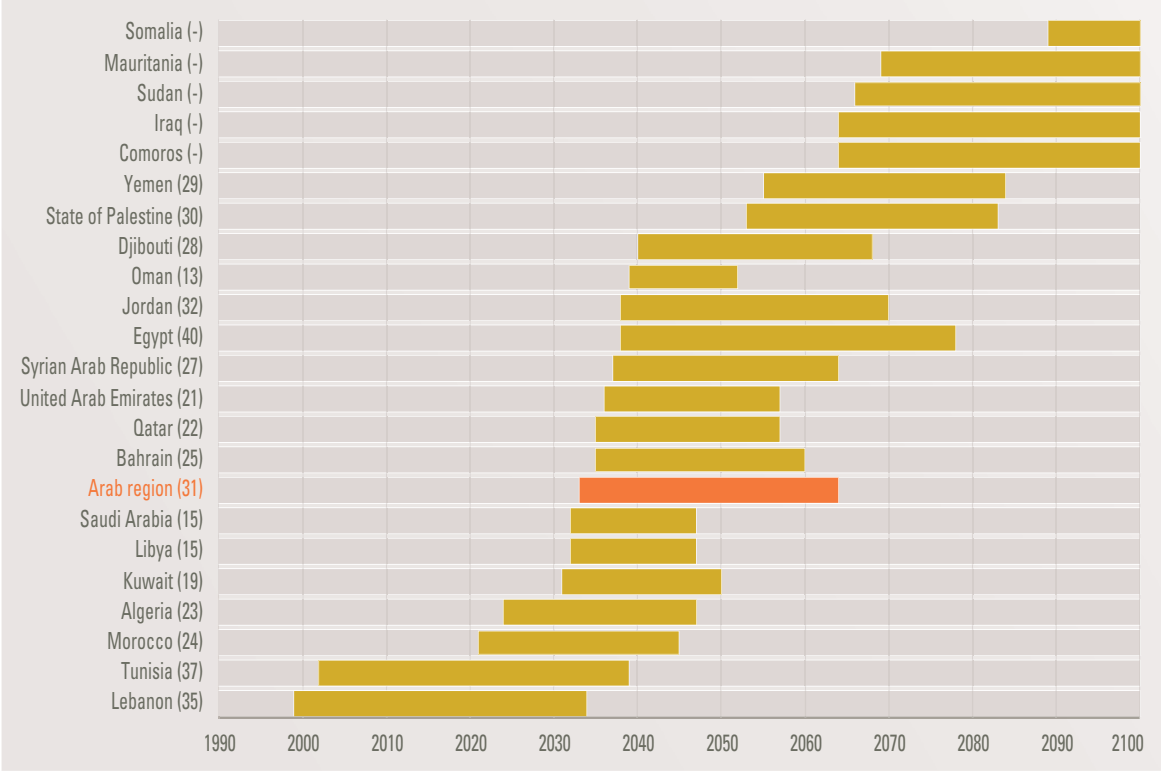
Population ageing in developed countries occurred gradually over long stretches of time, but it still posed challenges related to unemployment and pension sustainability.

**Table 4.** Share of the older population by age group, 2015

| Country | Percentage of the total population | | | Country | Percentage of the total population | | |
|---|---|---|---|---|---|---|---|
| | 60+ | 65+ | 75+ | | 60+ | 65+ | 75+ |
| Algeria | 8.9 | 5.9 | 2.3 | Oman | 3.8 | 2.3 | 0.8 |
| Bahrain | 4.1 | 2.3 | 0.7 | Qatar | 2.3 | 1.1 | 0.3 |
| Comoros | 4.7 | 2.9 | 0.9 | Saudi Arabia | 5.2 | 3.1 | 1.0 |
| Djibouti | 6.2 | 4.1 | 1.2 | Somalia | 4.3 | 2.7 | 0.7 |
| Egypt | 7.7 | 5.1 | 1.6 | State of Palestine | 4.5 | 3.0 | 0.9 |
| Iraq | 5.0 | 3.1 | 1.0 | Sudan | 5.4 | 3.5 | 1.1 |
| Jordan | 5.5 | 3.8 | 1.3 | Syrian Arabic Republic | 6.4 | 4.0 | 1.5 |
| Kuwait | 4.1 | 2.1 | 0.5 | Tunisia | 11.7 | 7.6 | 3.1 |
| Lebanon | 11.5 | 8.1 | 3.2 | United Arab Emirates | 2.0 | 1.0 | 0.2 |
| Libya | 6.5 | 4.3 | 1.6 | Yemen | 4.5 | 2.9 | 0.8 |
| Mauritania | 4.9 | 3.1 | 0.9 | Arab Region | 6.7 | 4.3 | 1.5 |
| Morocco | 10.0 | 6.4 | 2.4 | | | | |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision.*

**Figure 7.** Ageing transitions in Arab countries




**Source:** ESCWA calculations based on data from DESA, *World Population Prospects: The 2017 Revision.*

In contrast, the Arab region is not witnessing steady ageing. In nearly half of Arab countries, ageing is taking place at a fast or moderate pace, driven primarily by a rapid fertility decline but also by a steady increase in life expectancy. Arab countries therefore have little time to adjust to the consequences of population ageing, especially considering the relatively low levels of social and economic development in many of them.

Figure 7 shows two important trends related to population ageing in the Arab region. Firstly, it illustrates the estimated length of time over which population ageing will occur (the ageing transition). This is the length of time it will take for the proportion of persons aged 65 and above to increase from 7 per cent to 14 per cent of the total population. The ageing transition in most Arab countries is projected to range between 13 and 40 years (as shown in brackets in figure 7), which is considerably faster than the length of time it took OECD countries to age (between 50 and 150 years).[29] Secondly, figure 7 predicts the year at which the population of each country will shift from 'ageing' to 'aged', with the exception of the Comoros, Iraq, Mauritania, Somalia and the Sudan because they will continue the ageing transition past the year 2100.[30] Those years are especially important for policymakers, who should recognize that the period preceding the start of the ageing transition is a valuable time to begin planning and implementing policies that address the specific needs of older persons.

Figure 7 indicates that the majority of Arab countries will begin their ageing transition in the next two decades. For fast-ageing countries (Algeria, Lebanon, Morocco and Tunisia), the transition will begin before 2030. Countries experiencing moderate ageing (Bahrain, Djibouti, Egypt, Jordan, Kuwait, Libya, Oman, Qatar, Saudi Arabia, the Syrian Arab Republic and United Arab Emirates) are projected to begin the ageing transition between 2030 and 2050, and become aged by as early as 2047 for Libya and Saudi Arabia. In slow-ageing Arab countries (the Comoros, Iraq, Mauritania, Somalia, the State of Palestine, the Sudan and Yemen), the ageing transition is expected to begin later and take longer, starting after 2050 and, in most cases, with the exception of the State of Palestine and Yemen, continuing beyond 2100.

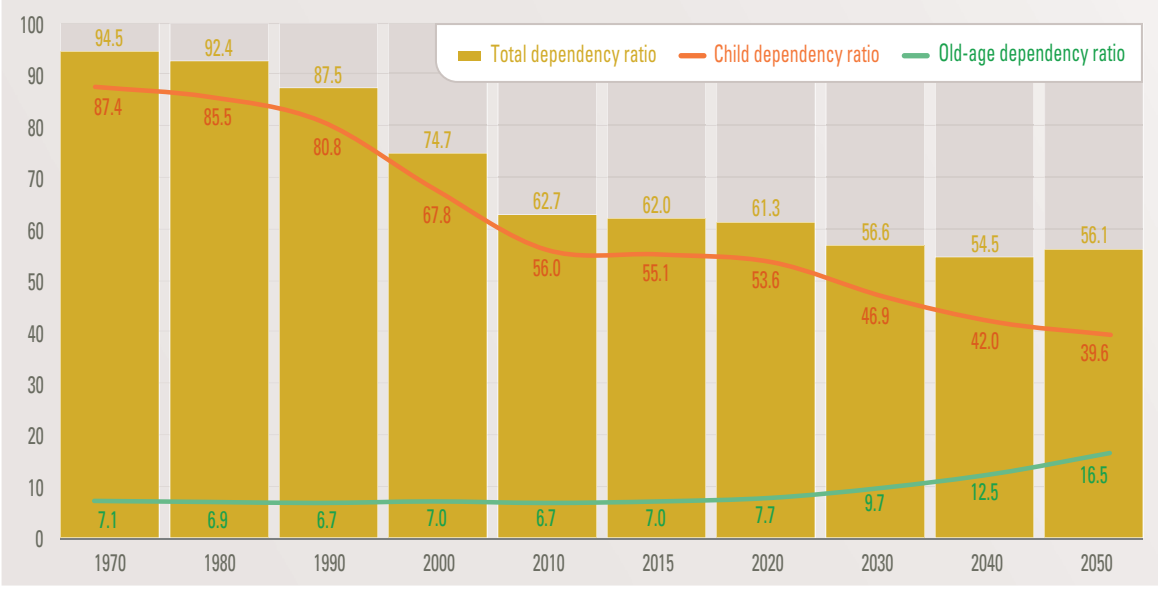
## D. Dependency ratios

To evaluate the economic impact of population age structures on a society's resources, demographers use the dependency ratio. This ratio is calculated as the number of people in a 'dependent age group' (people younger than 15 or older than 64) divided by the working-age population (people aged 15-64).[31]

*Changing trends in the share of older persons compared with that of working-age individuals show that the dependency ratio in the Arab region is shifting gradually towards increased dependency of older persons.*

Adding the child and old-age dependency ratios together results in the total dependency ratio. It is often assumed that older persons and children are dependent on working-age individuals in the same way; however, in general, older persons differ from children in the manner and degree of dependency. For example, some older persons might become physically dependent through disability or through age as their capacity declines, but might still be financially independent. In contrast, children are largely dependent both physically and financially. In addition, researchers argue that dependency ratios have critical limitations since they conflate age with dependency, both for populations aged 65 and above and for those under 15. Dependency ratios are presented in this section to serve as an indicator and measure of ageing, but should be interpreted with caution given those limitations.

**Figure 8.** Dependency ratios in the Arab region (percentage)




**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision*.

Figure 8 illustrates trends in the child, old-age and total dependency ratios in the Arab region from 1970 to 2015, and projections through 2050. It shows that the child dependency ratio decreased from 87.4 per cent in 1970 to 55.1 per cent in 2015, with a steady decline projected to continue in the future. At the same time, the old-age dependency ratio, which stood at around 7 per cent between 1970 and 2015, is projected to steadily increase until 2030 then accelerate to a high of 16.5 per cent in 2050. The total dependency ratio decreased rapidly between 1970 and 2015, from 94.5 per cent to 62 per cent. It is expected to further decrease in the future, reaching 56 per cent by 2050.

According to available data for 2015, Arab countries with high fertility also had relatively high total dependency ratios, namely the Comoros, Iraq, Mauritania, the State of Palestine, Somalia, the Sudan and Yemen (ranging from 97.4 per cent to 75.5 per cent). High dependency ratios in those countries are explained by the large share of young people. In contrast, countries with high positive net migration rates, caused mainly by labour migration, had small total dependency ratios, namely Bahrain, Kuwait, Oman, Qatar and the United Arab Emirates (annex XVI).

Owing to their early decline in fertility, Lebanon, Tunisia and, to some extent, Morocco have relatively high old-age dependency ratios: 12 per cent, 11.1 per cent and 9.7 per cent in 2015, respectively (table 5). Algeria is expected to reach almost 11 per cent by 2020. In 2030, these countries are projected to have significantly high old-age dependency ratios, ranging from 14 per cent in Algeria to 20.6 per cent in Lebanon. In 2050, many countries in the Arab region are projected to have relatively high old-age dependency ratios, except for those with high fertility rates observed in 2015, namely the Comoros, Iraq, Mauritania, the State of Palestine, Somalia, the Sudan and Yemen.

The observed and expected rise in old-age dependency ratios is generally offset by the rapid decline of child dependency ratios. Child dependency ratios decreased from 1970 to 2015, except in Somalia where it increased before starting to decline after 2000. The decline in child dependency ratios is projected to be most significant in Algeria, Bahrain, Libya, Morocco, Oman, the Syrian Arab Republic and Tunisia (annex XVII).

**Table 5.** Old-age dependency ratio (percentage)

| Country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|
| Algeria | 7.1 | 6.8 | 6.3 | 7.1 | 8.1 | 9.0 | 10.8 | 14.0 | 18.5 | 26.9 |
| Bahrain | 4.7 | 3.3 | 3.4 | 3.6 | 2.7 | 3.0 | 3.4 | 7.3 | 12.7 | 17.8 |
| Comoros | 5.8 | 6.2 | 6.2 | 5.7 | 5.3 | 5.1 | 5.4 | 6.3 | 7.3 | 9.0 |
| Djibouti | 4.6 | 4.6 | 4.9 | 5.4 | 5.9 | 6.4 | 6.7 | 8.7 | 11.1 | 14.6 |
| Egypt | 7.9 | 8.1 | 8.3 | 8.4 | 7.6 | 8.2 | 8.7 | 10.3 | 12.4 | 16.5 |
| Iraq | 7.8 | 8.3 | 7.6 | 6.5 | 6.0 | 5.5 | 5.9 | 6.0 | 8.1 | 10.0 |
| Jordan | 6.4 | 6.7 | 6.3 | 5.3 | 6.2 | 6.2 | 6.4 | 8.3 | 12.5 | 16.9 |
| Kuwait | 3.4 | 2.8 | 2.1 | 2.2 | 2.7 | 2.7 | 4.0 | 9.0 | 17.9 | 23.3 |
| Lebanon | 9.5 | 9.7 | 9.9 | 11.1 | 12.4 | 12.0 | 13.3 | 20.6 | 27.1 | 37.1 |
| Libya | 6.0 | 5.6 | 5.6 | 6.0 | 6.2 | 6.4 | 6.8 | 9.1 | 16.5 | 25.5 |
| Mauritania | 4.8 | 5.5 | 6.0 | 5.9 | 5.6 | 5.5 | 5.6 | 6.5 | 7.7 | 9.1 |
| Morocco | 7.0 | 6.2 | 7.0 | 8.6 | 9.4 | 9.7 | 11.6 | 17.2 | 21.9 | 28.5 |
| Oman | 6.3 | 5.2 | 4.4 | 4.0 | 3.8 | 3.1 | 3.3 | 5.8 | 10.6 | 19.3 |
| Qatar | 3.2 | 2.4 | 1.8 | 2.3 | 1.2 | 1.3 | 2.1 | 5.6 | 12.0 | 16.6 |
| Saudi Arabia | 6.6 | 5.6 | 5.1 | 5.1 | 4.4 | 4.3 | 5.2 | 9.2 | 16.6 | 25.1 |
| Somalia | 5.9 | 6.0 | 5.6 | 5.3 | 5.3 | 5.3 | 5.4 | 5.4 | 5.4 | 5.6 |
| State of Palestine | 6.0 | 4.7 | 4.3 | 4.6 | 5.0 | 5.2 | 5.4 | 6.6 | 8.5 | 10.9 |
| Sudan | 5.9 | 5.9 | 5.7 | 5.8 | 6.1 | 6.3 | 6.5 | 7.1 | 7.9 | 8.8 |
| Syrian Arab Republic | 6.9 | 6.2 | 6.1 | 6.0 | 5.8 | 7.0 | 8.0 | 9.6 | 12.5 | 17.4 |
| Tunisia | 6.8 | 7.2 | 8.4 | 10.6 | 10.8 | 11.1 | 13.2 | 18.8 | 24.1 | 31.7 |
| United Arab Emirates | 2.3 | 2.0 | 1.8 | 1.5 | 0.9 | 1.2 | 1.6 | 5.3 | 12.2 | 18.5 |
| Yemen | 5.8 | 5.9 | 5.4 | 5.8 | 4.9 | 5.1 | 5.2 | 5.4 | 6.0 | 8.7 |
| **Arab region** | 7.1 | 6.9 | 6.7 | 7.0 | 6.7 | 7.0 | 7.7 | 9.7 | 12.5 | 16.5 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision.*
**Note:** Old-age dependency ratio (age 65+/age 15-64).
De facto population as of 1 July of the year indicated.

## E. Key findings and conclusions

As demonstrated by the demographic trends and prospects discussed in the present chapter, population ageing in the Arab region is rapidly unfolding. At the regional level, declines in fertility and mortality are primary drivers of population ageing, whereas migration has far less of an impact. The predicted decline in fertility and mortality will have a major effect on the age structure of populations in the Arab region, in particular on the number and share of older persons. However, individual Arab countries will begin ageing at different stages, and will experience the ageing transition at varying rates.

The present chapter's findings reveal several important features of ageing in the Arab region. Firstly, population ageing is occurring at the same time as the 'youth bulge' generation is reaching working age. These two demographic phenomena exert pressure on Arab States, which must devote

resources to address the needs of both groups simultaneously. Secondly, the ageing transition in most Arab countries has either already begun or will occur in the coming years at a much faster rate than in other regions, such as the OECD countries, because of a rapid decline in fertility over the last four decades. This rapid ageing transition means that Arab countries have a short timeframe to adapt to changing age structures. Thirdly, trends show a continued predominance of women among the older population, resulting in various implications that are further discussed in the following chapters.

In the light of such findings, the majority of Arab countries must urgently address the impact of changing age structures to ensure that individuals today and in the future can age with dignity. The following chapters build on these findings to assess the current socioeconomic conditions of older persons in the region and the intergenerational support available to them; to project the situation of older persons in the future; and to propose a set of policy recommendations that can guide countries depending on their stage and rate of ageing.

Older persons face alarming conditions in the Arab region, despite variations across the region and within countries. Weak and non-inclusive social protection systems, with limited pension and health coverage, leave many older persons vulnerable to poverty and ill health.

# 2. Socioeconomic Situation of Older Persons in the Arab Region

## A. Introduction

Chapter 1 presented evidence on the Arab region's rapid ageing transition. Older persons will constitute over 15 per cent of the total population in the Arab region by 2050. Even in slow-ageing countries, such as the Comoros, Iraq, Mauritania, the State of Palestine, Somalia, the Sudan and Yemen where the proportion of older persons might not increase significantly in the coming decades given their youthful age structures, the number of older persons will almost quadruple by 2050. Consequently, there is a pressing obligation to protect, care for and empower older persons in the Arab region. Although population ageing can pose challenges to development, it can also offer opportunities if measures are taken to understand the socioeconomic impact of the ageing transition. Sustainable development hinges on the inclusion of all members of society, including older persons. To this end, older persons require an enabling environment that engages and empowers them.

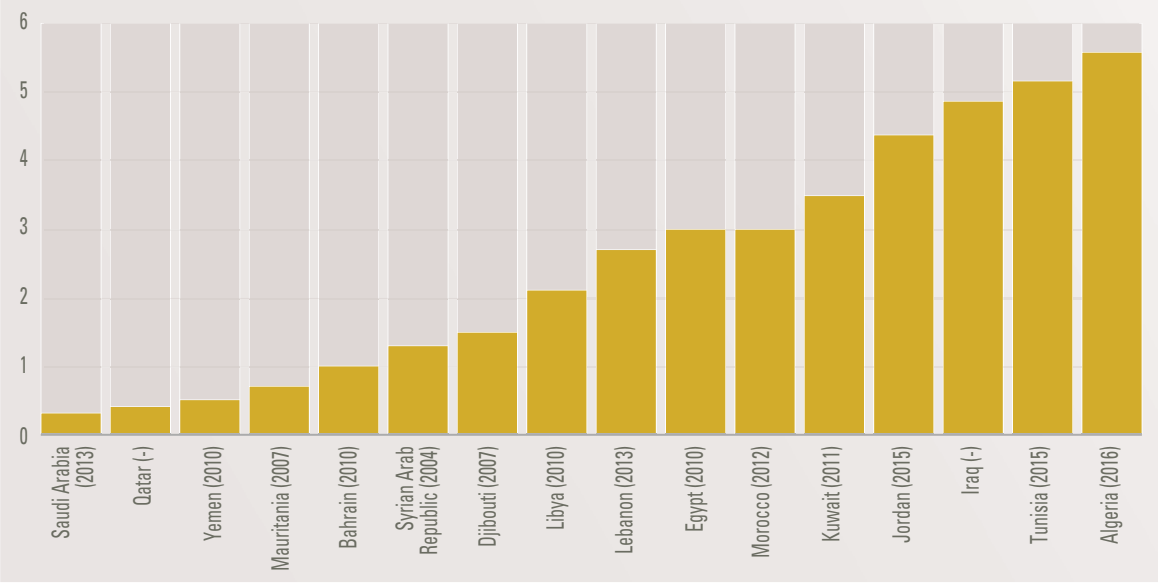
In the Arab region, caring forolder persons has traditionally been the responsibility of the family, with the State playing a secondary role. However, economic, political and social changes have weakened the family's ability to ensure the wellbeing of older persons. Countries across the region, including Egypt, Iraq, Jordan, Kuwait, Oman, the State of Palestine, the Sudan and Tunisia, have taken steps towards ensuring the human rights of older persons by developing relevant policies and strategies. Nevertheless, older persons continue to suffer from extreme vulnerabilities and dire conditions. It is therefore a priority to investigate their situation so as to identify the challenges and risks they face.

The present chapter seeks to provide some insight into the socioeconomic conditions of older persons in the region. It discusses social protection systems in Arab countries, presents the findings of a set of indicators on the situation of older persons, and concludes with some key findings. The methodology employs a quantitative approach to data analysis, and relies on the evaluation of a set of indicators that cover financial security (pension coverage and employment), health, education and living arrangements. The data and indicators used to assess the socioeconomic conditions of older persons were compiled from various sources, including national censuses, recent household surveys for selected countries, the Economic Research Forum, the Pan Arab Project for Family Health (PAPFAM), United Nations organizations and specialized agencies, and the World Bank. However, research on older persons in the Arab region faces major challenges and limitations owing to a lack of published records and of data disaggregated by age and sex.

## B. Social protection systems for older persons

Almost all Arab countries provide some sort of social protection programmes for health, education and pensions; however, the coverage and efficacy of those programmes vary for older persons. When compared with other regions, the Arab region has relatively low levels of public expenditure on social protection for pensions and other benefits, excluding health, for persons above the statutory pensionable age (2.6 per cent of GDP in Arab countries compared with 5.1 per cent in Asia-Pacific countries) (figure 9).[1]

**Figure 9.** Public social protection expenditure on pensions and other benefits, excluding health, for persons above statutory pensionable age (percentage of GDP)




**Source:** International Labour Organization, *World Social Protection Report 2017–19: Universal Social Protection to Achieve the Sustainable Development Goals* (Geneva, 2017), p. 86. Available at www.social-protection.org/gimi/RessourcePDF.action?ressource.ressourceId=54887.

Despite only dedicating a small share of GDP to social protection for older persons, a few countries have launched some important initiatives. For example, Egypt has implemented reforms, including substantially raising old-age pensions and attempting to cover older persons who do not have pensions.

In a region where the informal sector is one of the largest in the economy and where unemployment rates are among the highest in the world (mainly for young people and women),[2,3] the majority of the population is facing or is at risk of poverty and lacks access to sustainable health care. With the exception of social protection systems in GCC countries, which have significantly higher GDP per capita than other Arab countries, social protection in the region is contributory and primarily covers old-age, survivorship, invalidity and employment disability.

Social protection systems that cover social insurance, health, maternity, care for older persons, unemployment, and illness-related assistance are not well-developed in the region and are typically only available to military personnel or workers in the public and formal private sectors. Universal coverage is lacking in the Arab region, even in countries that have higher public social protection expenditure on pensions and other benefits for older persons. Large segments of the population are therefore left without social protection, including workers in the informal sector, agricultural and domestic workers, temporary workers, and migrant workers. Women are among the most vulnerable, as they have limited or no access to social security benefits. Most working women are employed in the informal sector or in unpaid work, so they are not eligible for social insurance (pension entitlement and health insurance programmes) when they age, with only a few exceptions.[4]

Social safety nets targeting poor, food insecure and vulnerable individuals and households have increased in recent years, following the 2008 global financial crisis. This trend is consistent with government spending patterns in the region

during previous financial crises, which show that average social security spending steadily increased in the years before, during and after a financial crisis. During past financial crises experienced in several Arab countries in the late 1980s and early 1990s, average social security spending increased from 10.1 per cent to 12.5 per cent.[5] Cash social transfer systems through traditional institutions, such as almsgiving instigated by religious obligations like *zakat*, are also well established in the region. These institutions operate differently across countries, taking the form of public funds in the Sudan, social funds in Egypt and Yemen, or individual donations through specific funds in Algeria, Jordan and the State of Palestine, for example. To compensate for the absence of adequate public social protection systems, civil society organizations in Arab countries have long provided many services to older persons facing poverty.

## C. Socioeconomic situation in old age

To assess the socioeconomic situation of older persons in the Arab region, the present section measures the wellbeing of older persons in five key domains: income security, health status, education, employment and enabling environment. To measure progress in those domains, the following indicators were used to evaluate the socioeconomic wellbeing of older persons in the Arab region. For each of the indicators, differences in the conditions faced by older men and women were also analysed where possible.

- Income security

*Pension coverage:* is used as a proxy for income security. Income security is based on the principle that older citizens should be guaranteed a minimum income that allows them to live decently.

- Health status

*Life expectancy and healthy life expectancy at 60:* are used as proxy indicators to measure health status in old age. Improving the health of older persons reinforces their autonomy.

*State versus out-of-pocket expenditure.*

*Prevalence of non-communicable diseases and disability.*

- Education

*Educational level:* is used to measure education, which impacts the overall wellbeing of older persons, including health and access to information and communication technology.

- Employment

*Employment:* serves as an indicator for pension and resource availability for individuals in old age.

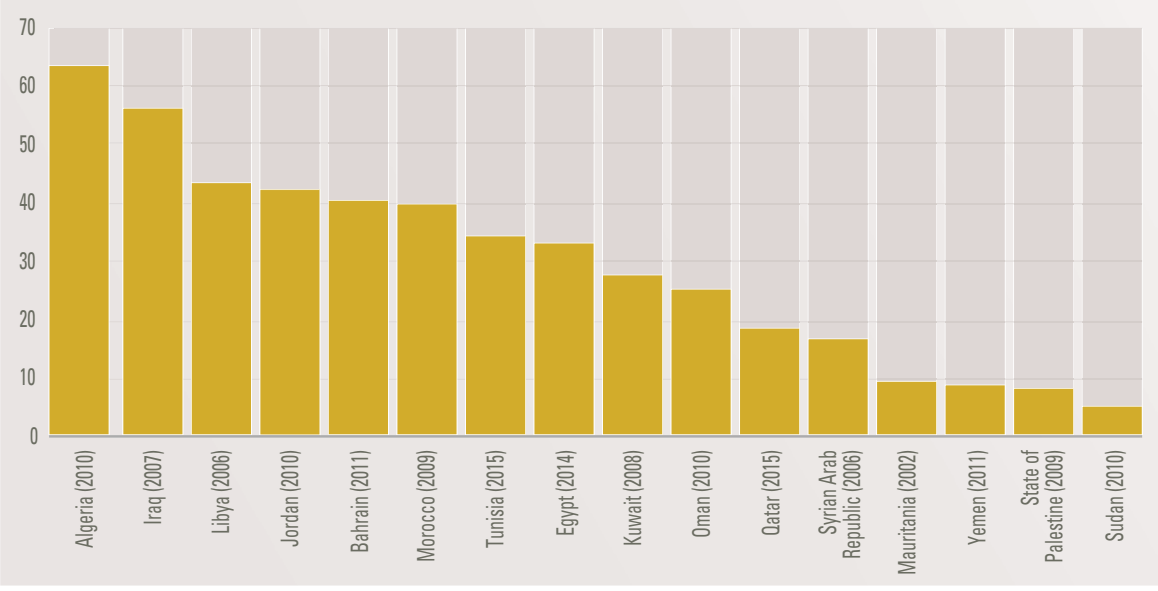
- Enabling environment

*Living and housing arrangements:* are used as proxies for an enabling environment. They demonstrate the relationship between older persons, their families and society.

### 1. Income security

Adequate social protection, including pension coverage, is a prerequisite for the wellbeing of older persons, without which they face a high risk of poverty and vulnerability. All Arab countries have some type of mandatory contribution of earnings linked to social insurance systems. However, pension spending in the region is relatively high with low coverage, and suffers from structural problems. Low coverage rates are attributed to the large informal employment sector in the region – including the agricultural and domestic work sectors – but also to evasion of pension contributions. Furthermore, many pension schemes are unsustainable because of the likelihood of a higher number of beneficiaries than contributors in the future,[6] as a result of population ageing, low retirement age and generous survivorship pensions in some countries.[7] As a result, a large part of the region's population is not entitled to a pension. This situation particularly affects women, the majority of whom are informally employed or unemployed.

**Figure 10.** Percentage of the population above statutory pensionable age receiving a pension




**Source:** ILO, *World Social Protection Report 2017–19: Universal Social Protection to Achieve the Sustainable Development Goals.*

The average pension coverage level for the region does not exceed 30 per cent of the workforce.[8] As shown in figure 10, the share of the population receiving old-age pension benefits varies drastically between Arab countries. It ranges from a low of 5 per cent in the Sudan to a high of 63 per cent in Algeria. Over 40 per cent of the older population in Iraq, Jordan and Libya benefit from pension coverage, while pension coverage in GCC countries ranges between 40 per cent in Bahrain, 27 per cent in Kuwait and 25 per cent in Oman. In the Arab region, formal old-age assistance is available primarily through ministries of social affairs, the United Nations Relief and Work Agency (UNRWA), and aid programmes funded principally by the European Union and the World Bank. However, those programmes are limited in scope and depend entirely on foreign donors, and therefore cannot guarantee beneficiaries a regular income or sustainable payments.

While migration might not be a key determinant of population ageing, it can have a significant effect on income security and pension coverage. As large numbers of working-age individuals migrate from Arab countries to find employment opportunities, the majority return in old age. Consequently, ensuring the portability of benefits is crucial to guarantee that returning migrants benefit from social and income security in old age. GCC countries, which are the primary destination for migrant workers in the region, exclude all foreign workers from social security coverage. In GCC countries, except Qatar, foreign workers are also not permitted to remain in the country once they reach retirement age, thus denying them pension coverage.

Unfortunately, data on poverty among older persons disaggregated by sex and geographic area of residence remains limited. However, it can be safely assumed that older persons are more vulnerable to poverty given their limited income sources and increased health risks, among other factors. Women are particularly vulnerable to poverty since larger proportions of them are excluded from social security schemes, are more vulnerable to disease, and are more likely to be widowed. World Bank data on poverty rates for female and male-headed households in Egypt, for example, show higher rates of poverty among rural versus urban households, and that poverty is higher

in female-headed than male-headed urban households.[9] Nonetheless, more data are needed to evaluate poverty in Arab countries, especially among older persons, particularly older women. Moreover, several countries in the region are experiencing conflict, meaning that financial security is threatened by instability and the potential loss of physical assets, including homes and lifelong earnings. Pension funds in those countries are also at risk from economic volatility, including severe currency devaluation.

Many older persons in the Arab region have financially benefited from intergenerational solidarity. Nuclear and extended families have played a key role in providing financial support, particularly in caring for older relatives or relatives with disabilities. However, current demographic trends and societal changes predict a negative impact on the traditional system of informal care, where family and adult children play a central role in providing assistance to older persons. Such changes in intergenerational support show that improving income security, including pension coverage, is a pressing priority to ensure the wellbeing of older persons.

## 2. Health

### (a) Longevity versus healthy life expectancy

The population of older persons in Arab countries has been increasing rapidly since the 1980s. As in most developed countries, the Arab region is experiencing significant gains in life expectancy at age 60. As life expectancy increases, quality of life and health issues become a growing concern for older persons. While people are living longer, older persons are not necessarily in good health. In general, women in Arab countries live longer than men, but they experience poorer health conditions in old age.[10] Poor health results in high medical expenses that older persons and their families must bear, if they are not covered by social security programmes. In most Arab countries, individuals without medical insurance have to pay out-of-pocket for treatment.

### (b) Epidemiological transition: non-communicable diseases, mental health and disability

The ageing transition in Arab countries is associated with a rapid increase in non-communicable diseases (NCDs).[11] High levels of morbidity, such as dementia, which limit daily activities are observed among people aged 65 and above in the region.[12]

Statistics based on PAPFAM surveys in nine Arab countries reveal that the share of older persons suffering from at least one chronic disease ranges between 13.1 per cent in Djibouti and 63.8 per cent in Lebanon, with most countries registering rates above 45 per cent.[13] The reported low instances of chronic disease among older persons in some countries are most likely the result of underreporting and limited access to health-care, especially in the least developed countries.

Table 6 shows that the share of deaths from NCDs among older persons is very high, ranging from 72.8 per cent in Mauritania to 97.4 per cent in Oman. Cardiovascular disease and cancer are the primary causes of death among older persons, ranging from 34.4 per cent in Bahrain to 60 per cent in Oman for cardiovascular disease, and from 5.7 per cent in the Sudan to 20.4 per cent in Qatar for cancer.

Moreover, in GCC countries, the prevalence of type 2 diabetes and obesity is unusually high relative to the rest of the world, and the obesity rate stands at an average of 40 per cent – one of the highest in the world.[14] The higher incidences of diabetes and obesity, along with their related complications, are expected to lead to significantly higher health-care costs in the coming decade, especially in countries such as Bahrain, Kuwait and Oman.[15]

Mental health at old age is also a growing concern across the region, affecting individuals, their family and friends, caregivers and society. While data on the mental health of older

**Table 6.** Major causes of death for older persons, 2011

| Country | Communicable, maternal, perinatal and nutritional conditions | Non-communicable diseases | | | | | | Injuries |
|---|---|---|---|---|---|---|---|---|
| | | Total | Malignant neoplasms | Diabetes mellitus | Cardio-vascular diseases | Respiratory diseases | Digestive diseases | |
| Algeria | 21.0 | 75.2 | 9.4 | 5.2 | 40.0 | 8.5 | 4.2 | 3.8 |
| Bahrain | 8.4 | 90.4 | 13.1 | 17.7 | 34.4 | 8.3 | 3.8 | 1.2 |
| Comoros | 21.3 | 75.7 | 7.3 | 8.6 | 39.3 | 8.9 | 3.5 | 3.0 |
| Djibouti | 12.6 | 84.9 | 7.4 | 2.4 | 53.0 | 5.4 | 8.0 | 2.5 |
| Egypt | 5.0 | 93.8 | 9.4 | 3.2 | 52.6 | 3.9 | 14.6 | 1.3 |
| Iraq | 9.5 | 80.6 | 8.7 | 2.0 | 52.8 | 5.1 | 5.3 | 9.9 |
| Jordan | 5.9 | 91.1 | 10.4 | 10.4 | 55.5 | 4.3 | 3.9 | 2.9 |
| Kuwait | 9.0 | 88.0 | 14.9 | 5.8 | 56.8 | 2.4 | 3.5 | 3.0 |
| Lebanon | 4.0 | 91.0 | 16.4 | 1.9 | 54.9 | 5.6 | 5.2 | 5.0 |
| Libya | 5.8 | 90.1 | 11.4 | 2.2 | 58.3 | 5.0 | 5.9 | 4.1 |
| Mauritania | 23.9 | 72.8 | 8.0 | 5.8 | 38.3 | 8.6 | 4.6 | 3.3 |
| Morocco | 4.9 | 92.0 | 8.8 | 2.2 | 58.1 | 6.3 | 7.6 | 3.1 |
| Oman | 1.0 | 97.4 | 11.0 | 9.9 | 60.0 | 4.3 | 4.3 | 1.6 |
| Qatar | 5.1 | 91.5 | 20.4 | 14.9 | 35.5 | 6.7 | 3.7 | 3.4 |
| Saudi Arabia | 8.6 | 89.3 | 9.0 | 9.2 | 55.5 | 4.1 | 4.1 | 2.2 |
| Somalia | 14.9 | 80.1 | 7.2 | 3.5 | 47.7 | 6.3 | 6.7 | 4.9 |
| Sudan | 10.0 | 86.8 | 5.7 | 3.8 | 53.4 | 7.0 | 7.2 | 3.1 |
| Syrian Arab Republic | 5.0 | 91.9 | 6.7 | 3.2 | 58.4 | 6.0 | 3.6 | 3.1 |
| Tunisia | 15.3 | 81.9 | 13.3 | 1.7 | 50.2 | 5.1 | 5.0 | 2.7 |
| United Arab Emirates | 14.1 | 82.6 | 11.9 | 6.1 | 50.1 | 4.0 | 2.8 | 3.3 |
| Yemen | 8.1 | 88.4 | 8.5 | 2.3 | 55.3 | 5.9 | 7.6 | 3.5 |
| **Arab region** | 9.0 | 87.8 | 8.9 | 3.7 | 52.3 | 5.6 | 8.3 | 3.2 |

**Source:** ESCWA calculations based on WHO, *World Health Statistics 2011* (Geneva, 2011), and from WHO, "Projections of mortality and burden of disease, 2004-2030" (estimates for 2008). Available at www.who.int/whosis/whostat/2011/en/; www.who.int/healthinfo/global_burden_disease/projections2004/en/ (accessed on 15 May 2018).

persons in the Arab region are scarce, research indicates that depression and dementia[16] are a growing concern, particularly in fast-ageing countries such as Lebanon and Tunisia.[17] Research is limited and is usually generalized from small-scale and local studies. For example, a study in Egypt estimates that the prevalence of dementia among older persons is currently around 6 per cent.[18] Another global study projects that by 2040, the number of people with dementia in the region will increase to around 4.7 million.[19]

Furthermore, disability is common in old age and is especially observed among the poorest populations. The present section considers functional disability, which is operationally defined as difficulty in performing one or more

**Table 7.** Proportion of older persons with disability by age and sex (Percentage)

| Country | Both sexes | | | Male | | | Female | | | Year of reference |
|---|---|---|---|---|---|---|---|---|---|---|
| | 60-69 | 60+ | 70+ | 60-69 | 60+ | 70+ | 60-69 | 60+ | 70+ | |
| Bahrain | 10.4 | 14.1 | 19.9 | 10.7 | 14.1 | 20.6 | 10.1 | 14.1 | 19.3 | 2010 |
| Egypt | 4.8 | 7.9 | 14.8 | 5.1 | 7.4 | 12.9 | 4.6 | 8.4 | 16.7 | 2016 |
| Iraq | 9.5 | 10.3 | 15.4 | 8.6 | 9.7 | 14.4 | 6.6 | 10.8 | 16.3 | 2013 |
| Jordan | 8.2 | 11.9 | 16.3 | 7.2 | 10.4 | 14.2 | 9.1 | 13.3 | 18.4 | 2015 |
| Mauritania | 3.4 | 4.5 | 5.8 | 3.6 | 4.7 | 6.2 | 3.1 | 4.2 | 5.5 | 2013 |
| Morocco | 15.6 | 25.0 | 36.8 | 14.3 | 22.6 | 33.8 | 16.9 | 27.2 | 39.4 | 2014 |
| Oman | 7.3 | 12.6 | 19.0 | 7.1 | 11.9 | 17.7 | 7.5 | 13.4 | 20.4 | 2010 |
| Qatar | 1.5 | 3.2 | 8.1 | 0.9 | 2.3 | 7.3 | 2.8 | 4.9 | 9.1 | 2010 |
| Saudi Arabia | 3.6 | 6.9 | 11.9 | 3.4 | 6.4 | 11.0 | 3.7 | 7.4 | 12.8 | 2016 |
| State of Palestine | 10.0 | 16.1 | 23.2 | 9.1 | 14.9 | 21.9 | 10.7 | 17.1 | 24.1 | 2007 |
| Yemen | 7.6 | 15.4 | 24.0 | 5.2 | 13.2 | 22.0 | 9.8 | 17.6 | 25.9 | 2014 |

**Source:** ESCWA, *Arab Disability Statistics in Numbers 2017* (Beirut, 2017). Available at www.unescwa.org/sub-site/arab-disability-statistics-2017.

activities of daily living (ADL).[20] Table 7 shows distinct differences between countries, with Morocco and the State of Palestine registering the highest rates of disability. Similarly to NCDs, this variation might also be attributed to access to health care and subsequent diagnosis and reporting. However, statistics show that in all Arab countries, women are more prone to disability than men.[21] These indicators should alert policymakers, given that the cumulative effect of chronic disease throughout the life course and a decline in physical capacity contribute to increased vulnerability, disability and dependency.[22]

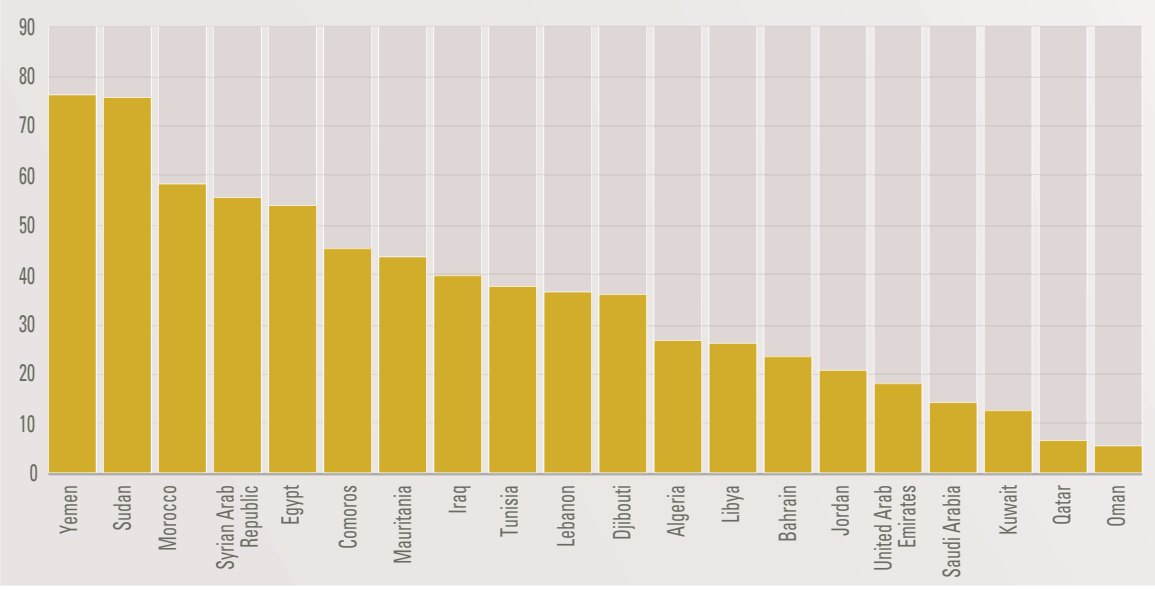
### (c) Health-care expenditure and funding

Individual health-care expenditure peaks in old age. Since many older persons are without pensions, this directly affects their out-of-pocket expenditure. Although no data exists on health expenditure disaggregated by age and sex, there is indication that many older persons pay health expenses themselves, have expenses covered by a family member, or remain without treatment if they or their family members cannot afford medical care. Out-of-pocket spending represents over 70 per cent of total health expenditures in some least developed countries, such as the Sudan and Yemen (figure 11). In the Comoros, Egypt, Mauritania, Morocco and the Syrian Arab Republic, individuals also pay out-of-pocket for health care, comprising on average 50 per cent of total health expenditures in those countries. In Iraq, Lebanon and Tunisia, out-of-pocket payments are also significant, totalling round 40 per cent of total health expenditures.

Research suggests that actual out-of-pocket expenditures are even higher, owing to informal payments by families to cover the cost of various medical care and services for older persons, including informal care. Family remains the main source of informal care for older persons; however, more data is needed to properly measure the burden cost of informal family care.

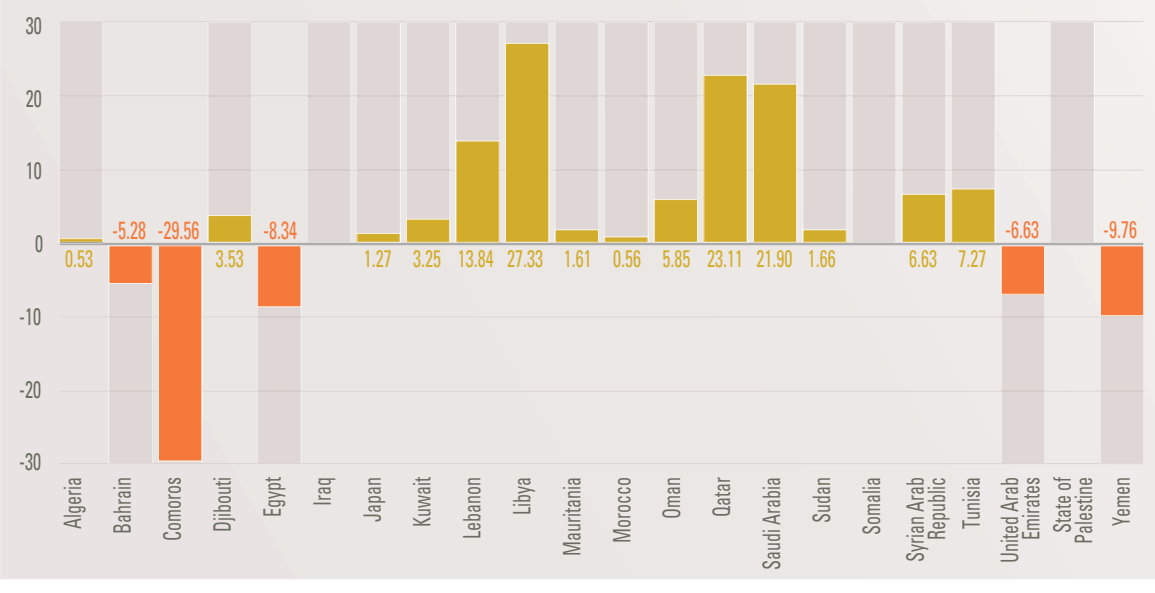
Owing to limited public funding, the Arab region is unlikely to see rapid improvements in health coverage in the short term. Recently, public health programmes in most Arab countries have seen significant reductions in funding: the average per capita annual public health expenditure in Arab countries in 2007 was $280

**Figure 11.** Out-of-pocket expenditure as a percentage of total health expenditure, 2014




**Source:** World Bank, "World development indicators, 2014", DataBank.
Available at http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators (accessed on 20 February 2018).

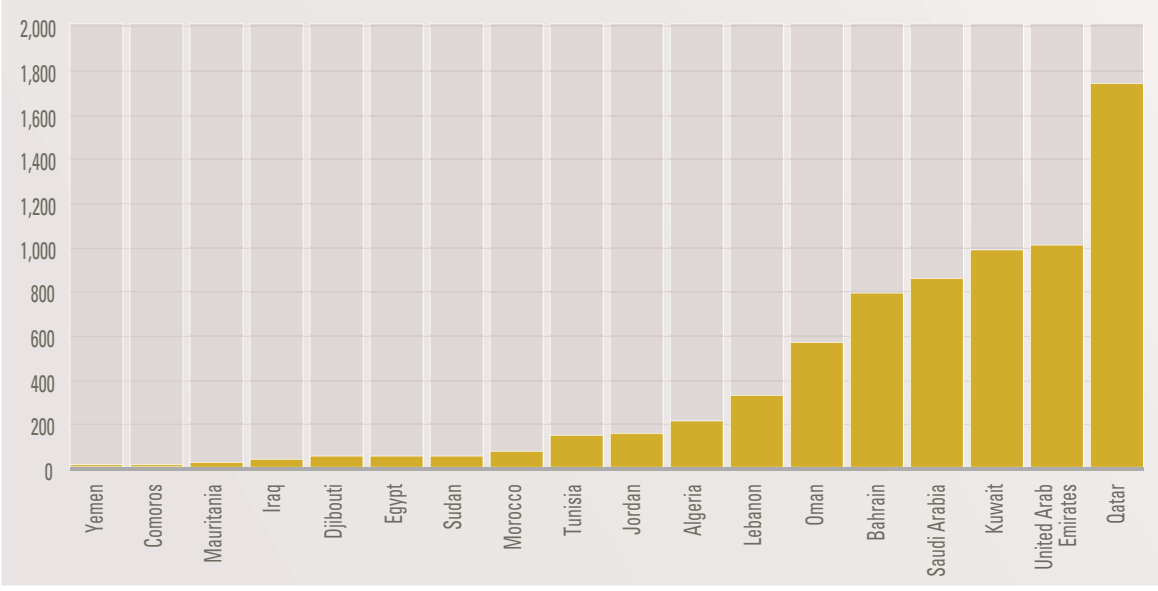
**Figure 12.** Change in public health expenditure as a percentage of total health expenditure, 2014 vs. 1995




**Source:** WHO, Global Health Expenditure database. Available at http://apps.who.int/nha/database (accessed on 20 March 2018).
**Note:** Public health expenditure consists of recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and non-governmental organizations), and social (or compulsory) health insurance funds.

(purchasing power parity), representing a third of the amount spent by other countries worldwide with the same average per capita income.[23] Over the period 1995-2014, only a few Arab countries significantly increased public health expenditures (figure 12). There is significant variation across Arab countries in public health-care expenditure, with per capita expenditure ranging from less

**Figure 13.** Public health expenditure in selected Arab countries (per capita, current $), 2015




**Source:** WHO, Global Health Expenditure database. Available at http://apps.who.int/nha/database (accessed on 3 May 2018).
**Note:** Information for Libya, the State of Palestine, Somalia and the Syrian Arab Republic is not available. Data corresponds to the indicator labelled 'Domestic general government health expenditure' (GGHE-D) in updated versions of the database.

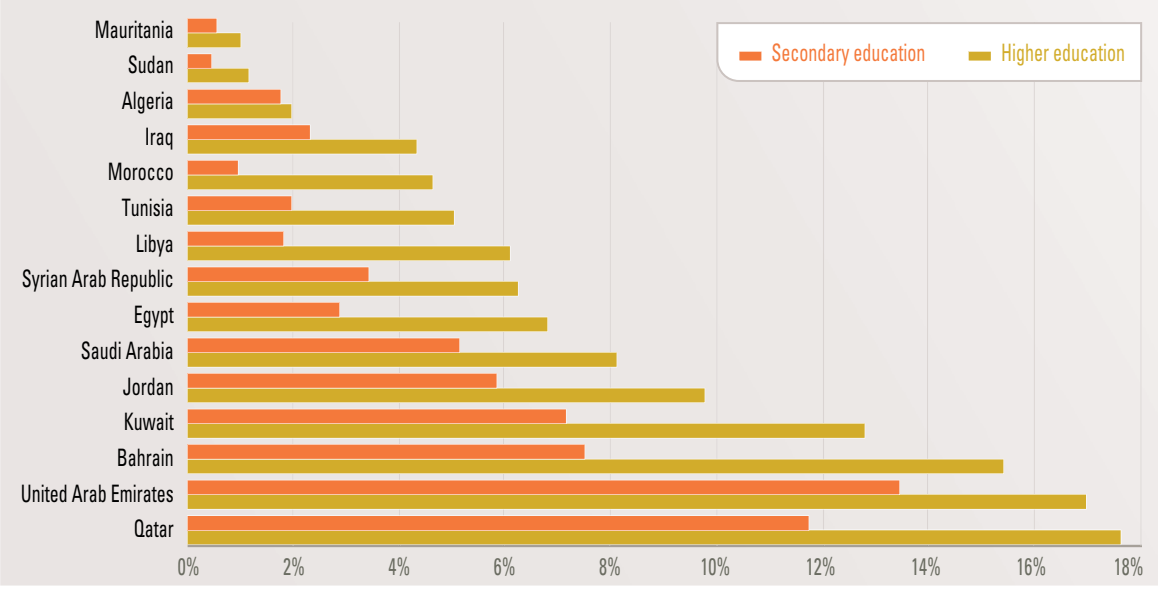
than $10 in Yemen and the Comoros to over $1,700 in Qatar in 2015 (figure 13).

According to available data, not all Arab countries enjoy universal health coverage. The State of Palestine and Tunisia have social health insurance systems financed by tax revenues and health insurance premiums, but only the insured are entitled to free treatment. In Iraq and Jordan, only civil servants and military personnel have free access to social health insurance. In Oman, the Sudan, the Syrian Arab Republic and Yemen, public health care is free and accessible to all residents. In Bahrain, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates, health-care services are financed by natural resource revenues and are exclusively reserved for citizens; expatriates must pay annual fees for access to national health-care services. In Oman, all expatriates in the private sector must be covered by their employer. Algeria, Egypt and Libya have public health-care systems financed by tax revenues and insurance premiums; their systems cover both the insured and the uninsured.

## 3. Education

In general, higher education levels are associated with better health status and reduced vulnerability among older persons.[24] Better educated older persons usually have better job opportunities during their working-age years, allowing them to save more and provide for themselves after retirement. Moreover, higher education levels increase the autonomy of older persons, and equip them to find employment opportunities that offer better pay and work conditions if they choose to continue to work into old age. Unfortunately, in the Arab region, the majority of older persons continue to suffer from low education attainment, especially women and in rural areas. In all Arab countries, on average, secondary education attainment is under 18 per cent and higher education attainment is below 14 per cent, with significant disparities between countries (figure 14). GCC countries have the highest education rates both for secondary and higher education, while LDCs have the lowest.

**Figure 14.** Education attainment among older persons, 2010




**Source:** Barro-Lee, "Educational attainment dataset, 2010". Available at http://barrolee.com/ (accessed on 15 January 2018).

**Table 8.** Older persons' education level in Egypt, Jordan and Tunisia (percentage)

| Age | Egypt (2012) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Male | | | | Female | | | |
| | 50-59 | | 60+ | | 50-59 | | 60+ | |
| Education | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural |
| Illiterate | 20.2 | 48.0 | 25.1 | 66.7 | 42.5 | 85.9 | 58.9 | 92.6 |
| Reads and writes | 6.7 | 9.3 | 11.2 | 11.9 | 6.0 | 3.0 | 5.7 | 2.5 |
| Elementary school | 20.4 | 14.3 | 17.7 | 12.8 | 16.1 | 4.7 | 15.4 | 4.2 |
| Secondary education | 23.3 | 17.2 | 18.9 | 4.9 | 19.6 | 4.6 | 10.2 | 0.6 |
| Post-secondary | 5.6 | 1.7 | 3.7 | 0.6 | 2.4 | 0.7 | 1.5 | 0.0 |
| University | 21.4 | 9.4 | 21.5 | 3.1 | 12.8 | 1.1 | 7.7 | 0.1 |
| Post-graduate | 2.4 | 0.1 | 1.9 | 0.0 | 0.7 | 0.0 | 0.6 | 0.0 |
| **Age** | **Jordan (2010)** | | | | | | | |
| | Male | | | | Female | | | |
| | 50-59 | | 60+ | | 50-59 | | 60+ | |
| Education | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural |
| Illiterate | 5.8 | 17.9 | 23.6 | 41.1 | 28.0 | 50.9 | 67.2 | 91.6 |
| Reads and writes | 25.4 | 34.5 | 30.4 | 37.2 | 24.2 | 31.1 | 15.5 | 4.9 |
| Elementary school | 22.4 | 16.1 | 14.0 | 11.1 | 18.7 | 8.5 | 7.2 | 1.0 |
| Secondary education | 15.3 | 13.1 | 10.8 | 5.8 | 11.4 | 1.7 | 5.4 | 1.0 |
| Post-secondary | 10.2 | 6.6 | 4.3 | 1.0 | 11.6 | 7.3 | 2.6 | 1.5 |
| University | 16.6 | 11.3 | 11.2 | 2.9 | 5.3 | 0.6 | 1.4 | 0.0 |
| Post-graduate | 4.4 | 0.6 | 5.7 | 1.0 | 0.8 | 0.0 | 0.7 | 0.0 |

| Age | Tunisia (2014) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Male | | | | Female | | | |
| | 50-59 | | 60+ | | 50-59 | | 60+ | |
| Education | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural |
| Illiterate | 14.4 | 31.3 | 49.2 | 83.0 | 43.0 | 81.0 | 81.0 | 95.9 |
| Reads and writes | 34.1 | 37.6 | 18.2 | 10.0 | 29.0 | 13.0 | 8.0 | 1.8 |
| Elementary school | 20.0 | 17.0 | 8.0 | 3.0 | 13.0 | 4.0 | 3.0 | 1.8 |
| Middle school | 12.8 | 7.3 | 8.9 | 2.0 | 5.0 | 2.0 | 5.0 | 0.0 |
| Secondary education | 12.7 | 5.6 | 9.5 | 2.0 | 6.0 | 0.0 | 2.0 | 0.3 |
| Post-secondary | 2.3 | 0.2 | 1.9 | 0.0 | 2.0 | 0.0 | 0.0 | 0.1 |
| University | 3.4 | 1.0 | 2.7 | 0.0 | 2.0 | 0.0 | 1.0 | 0.1 |
| Post-graduate | 0.3 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Source:** Economic Research Forum, *Jordan Labor Market Panel Survey*, 2010; *Egypt Labor Market Panel Survey*, 2012; *Tunisia Labor Market Panel Survey*, 2014.

Illiteracy rates for women are much higher than for men in many Arab countries. This is particularly true for older women in rural areas. For example, data disaggregated by sex for Egypt, Jordan and Tunisia indicate that the illiteracy rate approaches 100 per cent for older women in rural areas (table 8). In response to these high illiteracy rates, many Arab countries have established governmental bodies and developed strategies and policies to combat illiteracy among adults and older persons.[25]

## 4. Employment

Employment in old age should be a choice that older persons make to contribute their expertise and to reinforce their social connectedness. However, in the Arab region, people are often obliged to continue working past retirement (table 9) and into old age to compensate for weak social protection systems. Almost two-thirds of workers in the region work in the informal sector with no access to health insurance or pension funds.

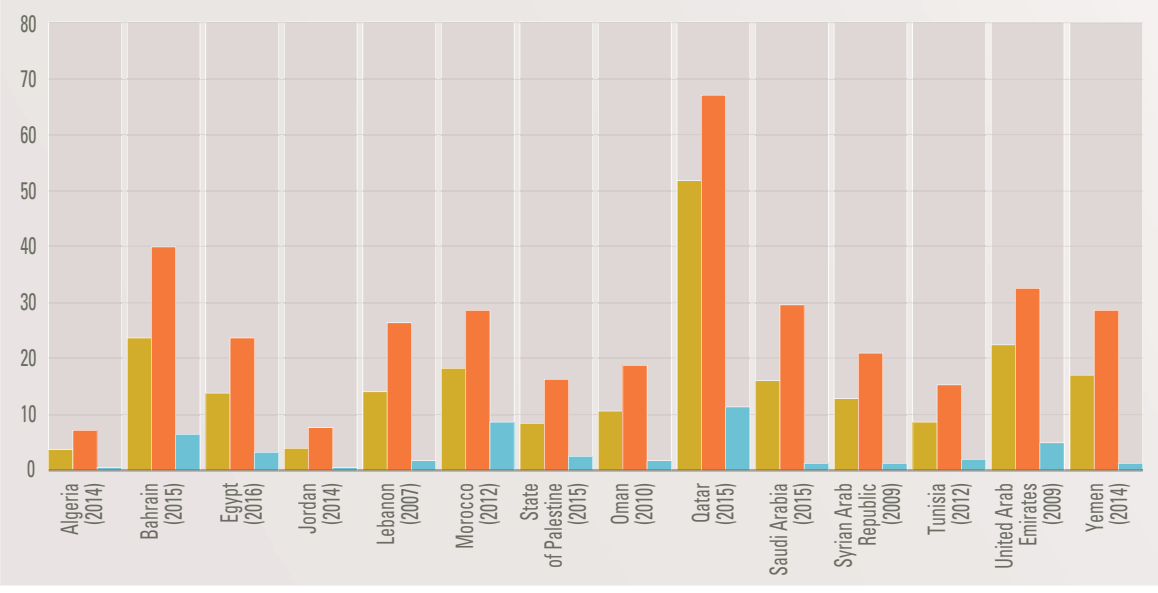
In Arab countries, women's limited access to the labour market contributes to their vulnerability in old age. Older women have a significantly lower participation rate in the labour market, as shown in figure 15. In Saudi Arabia, the employment-to-population ratio for older men is almost 27 times that of older women, while it is 23.9 and 19.1 times higher in Yemen and the Syrian Arab Republic, respectively. The country that presents the smallest difference between older men and

**Table 9.** Legal retirement age in selected Arab countries

| Country | | Egypt | Iraq | Jordan | Kuwait | Lebanon | Morocco | Oman | State of Palestine | Sudan | Tunisia |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Public sector | Male | 60 | 63 | 60 | 52 | 64 | 63 | 60 | 60 | 65 | 60 |
| | Female | 60 | 63 | 55 | 47 | 64 | 63 | 60 | 60 | 65 | 60 |
| Private sector | Male | N/A | 60 | 60 | 53-55 | 64 | 60 | 60 | 60 | 65 | 60 |
| | Female | N/A | 55 | 55 | 48-50 | 64 | 60 | 55 | 60 | 65 | 60 |

**Source:** Madrid International Plan of Action on Ageing, based on the results of a survey carried out by ESCWA for the Third Regional Review of MIPAA, 2017.

**Figure 15.** Employment-to-population ratio by sex of individuals aged 65 and above (percentage)




**Source:** ILOSTAT (n.d.). Available at http://ilo.org/ilostat/faces/home/statisticaldata (accessed on 16 May 2018).
**Note:** The employment-to-population ratio is the number of employed persons as a percentage of the total working-age population. For the data in this figure, the working-age population is commonly defined as persons aged 15 and above, but this varies between countries. In addition to using a minimum age threshold, certain countries also apply a maximum age limit.

women is Morocco, where men have three times the employment ratio of women.

## 5. Living conditions and housing arrangements for older persons

### (a) Older persons living with family

In Arab countries, beyond being a source of social relations, the family is the most well-established provider and care-giver for older persons. Literature on this topic highlights that in Arab countries, it is quite common for older persons to live in multigenerational households where the family is the main care-giver and financial provider. This has led to pensions built around family kinship.[26,27]

Data for Arab countries indicate that a large majority of older persons live with their family. In Lebanon, the proportion of those living in retirement homes does not exceed 1.3 per cent, and it is under 0.005 per cent in other Arab countries.[28] These numbers are far below those recorded in western countries for various reasons, including the availability of such institutions, the quality of services provided, and the structure of Arab families.[29] For example, in 2014, 5.3 per cent of older persons were living in retirement homes in the Netherlands, 4.3 per cent in France, and 3.9 per cent in Canada.[30]

Household size can be used as a proxy indicator to assess the residential situation of older persons. Decline in household size is often cited as cause for alarm in planning for older persons care. However, table 10 shows that, overall, households in the Arab region are large, which suggests that the decline in fertility has not yet significantly affected household size. In most Arab countries, the number of persons per household decreased slightly between 1990 and 2012, suggesting that older persons in the region are still living in large households, although this arragement is starting to change.

According to recent data from Morocco,[31] in 2015, two-thirds of older persons were living in households of four or more members. This is true for a higher proportion of older men

**Table 10.** Average household size in selected Arab countries

| Country | Around 1990 | Around 2000 | Around 2012 |
|---|---|---|---|
| Algeria | 7.0 (1992) | 6.51 / 6.3 (2002[k]) | 5.9 (2008[g]) |
| Bahrain | 7.0 (1989) | 5.95 | 6.37 |
| Egypt | 5.3 (1991) | 5.19 | 4.35 |
| Iraq | | 7.7 (2002) | |
| Jordan | | 6.0 (1997[h]) | 4.8 (2015) |
| Kuwait | 8.8 (1987) | 7.59 | 8.36 |
| Lebanon | 4.9 (1996) | 4.6 | 4.4 (2011) / 4.16 |
| Libya | | | 6.1 (2007[c]) |
| Mauritania | 5.2 (1990) | | 6.0 (2001[e]) / 6.2 (2013[d]) |
| Morocco[a] | 5.8 (1994) | 5.2 (2004) | 4.6 (2014) |
| Oman | 6.3 (1989) / 8,4 (1995[b]) | | |
| Qatar | 6.7 (1987) | 5.36 | 5.33 |
| Saudi Arabia | 7.4 (1987) | 6.08 | 5.8 (2010[m]) / 5.79 |
| Sudan | 5.1 (1993[i]) | 5.8 (2002) | 5.7 (2008[l]) |
| Syrian Arab Republic | 5.1 (1994[f]) | 4.4 (2004[f]) | 4.1 (2010) |
| Tunisia | 5.4 (1995) | 5.48 | 3.9 (2014[n]) |
| United Arab Emirates | 7.4 (1987) | 5.25 | 6.3 (2016[j]) |
| Yemen | 6.7 (1991) | 6.7 (2002) | |

**Sources:** [a]Morocco, Haut-Commissariat au Plan, Recensement Général de la Population et de l'Habitat de 1994; 2004; 2014.
[b]Oman, Ministry of Health, 1995.
[c]2008 ،جامعة الدول العربية.
[d]Mauritania, Recensement Général de la Population et de l'Habitat, 2015.
[e]Mauritania, Office National de la Statistique, 2001.
[f]2011 ،الهيئة السورية لشؤون الأسرة والسكان.
[g]Algeria, National Office of Statistics and Ministry of Health, Population and Hospital Reform, 2008.
[h]Jordan, Department of Statistics and Macro International, 1998.
[i]2011 ،السودان، المجلس القومي للسكان.
[j]ArcGIS, "United Arab Emirates average household size, 2016". Available at www.arcgis.com/home/item.html?id=bb9bf7c53c274d19b369901a3cbde406 (accessed on 16 May 2018).
[k]Algeria, Ministry of Health, Population and Hospital Reform, n.d.
[l]Sudan, Ministry of the Cabinet, Central Bureau of Statistics, 2013.
[m]United Nations Statistics Division, 2017.
[n]Tunisia, Recensement Général de la Population et de l'Habitat, 2014. Available at www.ins.tn/fr/publication/recensement-g%C3%A9n%C3%A9ral-de-la-population-et-de-lhabitat-2014-principaux-indicateurs.
Elsewhere: https://www.nakono.com/tekcarta/databank/households-average-household-size

than women: 71.1 per cent compared with 62.5 per cent, respectively. However, this proportion has gradually declined from 74.7 per cent in 2004. This slight downward trend is consistent across the region: over the period 1990-2012, the average household size decreased from around six or seven persons to approximately five persons per household.[32] Some countries are outliers, however, with data showing that household size in Bahrain, Mauritania, the Sudan, the United Arab Emirates and Yemen fluctuated or slightly increased over the same period.

In Bahrain, Jordan, the State of Palestine and Qatar, over 66 per cent of households are nuclear, dropping to 35 per cent in Morocco. There is a trend of increasing nuclearization

**Table 11.** Percentage of older persons heads of households

| Country | Year | Percentage |
|---|---|---|
| Egypt[a] | 2014 | 21.56 |
| Iraq[b] | 2011 | 17.88 |
| Jordan[c] | 2012 | 22.56 |
| Mauritania[d] | 2011 | 23.88 |
| State of Palestine[e] | 2014 | 15.98 |
| Sudan[f] | 2014 | 24.22 |
| Tunisia[g] | 2012 | 31.55 |
| Yemen[h] | 2013 | 22.72 |

**Sources:** [a]Egypt, Ministry of Health and Population, El-Zanaty and Associates and ICF International, 2015.
[b] United Nations International Children's Fund, 2011.
[c] Jordan, Department of Statistics and ICF International, 2013.
[d] Mauritania, Office National de la Statistique, 2011.
[e] State of Palestine, Central Bureau of Statistic, 2015b.
[f] Sudan, Ministry of the Cabinet, Central Bureau of Statistics, 2016.
[g] Tunisia, Ministère du Développement et de la Coopération Internationale, Institut National de la Statistique and Fonds des Nations Unies pour l'Enfance, 2013.
[h] Yemen, Ministry of Public Health and Population and others, 2015.

of the family, which is evidence of declining cohabitation. Consequently, the proportion of older persons who live with relatives might be decreasing. In other countries, the same pattern has been observed. In Bahrain, Jordan and Qatar, only around 20 per cent of households have extended family living arrangements.[33]

Living arrangements that include cohabitation with family are crucial for the emotional, physical and financial wellbeing of older persons, especially in view of limited social protection systems and access to health services and long-term care. However, data suggest that older persons continue to act as heads of households, which indicates their social and, in many cases, financial responsibility for their family. Table 11 shows that the percentage of older persons who are heads of households varies between 16 per cent in the State of Palestine to around 32 per cent in Tunisia. The burden of supporting their families increases older persons' vulnerability and their need to continue working into old age.

### (b) Older persons living alone

Another indicator of family structure is the percentage of older persons who live alone, which is usually used to understand the

**Table 12.** Percentage of older persons living alone by sex in selected Arab countries

| Country | Lebanon | Egypt | Algeria | Oman | State of Palestine | Morocco |
|---|---|---|---|---|---|---|
| Age | 65+ | 60+ | 60+ | 60+ | 60+ | 60+ |
| Year | 2004 | 2000 | 2002 | 2003 | 2006 | 2006 |
| Male | 7.0 | 3.9 | 1 | 7.2 | 5 | 3.4 |
| Female | 18.0 | 12.9 | 3 | 39.8 | 16 | 9.9 |

**Sources:** For Oman: United Nations Statistics Division, 2013; for Morocco: Morocco, Haut-Commissariat au Plan, 2014; for Algeria, Lebanon and the State of Palestine: United Nations Statistics Division, 2017; for Egypt: DESA, Population Division, 2005.

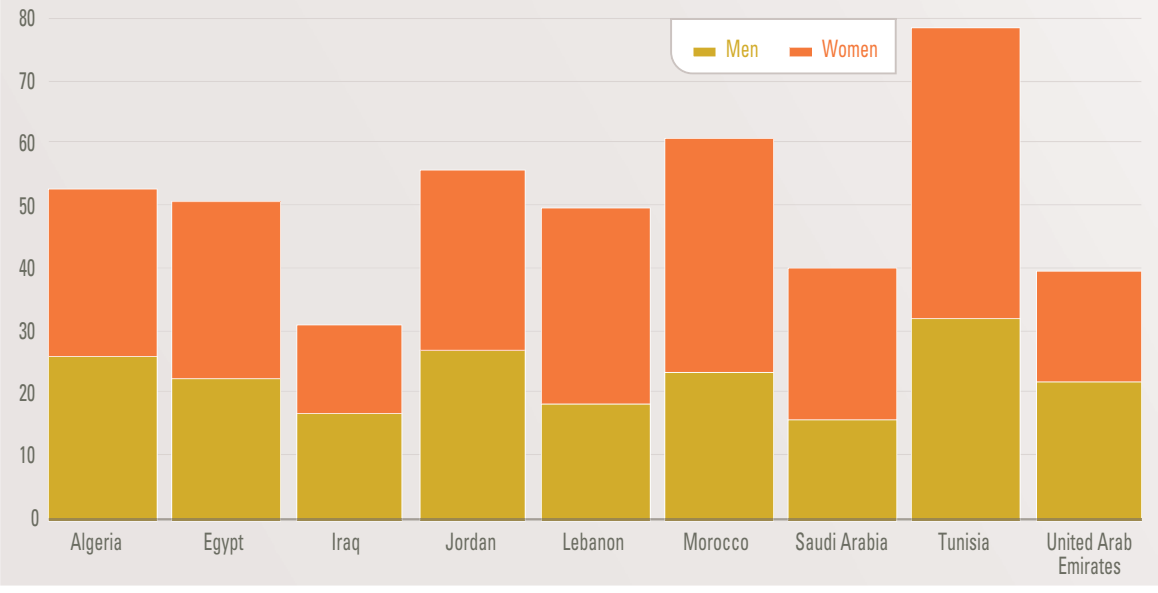
implications of older persons' vulnerability. Table 12 shows that the prevalence of older persons living alone is low in Algeria and Morocco, but relatively higher in Egypt, Lebanon, Oman and the State of Palestine. Observers argue that the relatively high rates of emigration among young people in Lebanon contribute to elevated rates of older persons living alone when compared with other Arab countries. Moreover, older persons from richer socioeconomic classes are also more likely to live alone than those of poorer classes.[34] Nevertheless, the proportions of older persons living alone in the Arab region are low when compared with OECD countries, where numbers vary between 17 per cent and 45 per cent.[35]

**Table 13.** Older persons' marital status in Egypt, Jordan and Tunisia (percentage)

| Age | Egypt | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Male | | | | Female | | | |
| | 50-59 | | 60+ | | 50-59 | | 60+ | |
| Marital Status | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural |
| Single | 2.5 | 0.4 | 1.0 | 0.1 | 2.7 | 1.3 | 2.0 | 1.1 |
| Married | 93.7 | 98.0 | 85.2 | 88.6 | 69.6 | 69.4 | 37.3 | 35.1 |
| Divorced | 1.6 | 0.5 | 1.3 | 0.2 | 3.3 | 2.5 | 1.9 | 2.4 |
| Widowed | 2.1 | 1.2 | 12.6 | 11.0 | 24.4 | 26.8 | 58.7 | 61.4 |
| Age | Jordan | | | | | | | |
| | Male | | | | Female | | | |
| | 50-59 | | 60+ | | 50-59 | | 60+ | |
| Marital Status | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural |
| Single | 1.5 | 0.6 | 0.9 | 1.0 | 4.4 | 6.8 | 2.3 | 1.5 |
| Married | 96.9 | 98.8 | 91.1 | 93.7 | 73.9 | 75.1 | 44.5 | 54.9 |
| Divorced | 1.3 | 0.0 | 0.7 | 1.0 | 2.5 | 0.6 | 2.3 | 0.5 |
| Widowed | 0.2 | 0.6 | 7.3 | 4.3 | 19.2 | 17.5 | 51.0 | 43.2 |
| Age | Tunisia | | | | | | | |
| | Male | | | | Female | | | |
| | 50-59 | | 60+ | | 50-59 | | 60+ | |
| Marital Status | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural |
| Single | 2.2 | 1.8 | 1.3 | 0.7 | 6.0 | 7.4 | 1.8 | 1.1 |
| Married | 95.1 | 97.1 | 88.5 | 91.0 | 82.6 | 82.4 | 50.5 | 61.6 |
| Divorced | 1.5 | 0.7 | 0.9 | 0.8 | 2.6 | 0.8 | 2.0 | 0.9 |
| Widowed | 1.2 | 0.5 | 9.2 | 7.6 | 8.9 | 9.4 | 45.7 | 36.4 |

**Sources:** Economic Research Forum, *Jordan Labor Market Panel Survey*, 2010; *Egypt Labor Market Panel Survey*, 2012; *Tunisia Labor Market Panel Survey*, 2014.

**Figure 16.** Prevalence of ADL dependence in selected Arab countries (percentage)




**Sources:** Kouaouci, 2005; Morocco, Haut-Commissariat au Plan, 2006a; Saudi Arabia, General Authority for Statistics, 2017; Uhlenberg, 2009; Yount and Sibai, 2009.

Table 12 also shows that more older women live alone than men, which could be largely attributed to the fact that they live longer than their husbands. As table 13 indicates, around 60 per cent of older women in Egypt were widowed, compared with around 47 per cent in Jordan and 40 per cent in Tunisia, with significant disparities between rural and urban areas. Widowhood among poor households increases older women's vulnerability, especially since they are often poorly educated and are rarely financially independent owing to the low participation rate of women in the labour market and a lack of adequate social protection in Arab countries. In conflict-affected countries, including Iraq, the State of Palestine, the Syrian Arab Republic and Yemen, most female-headed households are run by widows.[36]

For older persons who are dependent with regard to activities of daily living (ADLs), including personal-care activities such as eating, bathing, dressing and using the toilet, living arrangements are particularly important. Women are more vulnerable given that more women than men are ADL dependent in almost all Arab countries.

Figure 16 shows the proportion of older persons who are ADL dependent in selected Arab countries. Tunisia has the highest percentage of ADL dependent older adults: 46.8 per cent for women and 32 per cent for men. Lebanon also exhibits a high rate of ADL dependent women at 31.2 per cent, while only 18.5 per cent of men are ADL dependent. Egypt and Jordan follow with 28 per cent of women who are ADL dependent, and 22.4 per cent and 27.1 per cent of men, respectively. In Iraq and the United Arab Emirates, men are slightly more ADL dependent than women, but the overall share of the dependent population remains lower than in other countries (only 17 per cent of women are dependent in the United Arab Emirates compared with 22 per cent of men, and 14.2 per cent of women are dependent in Iraq compared with 17 per cent of men).

As the population ages in the Arab region, disease, disability and the share of ADL dependent older persons will increase, especially among older women. As already stated, their situation is highly problematic in many countries where older women are less

likely to qualify for old-age pension benefits and health insurance.

## D. Impact of crisis on older persons in the region: the Syrian Arab Republic

The Arab region suffers from various political crises, occupation, armed conflict, humanitarian crisis and instability, including Iraq, Libya, the State of Palestine, Somalia, the Sudan, the Syrian Arab Republic and Yemen. The direct and indirect effects of conflict on neighbouring countries and other countries in the region and beyond are well-known and evidenced by research. Conflict diminishes financial resources, reduces and displaces populations, increases morbidity and mortality, weakens social networks and cohesion, and affects psychological wellbeing.

While research has often focused on the impact of conflict on particularly vulnerable groups, including women, children and young people, there is an urgent need to better understand the consequences for other vulnerable populations, such as older and disabled persons. These social groups are disproportionately affected through the weakening of social ties and loss of family members who provided support; loss of economic resources; deterioration of health and psychological conditions; and restricted access to humanitarian aid. Although older persons are a growing share of the population in many countries, they are often overlooked in aid and humanitarian efforts: their specific needs are not researched, consulted nor taken into account, and few projects target them specifically as a vulnerable group. Moreover, older persons, especially older women, have a higher risk of abuse and neglect.[37]

In 2015, older persons represented around 6.4 per cent of the total population in the Syrian Arab Republic, corresponding to almost 1.2 million people; while older persons represented 6.5 per cent of the population in Libya, equivalent to 400,000 people. In Yemen, older persons represented 4.5 per cent of the population, totalling over 1.2 million people. Regardless of the size of the older population, the needs of older persons must not be neglected. As the present case study shows, they suffer disproportionately from conflict, but also play a key role in supporting the survival and success of their younger family members.

### Impact of the conflict in the Syrian Arab Republic on older persons

Since 2011, the Syrian Arab Republic has faced an intractable conflict that emerged from a deep socio-political crisis. The protracted nature of this conflict highlights its political, economic and social complexities. The impact of the crisis has been devastating, and the country is rapidly losing its human, physical, financial, social and natural assets and potential. The conflict has impacted Syrians across different regions, genders and age groups. Many individuals from vulnerable groups, including older persons, who suffered from exclusion even before the crisis have now also lost their livelihoods and suffered from numerous physical, social and economic burdens.

Understanding the impact and dynamics of the Syrian crisis is important to identify strategies, policies and programmes that promote inclusion and further understanding of how the conflict has affected older persons, including those who stayed in their homes, the internally displaced, refugees who fled the country, and those who emigrated for other reasons. It is important to consider the immediate, medium and long-term impact of the crisis on the older population, thus more research is needed on this topic. The present section highlights the major challenges faced by older persons during conflict and difficult humanitarian conditions, based on existing analysis and reports on the impact of the Syrian crisis.

Before the crisis, the Syrian Arab Republic had social protection systems in place, including broad health-care coverage, but service implementation and availability were inadequate to meet the needs of vulnerable groups, including older persons. Limited institutional accountability, inclusivity and transparency hindered the system's potential to fully allow persons to age with dignity.[38] Following the onset and expansion of the conflict, older persons have suffered from increasingly deteriorating economic and social conditions and further exclusion.

Older persons are encountering the following challenges as a result of the conflict:

- **Loss of economic and financial resources,** which strongly affects the capability of older persons to function and interact within their communities.[39] By the end of 2015, the overall economic loss in the Syrian Arab Republic as a result of the conflict was estimated at $254.7 billion, equivalent to 468 per cent of the Syrian GDP in 2010.[40]

  Many older persons have lost their financial resources for several reasons, including:

  - **Destruction of commercial and residential buildings, in which many older persons had invested their lifetime savings:** In the Syrian Arab Republic, and elsewhere in the Arab region, owning a house in old age provides a sense of security. However, as at 2015, at least 3 million buildings in the country had been affected by the war, and 1.2 million homes and 9,000 industrial facilities had been destroyed.[41]
  - **Loss of household breadwinners, including older persons' sons and daughters:** The loss of adult children, upon whom many older persons depend for economic, social and other support, has diminished their primary protection and support mechanisms. By the end of 2015, over 2 million people, or 11.5 per cent of the population, had been killed or injured, of which a significant proportion were working-age male breadwinners.[42] This change is reflected by an increase in the old-age dependency ratio from 5.8 per cent in 2010 to 7 per cent in 2015.
  - **Loss of livelihood for older persons:** 13.8 million Syrians have lost their work-related livelihoods, of which 9.5 million are still inside the country.
  - **Deteriorating living conditions:** 48 per cent of internally displaced Syrians live in rented houses thus further reducing savings, given the prolonged nature of the conflict. Moreover, currency devaluation and a price surge for all goods and services have drained the savings of older persons, thus reducing their ability to mitigate the impact of the conflict on their daily lives.
- **Increasing poverty:** As a result of these economic difficulties, the overall poverty rate in the Syrian Arab Republic rose to 85 per cent at the end of 2015, with around 70 per cent of the population living in extreme poverty (meaning that they cannot secure basic food and non-food items necessary for survival). The percentage of the population living in abject poverty (meaning that they cannot meet even basic food needs) increased dramatically from just 0.07 per cent in 2010 to 35 per cent in 2015.[43] As for Syrian refugees, 70 per cent of those living in Jordan and Lebanon are considered poor.[44]
- **Mortality:** Syrian older persons have been greatly affected by the number of fatalities resulting from the conflict. The Syrian crisis has led to the death of about half a million people, the majority of whom were young men.[45] The loss of family members is expected to have a large impact on older persons in terms of intergenerational relations, loneliness, loss of social support and hope for the future.[46] Moreover, the armed conflict has caused around 2 million injuries among the Syrian population, which

has increased the burden on many older people in supporting their injured family members.

- **Disability, disease and depression:** In addition to facing the challenges of a lack of income, appropriate shelter and essential household items, studies have shown that 77 per cent of older Syrian refugees in Jordan and Lebanon live with impairment, injury or chronic disease. Within that population, 54 per cent have a chronic disease, 66 per cent have an impairment, and 33 per cent have a severe impairment. Furthermore, 60 per cent face ADL challenges.[47] Older Syrian refugees also often suffer from depression and cognitive deficits, and express concerns about illness, loneliness and instability.[48] Studies have shown that 65 per cent of older Syrian refugees present signs of psychological distress at a rate three times higher than the general Syrian refugee population.[49]
- **Reduced health services:** The crisis has severely affected the population's ability to access health facilities, especially in conflict zones, owing to insecure conditions and the destruction of health infrastructure. The readiness and efficiency of health services were catastrophically affected by the loss of human capital, a reduction in health resources and expenditure, the loss of equipment and medicine, and difficulties in importing the necessary health-care materials and supplies.[50] This represents yet another burden on older persons who need to access effective health services often due to common chronic and ageing-associated disease, as well as conflict-related health issues such as traumatic injury and disability.
- **Forced displacement** inside and outside the Syrian Arab Republic has increased the immediate economic burden for older persons. About half of the Syrian population has left home. At the end of 2015, 6.3 million people, or around 60 per cent of the displaced population, were internally displaced; 3 million, or around 29 per cent, were refugees; and over 1 million, 11 per cent, were international migrants.[51] Estimates show that older people account for almost 5 per cent of the Syrian refugee population, of whom 3 per cent are registered with UNHCR. The low registration rate can be partly explained by the heightened challenges that older people face in reaching registration points.[52] Moreover, disability or mobility difficulties might contribute to fewer older persons leaving their residences in conflict zones.
- **Long-term psychological effects of displacement:** Displacement is expected to have an even greater impact on older persons in the future, since the average length of forced displacement is 20 years for refugees and over 10 years for internally displaced persons.[53] Consequently, today's working-aged displaced persons will be tomorrow's older displaced population, and will likely suffer high levels of anxiety and low levels of resilience and life satisfaction, as demonstrated by older persons in other protracted displacement situations.[54]
- **Declining social capital:** Many studies show that social capital has positive effects on behaviour and health patterns, especially for older persons.[55] Social capital is a concept that describes an individual, group or population's economic and cultural capital, which underpins social networks and transactions marked by reciprocity, trust, cooperation and a sense of working towards a common good. Social capital is often damaged in situations of conflict, as networks break down, communities are fractured, and services and transactions are interrupted. In the Syrian Arab Republic, the social capital index has declined by 30 per cent since the start of the crisis. This decrease is a result of notable declines in the three components of the index, albeit to varying degrees: the decline in social trust

contributed to the overall decline by 58 per cent, whereas values and networks contributed by 22 per cent and 20 per cent, respectively.[56] The continuing deterioration of social capital will have medium and long-term effects on the older population, as shown by studies on the resilience and vulnerability of older persons in the aftermath of conflict.[57]

The negative impact of the crisis in the Syrian Arab Republic on older persons has been significant, affecting their health and psychological, social and economic wellbeing. The conflict has had an immediate impact on the current older population and, according to research on other post-conflict situations, is likely to impact the next generation of older persons. There is therefore a need for short and long-term policies under a strategic vision that protects and respects the rights and dignity of all population groups, including older persons. Moreover, it is important to recognize that Syrian older persons could play a major role in rebuilding social cohesion after the conflict ends, contributing their experience to support an inclusive reconstruction process.

There is a gap in understanding older persons' needs and identifying related policies and projects when compared with attention given to women and children, although older persons are more vulnerable owing to health and marginalization challenges.[58] There is also a need to thoroughly analyse the impact of the conflict on older persons to establish a scientific base on which a related strategy and policies can be formulated as part of a comprehensive plan to overcome the crisis. Meanwhile, immediate programmes should be implemented to mitigate the effects of conflict on older persons, ensure the availability and accessibility of health and humanitarian services, provide psychological and social support, offer better living conditions, and include them in reconciliation, reconstruction and development processes.

## E. Conclusion and policy implications

The present chapter provided evidence of the alarming conditions faced by older persons in the Arab region, despite variations across the region and within countries. Weak and non-inclusive social protection systems, with limited pension and health coverage, leave many older persons vulnerable to poverty and ill health. Older persons in the least developed countries are at higher risk given limited resources; for example, findings show that less than 10 per cent receive old-age pensions and that out-of-pocket expenditure on health is the highest in the region.

The present chapter highlights the vulnerability of older women, who have higher rates of illiteracy and limited access to the formal labour market and pension coverage. Women are also at higher risk of disability. The majority lack health coverage and many do not have access to adequate health facilities. These challenges are compounded by the fact that women live longer, thus a growing number of older women, including those who live to be very old (aged 80 and above), will continue to suffer from diseases associated with ageing and limited financial security, with many living alone.

Protracted conflicts have spread across several Arab countries, adding to the risk variables that threaten the wellbeing of older persons in the region. Conflict causes serious problems for older persons, including loss of family and economic resources and increased risk of disease and injury, which exacerbate their vulnerability to ill health, isolation and poverty.

Care for older persons in the Arab region has predominantly been the responsibility of family members, because social protection systems are generally underdeveloped. However, the changing structure of living arrangements from extended households to a higher share

of nuclear households means that social protection systems must adapt to families' reduced ability to support older persons. There is therefore an urgent need to develop other means for supporting older persons.

These findings were limited by the dearth of data on older persons disaggregated by age, sex and location. Such data are necessary to better analyse the socioeconomic conditions of older persons, and inform policies to ameliorate their situation and to change their prospects from ageing in poverty to ageing with dignity and full respect for their fundamental human rights.Hil et, sandae. Nem fuga. Otatquiasin ex enihit as exped enimet

Intergenerational support in the Arab region is a two-way exchange, with older persons positively contributing to society. However, changes in social dynamics are threatening the nature and extent of this support, leaving older persons more vulnerable.

# 3. Two-Way Intergenerational Support

## A. Introduction

The previous chapters have demonstrated that current demographic patterns and trends are increasing the number and proportion of older persons in the Arab region. However, weak social protection schemes expose older persons to socioeconomic vulnerabilities, and increase dependency on their family and social networks. Moreover, changing socioeconomic trends coupled with the absence of a life-course approach to development policies are negatively impacting the ability of working-age persons to balance the demands of supporting themselves and their extended families, and to plan for their own old age.

The present chapter complements the previous two chapters by providing a detailed analysis of changing family roles and social networks in the Arab region. It demonstrates that intergenerational support in the region is a two-way exchange, and discusses the family's role and challenges in providing support to older persons. The evidence presented counters the common, negative perception of older persons as dependents and highlights the often-invisible tangible and intangible support that older persons provide to their families. The present chapter offers a deeper understanding of intergenerational support, particularly in the light of changing socioeconomic trends, to better inform social protection and long-term care policies that take into account the needs and challenges of both older persons and their families.

The present chapter focuses on the following dimensions of intergenerational exchange: living arrangements, and financial, emotional and instrumental support. It analyses the existing literature to provide a regional comparative perspective, and presents a case study on older persons in Beirut to assess intergenerational support in an urban environment in Lebanon.

## B. Intergenerational support in the Arab region

Intergenerational support, defined as the exchange of resources and support between family members of all ages, is a predominant social norm in the Arab region.[1] These exchanges take several forms, including living arrangements, and financial, emotional and instrumental support. Such exchanges preserve bonds between generations and play a key role in providing resources to older family members.[2] Familial support is therefore critical for the wellbeing of older persons, especially when there is a lack of societal or institutional support systems.[3] These exchanges are widely regarded as filial and social obligations, with children expected to reciprocate their parents' investment in them with financial and social support when they become adults and their parents become older.[4] However, older persons often contribute to the wellbeing of their adult children by sharing knowledge, experience and support with younger generations.[5]

### 1. Living arrangements

Only recently has more research been conducted on the living arrangements of Arab families, particularly those of older persons.[6] Living arrangements include more than physical housing; they also encompass the provision of social and economic resources. For older persons, living arrangements are key to their wellbeing. Shared living arrangements between family members,

whether through co-residence or living in close proximity, promote intergenerational support, close family relationships and the overall wellbeing of older persons.[7]

One of the main forms of living arrangements in the Arab region is co-residence, defined as at least one older person living with at least one adult child or other kin.[8] Very few older persons in the region live in retirement homes.[9] Co-residence facilitates support exchanges through daily contact and sharing of resources, and is especially important when an older person experiences certain vulnerabilities, such as declining health or widowhood.[10] However, co-residence is not a one-way means of support. Even if an older person is of poor health and needs personal care, co-residence has been found to be beneficial to both the adult child and the older person. Adult children caring for their older parents note personal satisfaction and reward in carrying out caregiving tasks. Older persons in good health might provide different types of support while co-residing with their adult children, such as assisting in household chores and providing childcare to grandchildren.[11] This contribution comprises part of an informal, but very valuable, exchange of support.

Co-residence also occurs when adult children reside with their older parents due to economic reasons, such as saving on rent.[12] In many Arab countries, children reside with their parents until marriage. Some adult children even live with their parents after marriage. For example, in Egypt, newlyweds often reside with the husband's parents until the newly-married couple give birth to their first child.[13] This living arrangement helps support newlyweds financially so that they can establish their own separate household later. Research has shown that wealth can have varying effects on co-residence, as it can either promote co-residence – as research in Egypt and Kuwait has shown[14] – or it can have the opposite effect as it allows older persons to live alone since they can support themselves (purchasing privacy).[15]

Research also shows that even when older persons do not co-reside with their adult children, adult children often reside near their parents.[16] Living close to older parents facilitates emotional and instrumental support exchanges between adult children and their parents. For example, a case study conducted in Egypt shows that married daughters often live in the same neighbourhood, village or building as their parents to visit often and maintain a close relationship, which fosters important emotional support.[17] Family members often live near frail older persons to provide care. Some countries have actively encouraged adult children to live close to their older parents: the Qatari Government, for example, provides housing benefits for family members who want to live near their older parents.[18] In Kuwait, relatives often live within a short driving distance to one another to facilitate frequent contact.[19]

## 2. Financial, instrumental and emotional support and exchanges

Support between older persons and adult children in the Arab region is a two-way exchange,[20] and can take the form of financial support, such as providing money and contributing to household expenses; instrumental support, such as assisting in household chores and taking care of grandchildren; and emotional support, such as visits, calls and expressing affection.[21] Several studies highlight that support exchanges are common between older persons and their children in the region, including PAPFAM national studies conducted in Algeria, Lebanon and the State of Palestine; the Survey of Health, Ageing and Retirement (SHARE) in Saudi Arabia; and a number of specialized small-scale studies in Egypt and Tunisia.[22]

Many older persons in the Arab region experience income insecurity, ill health or disability, which requires them to rely on their adult children for financial support. Data from the PAPFAM study in Lebanon indicate that 54.1 per cent of older men and 68.6 per cent of older women receive financial support from their adult children. This percentage increases with age, approaching 72 per cent for those aged 80 and above.[23] A case study in Egypt shows that older persons expect to receive financial support from their adult children, especially from

their adult sons. The research indicated that both adult sons and daughters sent their parents transfers, although the practice was more common for adult sons than daughters.[24]

Nevertheless, some older persons also provide financial support to their adult children. The PAPFAM study confirms that older persons in the Arab region provide financial support to their children and extended family members.[25] In Arab tradition, husbands and adult sons are typically the main providers of financial and material support.[26] In Egypt, older fathers are obliged to provide their adult daughters with financial or material transfers in the case of divorce or neglect by their spouse.[27] Studies in Ismailia, Egypt, reveal that while older men often provide adult children with money and goods, older women often receive money and goods from their adult children. These contrasting patterns of economic exchange illustrate that older mothers are disproportionate receivers of such exchanges, perhaps indicating more vulnerability compared with older fathers.[28]

Older persons, particularly older men, therefore continue to play a key role as a financial safety net for adult children and their families. Evidence of older persons maintaining the provider role contradicts the common misconception that older persons are a dependent population or passive receivers of support and care.[29] Older persons maintaining a role as contributors and providers in the family reinforces the dynamic and structure of the Arab family, which is based on close kinship and mutual support.

Support exchanges are not only material and financial but also include emotional and instrumental support,[30] which emerge from cultural norms, transactional expectations, economic benefits, and the fact that most Arab countries do not have adequate long-term care programmes.[31] Emotional support is provided by both older persons and adult children through affection, a sense of duty and respect.[32] Emotional support is mainly achieved through daily visits and contact. Research has shown that older persons greatly appreciate frequent visits from adult children.[33]

Studies show that instrumental support is also often two-way between older persons and adult children. Instrumental support includes, but is not limited to, daily chores, personal care, grocery shopping, managing illness symptoms and treatment, accessing resources, communicating with health care professionals, assisting in financial matters and bill-paying.[34] The role of the primary provider of instrumental support varies depending on several factors. PAPFAM studies show that between 34 per cent and 40 per cent of older persons in Algeria, Lebanon and the State of Palestine provide instrumental support to their adult children in the form of domestic chores and helping with grandchildren.[35] On the other hand, studies in Egypt indicate that older persons expect their adult children to provide them with instrumental support, such as through household chores.[36] These expectations primarily fall on daughters and daughters-in-law since, in general, mothers, wives and daughters are expected to provide domestic work.[37] Younger generations' instrumental support is particularly critical to the wellbeing of older persons when their health declines. Evidence shows that daughters and daughters-in-law usually assume caregiving roles and provide assistance to older persons.[38] However, adult children might also hire a formal caregiver to assist older parents in meeting their instrumental needs.[39] Adult children therefore play an immense role in providing instrumental support to their parents to enhance and maintain their quality of life, and ensure their survival.

## C. Case study on intergenerational support in Beirut

### 1. Methodology

To further explore intergenerational support between older persons and adult children in the Arab region and factors that promote it, a case study was carried out in Beirut. It employs qualitative research to gather data on

participants' views of intergenerational support within their families, with particular focus on living arrangements and support exchanges. The case study uses an inductive approach to generating knowledge by conducting detailed interviews with participants. Open-ended, semi-structured interviews were held with a sample of older persons; adult children; and key informants from retirement homes. Data from the interviews were thematically analysed to identify, assess and report patterns. The case study was carried out from June 2017 to August 2017.

### (a) Participant selection

A total of 31 individuals participated in the case study. The sample consisted of 14 Lebanese older persons, 14 Lebanese adult children and 3 representatives from retirement homes – all of whom lived in Beirut. Purposive non-probability sampling was used to approach eligible participants and continued until enough participants had been selected. Participating older persons were required to be aged 60 or above. Adult children participants were required to be aged 25 or above. None of the participants were from the same family.

The three individuals managing retirement homes in Greater Beirut were selected as key informants. Representatives were selected from homes that had different criteria for enrolling older persons, provided different services, and catered to different socioeconomic statuses and health conditions. They were interviewed about the services the homes provided and the conditions of older persons residing in them.

### (b) Data collection and analysis

Interviews with older persons and adult children focused on the four dimensions of intergenerational exchange: living arrangements, and financial, instrumental and emotional support.[40] Questions probed the limitations of providing and receiving intergenerational support, participants' satisfaction with intergenerational support, and the role and shortcomings of Government in providing services for older persons or adult children.

Interviews with representatives of retirement homes aimed at understanding the services offered by the homes and the characteristics of older persons residing in them. Additional questions focused on the role and challenges facing government support to homes.

### (c) Main characteristics of older person and adult child participants

On average, older persons in the population sample were aged between 60 and 70, and most were retired. The majority were married at the time of the interview, although one individual was divorced and two were widowed. Two older participants had never been married and had no children. The adult children in the population sample were aged between 30 and 53. Half were married and the other half were unmarried. Married adult children had, on average, three children. Table 14 presents the sex breakdown of the sample, their mean age and educational level.

**Table 14.** Demographic information of older persons and adult children

| | Older persons | Adult children |
|---|---|---|
| **Total number of participants** | 14 | 14 |
| Female | 50% | 57% |
| Male | 50% | 43% |
| **Mean age** | | |
| Female | 69 | 38 |
| Male | 68 | 36 |
| **Education** | | |
| Primary | 43% | - |
| Intermediate | 7% | - |
| Secondary | 21% | 21% |
| University | 29% | 79% |

**Source:** 2017, ESCWA case study on intergenerational support.

### (d) Main characteristics of representatives from retirement homes

Participants working in retirement homes represented diverse institutions, namely an assisted living centre, an accredited charitable organization and a non-profit organization. The three institutions served as the primary living arrangements for older persons of different backgrounds and characteristics. They provided full boarding services and were equipped with medical staff, including geriatric doctors and nurses. The capabilities of the older persons residing in those homes varied from being independent (able to bathe, eat, dress and move around independently) to needing significant assistance with daily life activities because of frailty, physical disability or illness. The average age of the residents in the three homes exceeded 80 years.

### (e) Case study limitations

The case study focused solely on persons living in one urban setting, Beirut. Findings therefore might not be generalizable to intergenerational support within families in rural areas. The study relied on detailed interviews with a relatively small sample of participants, the majority of whom belonged to the middle and upper classes. Future large-sample qualitative research is therefore needed to deduce more generalizable findings. However, the results of this case study complement the existing literature on intergenerational support in the region.

## 2. Discussion of findings

### (a) Living arrangements

The findings highlight that most older persons co-reside with unmarried or married adult children in parent-headed households. Furthermore, several older persons co-reside with an older parent. The majority of adult children interviewed also lived with their parents in parent-headed households. The main reasons underlying participants' decision to co-reside with an adult child or older parent included: economic factors (the inability of the adult child or the older person to afford a separate household), the adult child was unmarried, the older person's health was declining, and the desire to maintain close family relationships.

> "I came back from the Gulf and started working in Lebanon and purchased a house in Beirut. I decided to let my parents reside with me since I thought to myself, they are getting older and we should spend more quality time together." – Interview with female adult child, unmarried, age 42

These findings indicate that for the urban middle class, co-residence is still common. Such findings could provide insight on the impact of socioeconomic class on the choice of living arrangements. For example, research by Tohme and others (2011) claims that Lebanon follows a western model where wealthier older persons are more likely to reside alone to purchase their privacy. Larger scale research on the possible impact of structural and socioeconomic factors affecting living arrangements choices is therefore warranted.

For families that do not co-reside, living nearby is a common alternative. Almost half of the older persons interviewed stated that nearly half of their adult children resided near them. Similarly, almost half of the adult children interviewed indicated that they lived close to their parents. Participants mentioned that this choice was motivated by the ability to exchange support and maintain daily contact more easily.

> "My son wants to buy a house, so he asked whether he, his wife and son could reside with us until he had saved enough money to purchase his own house." – Interview with male older person, married, age 66

However, half of the older persons and adult children interviewed did not live close to their adult children or older parents. Two important reasons provided by participants included high housing prices in Beirut, and adult children living abroad. Urbanization and migration therefore seem to affect the ability to co-reside or live in close proximity in Beirut. While distance between family members could negatively affect intergenerational support, neither older persons nor adult children perceived distance as a barrier, particularly for exchanging emotional support. This observation could possibly be explained by increased access to new technology and means of communication, including mobile phones, the Internet and social media, as indicated by some interviewees.

Co-residing or living close to family was not the choice of older persons living in retirement homes, although the vast majority were married and had children. Most older persons residing in the assisted living centre belonged to an upper economic class, and had chosen to live there either for convenience, because their children lived abroad, or because they did not have close family support. However, in the other two homes, adult children had made the decision to enrol their parents in the home, and served as guardians in case of emergency. Representatives from the homes remarked that, in recent years, more older persons had been requesting to enrol themselves in the homes. The number of older persons residing in homes in Lebanon is still very low (less than 1.3 per cent). However, these initial findings indicate a shift towards retirement homes, particularly for older-older persons (aged 80 and above). This shift could possibly be the result of changing trends in living arrangements, with adult children living farther away from their older parents.

> "My father is very sick and lives in a building right next to me with two female nurses. Being so close to him makes it easier for me to go check up on him and, in case anything happens, I am right there." – Interview with female older person, married, age 65

### (b) Financial exchanges

The findings highlight that financial support is mainly transferred upwards from the adult child to the older person and from the older person to the older parents. Most older participants were unable to support themselves and received money from male and female adult children on a monthly basis to pay for rent and utilities, groceries and personal goods, and medical expenses. Similarly, the majority of adult children participants provided money to their older parents on a monthly basis. Adult children residing with their parents in adult child-headed households noted giving money to parents to pay expenses for the whole household. Financial support to older persons was mostly shared between siblings; however, many participants indicated that such support was mostly borne by one adult child, especially if he/she was single, because the other siblings were married and had financial responsibilities to their families.

> "I do not give money to my married son, but whenever I go shopping I buy clothes and toys for his children. When there are occasions I buy him gifts for his house." – Interview with female older person, married, age 65

Widowed, divorced and older persons with disabilities said that they were dependent on their adult children's financial support. This dependence signifies the income insecurity faced by vulnerable older persons. Despite their previous employment, their ability to provide for themselves in old age was limited. This was more often true for the female older persons interviewed. Adult children employed in the formal sector highlighted their ability to enrol their parents on their insurance schemes in the National Social Security Fund as a benefit, which significantly decreased their own expenditure on their parents' medical expenses. However, this was not the case for adult children who did not benefit from the Fund.

As for receiving financial support from older parents, almost half of the adult children participants indicated that their parents assisted them financially. A few participants said that their parents were paying for their university tuition fees, while others indicated that their parents were providing a monthly allowance to them or to one of their siblings. Other forms of financial assistance included paying medical insurance fees or purchasing a house for a male adult child. Furthermore, a couple of older persons established a business that their children took over, and thus believed that they were indirectly supporting their children's financial situation. Most adult children said that they and their siblings received material gifts or money from their parents on special occasions.

> "I opened up a mini-market 40 years ago. Now, my two sons are running it. Without me, they would not have had this job, and I still handle the finances of the business."
> – Interview with male older person, married, age 70

Intergenerational support includes financial transfers across multiple generations, not just between parents and children. For example, one older person noted that the money received from adult children was mainly used to pay for monthly allowances, medical expenses and nursing assistance for his parent. Financial support sometimes extended even further beyond the nuclear family to aunts, uncles and parents-in-law. For instance, several participants said that they provided money to a parent-in-law or received money from a son-in-law, and almost half of the adult children indicated that they financially supported aunts and siblings. These findings corroborate the high degree of inter-connectedness within the family, where support is not only exchanged between parents and children but also extends to siblings and other family members.[41]

> "My wife's brother – the only boy among nine girls – cannot provide for my mother-in-law. Thus, I pay for my mother-in-law's rent."
> – Interview with male older person, married, age 65

Regarding financial support for older persons living in homes, all participants said that residence fees for the majority of older persons were either paid by the older persons themselves, the Ministry of Public Health or the Ministry of Social Affairs. There were only a few cases where adult children paid for the older person's residence fees. Nonetheless, participants reported that children provided their parents with material gifts, such as clothes. Furthermore, several adult children hired special nurses or helpers to assist parents living in the homes.

### (c) Instrumental support

Instrumental support is highlighted as an extremely important exchange between older persons and adult children. Older women often provide instrumental support to their adult children or children-in-law by taking care of grandchildren, shopping for groceries, doing household chores, and preparing family meals. Older persons interviewed expressed happiness at taking care of grandchildren and regarded it as part of their grandparenting role. Most male older persons assisted their adult children with various errands, including government paperwork. Moreover, several female older persons noted providing instrumental support to their older parents. Working adult children emphasized their dependence on their older parents given their long working hours, and said that they received such support from parents more often than they provided it.

> "When my daughter and her husband go out at night, they bring the grandchildren over to my house with the helper, so I look after them."
> – Interview with female older person, married, age 65

Adult children provided instrumental support in return to their older parents, by accompanying them on doctors' visits and social visits, following up on health conditions, offering transport, assisting with personal errands, and helping with official paperwork. Female adult children often assisted with household chores, and several of them hired a part-time house-cleaner to carry out their parents' chores. Adult children indicated that they received help from their siblings in providing instrumental support to their parents; however, that support was lacking when siblings lived abroad but the extra support was welcome when those siblings did visit their older parents. Adult children participants also noted providing instrumental support to their siblings, such as babysitting children, and assisting siblings living abroad with banking services or official paperwork.

> "When my dad fell and hit his head, my sister came from abroad and helped us care for my father. This was a relief because my other sister and I were able to go to work and did not have to take days off to help our mum." – Interview with male adult child, never married, age 33

Adult children's role in providing instrumental support decreased in cases where older parents were living in homes. Interviews indicated that adult children felt that the home was responsible for providing such support. In only a few instances, adult children accompanied their older parents living in homes on social outings or supported their older parents by following up with resident physicians about their health.

> "Children perceive their parents as a burden. When they enrol them here, we tell them that they need to stay involved in their parent's life, but rarely do they stay engaged. Even when we need to hospitalize the older adult, we call their children and none care, as if the older adult is solely our responsibility now." – Interview with a male key informant at a retirement home

### (d) Emotional support

Emotional support between family members was expressed as a two-way exchange. Older persons perceived emotional support as highly valuable and, at times, more essential than material support. Emotional support was often expressed differently by men and women, aligned with gender roles. Most older women noted providing emotional support through a display of affection, such as hugs and kisses; whereas older men mentioned offering counselling and guidance. Those trends were also echoed by both male and female adult children.

> "My parents always bless me. They always tell me 'May God help you succeed in life'. I admire this so I learned to always bless them as well, and tell them, 'May God keep you by my side'". – Interview with female adult child, unmarried, 31 years old

As for receiving emotional support from adult children, most older persons noted receiving affection, attention and health-related advice from their children, in addition to regular (daily or weekly) calls and visits. Even in cases where adult children resided abroad, the majority called and chatted with their parents and siblings regularly. Adult children emphasized quality time as a form of expressing emotional support and mentioned visiting older parents, grandparents and extended family members on a regular basis. Older parents echoed the importance of quality time and expressed sadness at not sharing it with their adult children. For example, one older mother said that she was hurt when her co-residing adult children would go straight to their rooms after returning from work. Scheduling regular family time was often important to ensure that it would take place: older persons and adult children highlighted that families set designated days for gatherings; for example, one older person noted that every Saturday, her children

and grandchildren came to visit her to have a meal and spend the day together. A female adult child said that her mother spent every Monday and Saturday with her.

> "My mother visits me every Thursday with my brother and sister, and on Saturday my wife and I and my siblings visit her". – Interview with male adult child, married, 55 years old

> "I schedule a regular Skype session with my son and daughter who live in Dubai. I find it very fruitful. It is even better than the quality time spent if they were here because on Skype we are committed to this session; whereas if they lived here, I would see them for only five minutes since they would have to go out or would be at work the whole time." – Interview with female older adult, divorced, 65 years old

Participants said that social media facilitated emotional support through regular contact, especially when family members or extended family members did not live nearby. Participants indicated that they used WhatsApp, FaceTime and Skype as the main platforms for daily communication. Several older persons said that they used those platforms to chat with children, grandchildren and friends, and that their favourite feature was being able to see their loved ones. This is consistent with other research findings that study the effect of information and communication technology, including social media, on older persons' lives.[42]

The expression of emotional support in the form of verbal and physical displays of affection to older parents living in homes varied. The representatives of two of the three homes indicated that adult children and grandchildren called and visited regularly. However, the representative of the charitable

> "When adult children visit their parents [at the home], they usually sit next to each other and hold hands. Sometimes the adult child would feed the parent or peel fruits for him/her". – Interview with female representative from a retirement home

organization noted that visits and calls from adult children were minimal. Only one in seven adult children visited their parents in the home. Each home reported conducting events on special occasions, such as Mother's Day, and inviting adult children to attend to maintain their involvement in their parents' lives and encourage emotional support.

### (e) Satisfaction with intergenerational support

Both older persons and adult children noted satisfaction with the support exchanges and close-knit relationships within their family. Physical distance and time limitations did not stop intergenerational support, yet it did limit the ways that family members exchanged support. While emotional support was made possible through communication technology, the exchange of instrumental support was less convenient or feasible. Adult children noted that having siblings abroad put greater pressure on the adult children living near the older parents, since the latter were the ones expected to solely provide instrumental, and often financial, support to the parents.

> "If my brothers do not send money on time [for my older parents], then I have to give them extra money from my salary. This upsets me because my brothers do not know the situation at home, since they are not living it day by day."– Interview with male adult child, married, 32 years old

Providing support to adult children was often perceived as a source of gratification

for parents when it involved caring for grandchildren; however, it was also a source of concern when it involved financial support. Furthermore, the notion of children's obligation to support their parents was echoed strongly both by older persons and adult children, and was perceived as a sign of gratitude. Social and religious norms reinforced this sense of obligation, according to some of the participants. Given the criticality of intergenerational support to the wellbeing of older persons, adult children, especially unmarried women, expressed a great deal of concern regarding their future since having children was the main source of security in old age, given weak social protection schemes, looming financial insecurity, and health

> "I receive medication and medical check-ups from a local non-governmental organization; however, in certain cases, they refer me to private doctors. I never go because I do not have money for the consultation and I do not want to know if I have new health problems. I cannot afford to pay for any more medication. I am already paying 100,000 LBP ($67) every month for my medication." – Interview with female older adult, 70 years old

> "It is very hard not having children when one reaches old age. I know my siblings and nieces and nephews are here for me, but I see how I am with my parents and I see how my mum and dad's nieces and nephews are with them – it's different. I am obliged to take care of my parents and I enjoy it but at the end when I am old my extended family is not obliged to take care of me. The pressure is all on me to take care of myself." – Interview with female older person, never married, 60 years old

deterioration. They therefore built strong relationships with their siblings, nieces and nephews since they believed that they would be obliged to depend on them in the future.

### 3. Intergenerational exchanges: the need for stronger State support

> "My father likes to read but there are no public libraries for him to go to, and I do not see the Ministry of Tourism encouraging older adults to go watch plays. Also, there are no reduced rates for older adults to go to the cinema." – Interview with female adult child, never married, 42 years old

Interviews with older persons, adult children and representatives of retirement homes emphasized the need for stronger support from the State to better provide and care for older persons and their families. The required support is holistic in nature, and should follow a life course that does not begin in old age but rather includes a range of dimensions such as health care, in-home care, financial security and social engagement.

Adult children indicated that they made intentional efforts to continually involve their parents and keep them active; for example, by requesting specific errands or through social outings. However, they emphasized the lack of recreational activities and venues for older persons, and the limited platforms for their engagement in the community.

The autonomy of older persons is greatly compromised by non-inclusive health coverage for older persons and pension schemes.[43] As a result, older persons are heavily dependent on their families and whatever savings they have for financial support. Older persons and adult children complained about the high price of medication and medical insurance for older persons, which they perceived as a significant burden and concern. They emphasized the need to improve and expand social protection schemes.

While children felt obliged to provide instrumental support to their parents, they highlighted the need for in-home assistance, particularly when they were unable to live nearby or had to work long hours, which left their older parents without care. Furthermore, participants noted that homes for older persons in Lebanon were either expensive or lacked professionalism, which deterred them from considering those homes as an option, especially for their older older parents. Participants stressed the need to make good retirement homes more accessible, and provide pension schemes to older persons who worked in sectors other than the public sector.

> "My brothers and I got my father a taxi licence plate. Even though the licence plate is expensive, we got it for him so that even when he retires from his job, he can work as a driver. This will keep him active and still enable him to earn money." – Interview with male adult child, married, 32 years old

## D. Conclusion

The present chapter explored intergenerational support among older persons and adult children, with particular focus on a case study in Beirut, arguing that support in the form of living arrangements, and financial, instrumental and emotional support was a two-way exchange

> "My father is very old. It causes me so much stress that I need to take care of him. I am old too and need time to rest. It costs $1,000-2,000 per month to live in a retirement home in Lebanon. If it were cheaper, I would have placed him there. That way, I would have time to rest and see my family more often."– Interview with female older adult, married, 65 years old

between older persons and adult children. It provided a glimpse of the numerous ways that older persons offered critical support to their families, which will hopefully contribute to altering the negative perception of older persons as mere dependents. The findings of the Beirut case study corroborate the findings of other qualitative case studies conducted in Arab countries.

The chapter also provided insight on the scope of intergenerational support, which can extend beyond the dyadic relationship between parents and children to include siblings and extended family members, such as grandparents, aunts and uncles. The case study found that co-residing or living close to family was still common among middle-class urban residents. However, it identified changing social trends affecting living arrangements and intergenerational exchanges, such as rising life expectancy, migration, urbanization, increased economic challenges, unemployment and modernization. Furthermore, there is rising concern for the well-being of unmarried persons in old age linked to the availability of intergenerational support. Those changes take a heavy toll on living arrangements and instrumental support, compared with emotional support that seems less affected owing to the prevalence of communication technology and online social platforms.

Moreover, the case study underscored the additional stress that older persons faced when simultaneously providing financial and instrumental support to both their older parents and to their adult children. Consequently, future research could benefit from studying the sub-age groups of older persons to determine their unique needs and challenges. Lastly, the case study highlighted key areas for State intervention, especially in terms of increasing social protection, improving pension schemes, and providing at-home and long-term care.

Now more than ever, Governments are prompted to take action to "leave no one behind" as they pledge to achieve the 2030 Agenda for Sustainable Development. It is therefore not only an ethical imperative to ensure that ageing with dignity is possible for all persons, but also a precondition for inclusive sustainable development.

# 4. Future of Ageing in the Arab Region

## A. Introduction

Since most Arab countries are approaching the ageing transition, they are experiencing changes in the relative numbers of children, young people, working-age individuals and older persons. By 2050, most countries will have experienced an increased number and share of older persons, with a simultaneous rise in the number and proportion of working-age individuals and a declining share of children.

As the data in chapter 1 demonstrates, according to the medium variant of United Nations projections,[1] approximately 9.5 per cent of the population of Arab countries will be aged 60 and above by 2030 and 15.1 per cent by 2050, marking a dramatic increase from 6.7 per cent in 2015. The share of those aged 75 years and above, who are at a heightened risk of dependency, and most of who will be older women, will increase from 1.5 per cent in 2015 to 2 per cent in 2030, and to 4 per cent by 2050.

In absolute terms, the number of older persons in the Arab region is projected to experience an unprecedented increase, growing from nearly 27 million in 2015 to over 49 million in 2030 and to 102 million in 2050. This means that the population of older persons will multiply by 3.8 in 35 years, and increase annually by just over 2 million, on average. This rapid growth will cause challenges, thus requiring the urgent attention of policymakers. Families and societies in the Arab region will have less time to adjust than those in developed countries, as the ageing transition in Arab countries will occur at a much faster pace. However, the speed of the ageing transition will vary between Arab countries, according to the demographic dynamics (fertility, mortality and migration) of the population.

The present chapter explores the prospects of ageing with dignity by 2030 and 2050. It builds on the current demographic trends and future prospects presented in chapter 1 to provide an evidence-based projection of the needs of older persons in the Arab region by 2030 and 2050, using both quantitative and qualitative approaches. Projections show that the needs of older persons in the region will become more pressing as the number of older persons increases. Older persons' future needs are assessed using the following critical areas of analysis: education, income security, health, capability and enabling environment.

It is important to note that this analysis is based on population projection hypotheses. Nonetheless, when this projected increase in the share and number of older persons occurs, it will undoubtedly cause significant socioeconomic pressures. Governments must therefore take appropriate measures to meet the future needs of all segments of the population, and to ensure that older persons are not left behind as they engage in holistic integrated development planning and policymaking to achieve sustainable development for all by 2030.

## B. Income security

As discussed in chapter 2 and demonstrated by the Beirut case study in chapter 3, income security (in the form of pensions or other savings, continued employment in old age, or support from family members or the State) is critical for the wellbeing and dignity of older persons. Moreover, it is vital for Governments to understand the challenges currently facing working-age individuals, to guarantee that they are able to age with dignity.

### 1. High unemployment among working-age individuals

A major concern for the prospects of older persons in the region is current high unemployment rates among

young people and adults. Unemployment among individuals currently aged 40 and above is an indicator that they will not have savings when they reach the age of 60, meaning they will have no income security as they age. This becomes especially problematic as the number of individuals facing this situation increases and becomes a greater share of society.

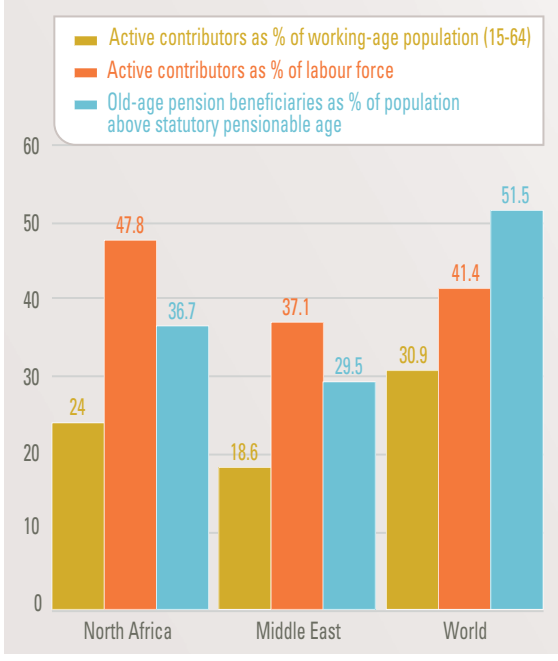
### 2. Many of today's workers are tomorrow's vulnerable older persons

As shown in chapter 2, many working individuals are not eligible to contribute to pension plans. Consequently, without other means of income security, such as savings or family support, they will be left unable to provide for themselves in old age – in just two to three decades. Pension coverage availability and eligibility is limited in most Arab countries, and many older persons and working-age individuals are excluded from it.[2] As a result, many older persons will continue to work for as long as they physically can to provide for themselves and their families. However, many older persons work in the informal sector, are poorly compensated, suffer from difficult job conditions, and are offered limited social security.

Pension coverage is an indicator of older persons' present and future income security. Figure 17 presents three measures of effective coverage. The first two measures show working-age active contributors to pensions (solely contributory pensions) as a percentage, in two variants. These figures provide an indicator of future pension coverage when those individuals retire. The two variants distinguish the percentage between those who are economically active (active contributors as a percentage of those who are economically active) and those of working age (active contributors as a percentage of the population). The third measure shows the current percentage of older persons above statutory pensionable age receiving contributory or non-contributory pensions.

Old-age pension beneficiaries as a percentage of the population above statutory pension age constitute a mere 36.7 per cent in North Africa and 29.5 per cent in the Middle East, which are very small proportions compared to the world average of 51.5 per cent. The ratio

**Figure 17.** Effective pension coverage ratios by subregion (percentage) weighted by total population, 2014




**Source:** ILO, Social Protection Department, Old-age pension beneficiaries as a proportion of the population above statutory pensionable age, 2014. Available at www.social-protection.org/gimi/gess/RessourceDownload.action?ressource.ressourceId=44420 (accessed on 15 May 2018).
**Note:** In this figure, North Africa comprises Algeria, Egypt, Libya, Morocco, Tunisia and the Sudan; and the Middle East comprises Bahrain, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, the State of Palestine, Qatar, the Syrian Arab Republic and Yemen.

of active contributors as a percentage of the working-age population or as a percentage of the economically active population indicates that less than half of active contributors today are projected to benefit from a pension once they reach old-age. For example, by 2014, only 24 per cent of the working-age population (aged 15-64) contributed to a social security pension scheme in North Africa and only 18.6 per cent in the Middle East.

## C. Health status

As demonstrated in chapter 2, population ageing is correlated with an increase in NCDs and disability. Chronic conditions, multi-morbidities, disease, disability and cognitive impairment are more common

among older persons, which is why ageing constitutes a challenge in the Arab region. As the number of older persons rises, their specific health needs put greater pressure on health-care systems and families. Women are traditionally the primary caregivers for older persons, but they are increasingly participating in the labour market. Furthermore, conflict in the region has had a unique impact on the health and abilities of today's working populations, who will become tomorrow's older persons. Governments need to adapt current health and care systems and provide support for unpaid caregivers to meet the increasing demand for older persons' physical and financial support.

## 1. Non-communicable diseases

The prevalence of NCDs highlights the impact of ageing on health-care systems, as the need for health care grows along with the number of older persons. Given the lack of data for individual countries and the Arab region as a whole, the present section uses data on deaths due to NCDs obtained from the latest publication by the World Health Organization (WHO) on the burden of disease.[3] Projections on the number of NCDs are therefore based on a rough macro approach, using the proportions of the population with NCDs by age group.

Data were collected for two age groups (50-69 and 70 and above) for 2015 and 2030. The younger age range includes individuals as young as 50 in 2015, because these individuals will be aged 60 or above by 2025. This exercise makes the following two key assumptions: countries in the Arab region are homogenous in terms of the share of NCDs; and the prevalence of NCDs for persons aged 50-69 years is the same as for persons aged 60-69 years. The projected number of people with NCDs for the Arab region is calculated by projecting the 2015 percentages of people with NCDs in the MENA region for the corresponding age groups in the whole Arab region in 2030, as indicated in table 15. These projections provide an idea on how ageing might affect health-care systems in the future, but countries are encouraged to collect better data to develop policies specifically tailored to meet future needs.

Based on these calculations, the number of NCDs among persons aged 60 and above in the Arab region is projected to increase by 41.1 per cent between 2015 and 2030, from 880,000 cases to 1,244,000 cases. This result is consistent with the findings of many studies on this phenomenon. For example, Khatib (2004) estimated that in 2004, 47 per cent of the Arab region's burden of disease was due to NCDs and that it would rise to 60 per cent by 2020,[4] yielding one of the world's greatest increases in the absolute burden of NCDs and their risk factors. Over 66 per cent of NCD-related deaths occur in individuals above 60.[5]

This change from a burden of disease dominated by mortality from infectious causes to degenerative or chronic causes is called epidemiological transition, which Arab countries will experience in a much shorter timeframe than high-income countries.[6] As a result, Arab countries not only have to deal with their current burden of prevalent infectious diseases, but also with this growing burden of chronic diseases.

**Table 15.** Older persons with non-communicable diseases in the Arab region, 2015 and 2030

| | | 2015 | 2030 |
|---|---|---|---|
| **Rate of non-communicable diseases[a]** | 60-69 years[b] | 1% | 0.8% |
| | 70+ years | 6.9% | 5.9% |
| **Number of persons with non-communicable diseases** | 60-69 years | 154 000 | 249 000 |
| | 70+ years | 726 000 | 995 000 |

**Sources:** ESCWA calculations based on WHO data, "Projections of mortality and causes of death, 2015 and 2030: global health estimates summary tables: projection of deaths by cause, age and sex", by World Bank Income Group. Available at www.who.int/healthinfo/global_burden_disease/projections/en/ (accessed on 19 February 2018).

[a]Calculations are based on 2015 WHO data for countries in the MENA region, namely Algeria, Djibouti, Egypt, Iran, Iraq, Jordan, Lebanon, Libya, Morocco, the Syrian Arab Republic, Tunisia and Yemen.

[b]Rates correspond to calculations based on persons aged 50-69.

Common risk factors of NCDs are modifiable based on behaviour, including tobacco use, alcohol abuse, unhealthy diet, insufficient physical activity, obesity, and raised blood pressure, blood sugar and cholesterol. Countries have a responsibility to curb the rapid growth of NCDs through prevention and risk-reduction initiatives, which are often low-cost and can have a significant impact on the health and longevity of populations.[7]

## 2. Health-care programmes

Several studies have highlighted the shortage of professionals in the health sector. For instance, the expected increase in the number of cancer patients among older persons across the Arab region requires additional specialized training of professionals, mainly of physicians and nurses, at the primary, secondary and tertiary levels of health services. Training should also focus on clinical practice and the creation of multidisciplinary teams, both at health care facilities and for home-based services.

The need for medical professionals is urgent in the Arab region, particularly among the older population with comorbidity – geriatrics plays an important role in that regard. Abyad (2004) stresses that future demand for quality long-term care services for older persons requires a focus on geriatric and gerontological education and training for health professionals and para-professionals as one of the most important areas of care for older persons.[8]

Another study indicates the lack of geriatricians in many Arab countries: Sibai, Rizk and Kronfol (2014) find that the highest ratio of geriatricians to older persons is in Bahrain (1 geriatrician for every 8,250 persons aged 65 and above) and Lebanon (1 geriatrician for every 20,000 persons aged 65 and above). Tunisia, one of the region's fastest ageing countries, has one of the largest numbers of geriatricians (around 400). For most other Arab countries, the ratio does not exceed 1 geriatrician for every 100,000 older persons.

**Box 2.** Preparing health professionals for the future care of older persons: good practices in the region

### Lebanon: Ain Wa Zein Hospital, the American University of Beirut and the Lebanese University

In Lebanon, three institutions have joined in a collaborative programme to help build the capacity of health professionals to care for the increasing number of older persons in the country. This programme brings Ain Wa Zein Hospital, a tertiary care hospital in a rural area and its affiliated nursing home, into partnership with the American University of Beirut and the Lebanese University to provide monthly onsite training in geriatrics for three internal medicine residents, two geriatric fellows and 12 master's degree students from each university. The programme also offers a master's programme in gerontology for students who have completed the Bachelor of Science nursing programme.

### Egypt: Ain Shams University

Key programmes to encourage geriatric training are also underway in Egypt. For example, the Geriatrics and Gerontology Department of Ain Shams University's Faculty of Medicine offers a master's degree and a medical degree in geriatric medicine. The degree programmes involve theoretical training, but are also connected to a specialized residency programme and clinical training course. This programme has resulted in an increased number of qualified geriatric specialists and consultants in Egypt and other Arab countries, with approximately 700-1,000 graduates completing the programme each year since 2002.

**Source:** WHO, 2016b.

These ratios are appallingly low when compared with non-Arab countries. For example, the United States has roughly 1 geriatrician for every 5,000-7,000 older persons.[9] Nevertheless, the American Geriatrics Society argues that, ideally, the United States should have one geriatrician for every 700 people aged 65 and above. It should be noted, however, that geriatrics is a relatively new branch of medicine, and has recently started receiving more attention in the region. Egypt and Lebanon have taken the lead in advancing training and research in this respect.[10]

If the shortage of local geriatricians or physicians trained in geriatrics continues in most Arab countries, they will not be prepared for the needs of older persons in the near future, because medical training takes several years. For example, in Morocco, assuming the ratio of older persons per geriatrician in 2015 remains constant, the number of geriatricians would need to almost double by 2030 to be sufficient to serve the older population. If Morocco were to match the ratio of geriatricians to older persons in France, for example, it should already have almost 22 times the number of geriatricians it had in 2015 and it will need about 40 times the current number by 2030.[11] This is an unlikely situation for the near future, given the number of years needed to train specialists; however, substantial progress can still be made if efforts begin now. There is therefore an urgent need to consider alternative solutions, like training all health professionals in geriatric care and attracting specialized physicians from abroad.

## 3. Universal health protection

The lack of geriatric professionals is not the only obstacle to providing adequate medical care for older persons today and in the near future. The lack of universal health protection is a principal obstacle to the health and wellbeing of the population, particularly older persons.

**Table 16.** Estimated deficits in health protection in the Arab region

| Country | Percentage of the population without legal coverage | |
|---|---|---|
| Algeria | 14.8 | 2005 |
| Bahrain | 0.0 | 2006 |
| Comoros | 95.0 | … |
| Djibouti | 70.0 | … |
| Egypt | 48.9 | 2008 |
| Iraq | … | … |
| Jordan | 25.0 | 2006 |
| Kuwait | 0.0 | 2006 |
| Lebanon | 51.7 | 2007 |
| Libya | 0.0 | 2004 |
| Mauritania | 94.0 | 2009 |
| Morocco | 57.7 | 2007 |
| Oman | 3.0 | 2005 |
| State of Palestine | 83.8 | 2004 |
| Qatar | 0.0 | 2006 |
| Saudi Arabia | 74.0 | 2010 |
| Somalia | 80.0 | 2006 |
| Sudan | 70.3 | 2009 |
| Syrian Arab Republic | 10.0 | 2008 |
| Tunisia | 20.0 | 2005 |
| United Arab Emirates | 0.0 | 2010 |
| Yemen | 58.0 | 2003 |

**Source:** ILO, 2017, Statistical Annexes, Table B.13, Deficits in universal health protection by rural/urban areas.

The percentage of the population without health coverage is very high in the Comoros, Djibouti, Mauritania, Saudi Arabia, Somalia, the Sudan and Yemen. Table 16 sets out the most recent data: despite improvements since the publication of that data, deficits in health protection are significant. Out-of-pocket expenditure is also high (as shown in chapter 2), reaching 76 per cent in Yemen. Arab countries must therefore intensify efforts to meet the health needs of the growing number of older persons, who are more susceptible to NCDs and are thus highly vulnerable without proper health coverage.

The ability of older persons to access health services is further compromised in crisis settings, thus increasing their vulnerability to disease and disability (box 3). Countries in conflict suffer from limited resources and weakened institutional capacity, resulting in poor health systems that often do not meet the population's needs.[12] Older persons in conflict-affected countries suffer from limited health services because of limited State resources and damaged medical facilities. Older persons in such countries therefore require special attention from the State and organizations involved in post-war development efforts.

**Box 3.** Study on the health status and needs of older refugees from the Syrian Arab Republic in Lebanon

### Objective

To characterize the physical and emotional conditions, dietary habits, coping practices and living conditions of the older population arriving in Lebanon between March 2011 and March 2013.

### Method

A sample of 210 older refugees was drawn from a listing of 1,800 refugees aged over 60 receiving assistance from the Caritas Lebanon Migrant Center (CLMC) or the Palestinian Women's Humanitarian Organization (PALWHO). CLMC and PALWHO social workers collected qualitative and quantitative information during 2013.

### Results

Two-thirds of older refugees described their health status as poor or very poor. Most reported at least one non-communicable disease, with 60 per cent having hypertension, 47 per cent reporting diabetes, and 30 per cent indicating some form of heart disease. Difficulties in affording medicine were reported by 87 per cent of participants. Physical limitations were common: 47 per cent reported difficulty walking and 24 per cent reported vision loss. About 10 per cent were physically unable to leave their homes and 4 per cent were bedridden. Most required medical aids such as walking canes and eyeglasses. Diet was inadequate, with older person refugees reporting regularly reducing portion sizes, skipping meals, and limiting intake of fruits, vegetables and meats, often to provide more food to younger family members. Some 61 per cent of refugees reported feeling anxious, and significant proportions of older persons reported feeling depressed, lonely and that they were a burden to their families. Around 74 per cent of older refugees indicated varying degrees of dependency on humanitarian assistance.

### Conclusion

The study concluded that older refugees from the Syrian Arab Republic were highly vulnerable, requiring health surveillance and targeted assistance. In general, programmes assisting vulnerable populations focused their services on women and children, thus overlooking older persons.

**Source:** Strong and others, 2015.

## 4. Disability

Increasing chronic health conditions influence the nature and prevalence of disability, which is why ageing often leads to an increase in the number of people at risk of disability. Disability ranges from immobility to blindness and mental limitations, all requiring different health care and social policies. If countries are not prepared, such conditions will inevitably place great pressure on health services. Medical expenses and the burden of long-term care can have a negative impact on labour and productivity. These costs can be mitigated through appropriate prevention mechanisms, including management of chronic diseases and mental health problems.[13] Chapter 2 provided a brief overview of disability in the Arab region. It showed a positive correlation between disability and older age groups, highlighted differences in older persons' disability rates between Arab countries, and showed the increased risk of disability for women across countries.

Disability is believed to be one of the main determinants of future health.[14] To calculate how many years of life expectancy older persons lose because of disability, the present section estimates disability-free life expectancy (DFLE)[15] for selected countries. Table 17 presents life expectancy at age 60 and its components, DFLE and the number of years expected to be lost because of disability. Older men and women in Qatar enjoy the highest life expectancy at 60 years without disability. In Morocco, older men and women experience the highest number of years lost due to disability, amounting to 4.5 and 6.1 years, respectively.

Table 17 indicates that older women are more vulnerable than older men: except for Bahrain and Mauritania, the number of years lost in life expectancy because of disability is higher for women than for men. It also shows that older women in Morocco, Oman, the State of Palestine and Yemen suffer most from the impact of disability, and that they live a higher proportion of their older life (after 60 years) with a disability compared with older women in other countries. This increased

**Table 17.** Life expectancy at 60 with and without disability in selected Arab countries

| Country | Reference year of data on disability | Reference period of the life table used | Male | | | Female | | |
|---|---|---|---|---|---|---|---|---|
| | | | Life expectancy at 60 without disability | Years lost due to disability | Life expectancy with disability | Life expectancy at 60 without disability | Years lost due to disability | Life expectancy with disability |
| Bahrain | 2010 | 2010-2015 | 18.9 | 3 | 15.9 | 20 | 3.2 | 16.9 |
| Egypt | 2016 | 2015-2020 | 16.3 | 1.5 | 14.8 | 18.8 | 2.2 | 16.6 |
| Iraq | 2013 | 2010-2015 | 16.2 | 1.6 | 14.6 | 18.6 | 2.1 | 16.5 |
| Jordan | 2015 | 2015-2020 | 18.2 | 2 | 16.2 | 20.7 | 3 | 17.7 |
| Mauritania | 2013 | 2010-2015 | 15.8 | 0.7 | 15 | 17 | 0.7 | 16.3 |
| Morocco | 2014 | 2010-2015 | 19.2 | 4.5 | 14.7 | 21 | 6.1 | 14.9 |
| Oman | 2010 | 2010-2015 | 19.3 | 2.6 | 16.8 | 22 | 3.5 | 18.5 |
| Qatar | 2010 | 2010-2015 | 20.1 | 1.1 | 19 | 21.6 | 1.6 | 20.1 |
| Saudi Arabia | 2016 | 2015-2020 | 17.9 | 1.2 | 16.7 | 20.3 | 1.8 | 18.5 |
| State of Palestine | 2007 | 2005-2010 | 17.1 | 2.6 | 14.5 | 19.4 | 3.5 | 15.9 |
| Yemen | 2014 | 2010-2015 | 15.4 | 1.8 | 13.6 | 17.1 | 2.9 | 14.2 |

**Source:** ESCWA calculations based on the life table of the medium variant of the *World Population Prospects: The 2017 Revision*, projections and ESCWA data on disability.

vulnerability results from a number of factors. Women live longer than men, and generally have less access to health services and are more exposed to ill health due to pregnancy and poor nutrition. Furthermore, owing to osteoporosis, older women are more prone to fractures than older men, which can result in disability or death.

These findings are in line with the *World Report on Disability 2011*,[16] which warns that in the years ahead, disability will be an even greater concern because its prevalence is on the rise owing to ageing populations and the higher risk of disability in older persons, as well as the global increase in chronic health conditions such as diabetes, cardiovascular disease, cancer and mental health disorders.

Socioeconomic development, medical breakthroughs and ongoing conflicts make the future of disability difficult to predict. Nevertheless, the projections in table 18 provide a broad estimate of the number of older persons who might suffer from a disability in the future. One approach applies the present observed rate of older persons' disability, which stands as a measure of health and function, to the projected number of persons aged 60 and above in the future assuming a constant rate of disability as estimated according to last available data (constant rate scenario in table 18). Two other scenarios are also presented. The first assumes a reduction of this rate by 10 per cent, and the second assumes an increase of the last observed rate by 10 per cent.

Each of the scenarios shows that by 2030, the number of older persons suffering from a disability could increase rapidly. For example, from 2016 to 2030, the number is projected to increase by 167 per cent for males in Saudi Arabia in the constant rate scenario, by 195 per cent if this rate increases by 10 per cent, or by about 142 per cent if the rate decreases by 10 per cent.

**Table 18.** Population aged 60 and above (in thousands) with disabilities in 2030 and 2050 according to three scenarios

| Scenario | | Reduced by 10% | | Constant rate | | Increased by 10% | |
|---|---|---|---|---|---|---|---|
| Country | Year | Male | Female | Male | Female | Male | Female |
| Bahrain | 2010 | – | – | 3 | 3 | – | – |
| | 2030 | 13 | 10 | 15 | 11 | 16 | 12 |
| | 2050 | 27 | 19 | 33 | 24 | 40 | 29 |
| Egypt | 2016 | – | – | 280 | 372 | – | – |
| | 2030 | 363 | 480 | 403 | 534 | 444 | 587 |
| | 2050 | 660 | 859 | 815 | 1 061 | 986 | 1 284 |
| Iraq | 2013 | | | 74 | 98 | – | |
| | 2030 | 122 | 173 | 136 | 192 | 149 | 212 |
| | 2050 | 266 | 357 | 329 | 441 | 398 | 533 |
| Jordan | 2015 | – | – | 25 | 35 | – | – |
| | 2030 | 44 | 60 | 49 | 67 | 54 | 73 |
| | 2050 | 89 | 121 | 110 | 150 | 133 | 181 |
| Saudi Arabia | 2016 | – | – | 65 | 55 | – | |
| | 2030 | 157 | 108 | 174 | 121 | 192 | 133 |
| | 2050 | 296 | 275 | 366 | 340 | 443 | 411 |

| Scenario | | Reduced by 10% | | Constant rate | | Increased by 10% | |
|---|---|---|---|---|---|---|---|
| Country | Year | Male | Female | Male | Female | Male | Female |
| Morocco | 2014 | – | – | 357 | 478 | – | – |
| | 2030 | 623 | 828 | 693 | 920 | 762 | 1 012 |
| | 2050 | 931 | 1 303 | 1 149 | 1 608 | 1 390 | 1 946 |
| Oman | 2010 | – | – | 8 | 7 | – | – |
| | 2030 | 28 | 19 | 31 | 21 | 35 | 23 |
| | 2050 | 83 | 55 | 103 | 68 | 125 | 82 |
| Qatar | 2010 | – | – | 1 | 1 | – | – |
| | 2030 | 4 | 3 | 5 | 3 | 5 | 3 |
| | 2050 | 9 | 9 | 11 | 11 | 13 | 13 |
| State of Palestine | 2007 | – | – | 12 | 14 | – | – |
| | 2030 | 27 | 35 | 30 | 38 | 32 | 42 |
| | 2050 | 58 | 75 | 72 | 92 | 87 | 112 |
| Yemen | 2014 | – | – | 73 | 109 | – | – |
| | 2030 | 102 | 167 | 114 | 186 | 125 | 204 |
| | 2050 | 236 | 362 | 291 | 447 | 352 | 541 |

**Sources:** ESCWA calculations based on *Arab Disability Statistics in Numbers 2017* and *World Population Prospects: The 2017 Revision* (medium variant).
**Note:** The start years are different based on the availability of disability data from the most recent census in each country and according to ESCWA data from www.unescwa.org/sites/www.unescwa.org/files/u593/arab_disability_in_numbers_2017.pdf pp2-3.

One way to reduce the risk of disability in older persons is to promote and ensure 'healthy ageing' through national awareness-raising campaigns that encourage physical exercise and a good diet to prevent health risks related to obesity and physical weakness, among other initiatives.

## D. Education levels of older persons by 2030 and 2050

Education is necessary for the social integration of older individuals. It enables them to develop new skills, strengthen social networks, and feel more able to deal with life's challenges.[17] Adopting a life-course approach to population policies implies that the working-age group of today (the older population of tomorrow) must be given more chances to learn and acquire skills to reinforce resilience and build abilities to better contribute to society in old age.

New population projections by age, sex and education attainment[18] reveal how young, more educated cohorts will replace older cohorts with lower education attainment in the coming decades.[19] The following education categories were considered in the analysis:

- **No education:** never been to school;
- **Primary education:** some primary, completed primary, incomplete lower secondary;
- **Secondary education:** completed lower secondary to incomplete first level of tertiary;
- **Post-secondary education:** Completed first level of tertiary or higher education.

Table 19 presents the results of the medium variant of future trends in the education levels of the older population for all Arab countries.[20] This scenario is based on historical education trends and shows sustained efforts in increasing education attainment throughout youth and young adulthood. It confirms that improvement in the education

**Table 19.** Projected education attainment of older persons in the Arab region (percentage)

| Year | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|
| | No education | Primary | Secondary | Post-secondary | No education | Primary | Secondary | Post-secondary |
| 2015 | 44.5 | 25.1 | 19.2 | 11.2 | 74.1 | 13.9 | 8.2 | 3.8 |
| 2030 | 24.9 | 25.0 | 33.9 | 16.2 | 51.7 | 19.6 | 20.4 | 8.4 |
| 2050 | 11.3 | 20.4 | 46.6 | 21.6 | 22.8 | 19.3 | 38.2 | 19.7 |

**Source:** ESCWA calculations based on Lutz, Butz, and Samir K.C., 2014.

composition of the older population is already pre-programmed into the age structure.

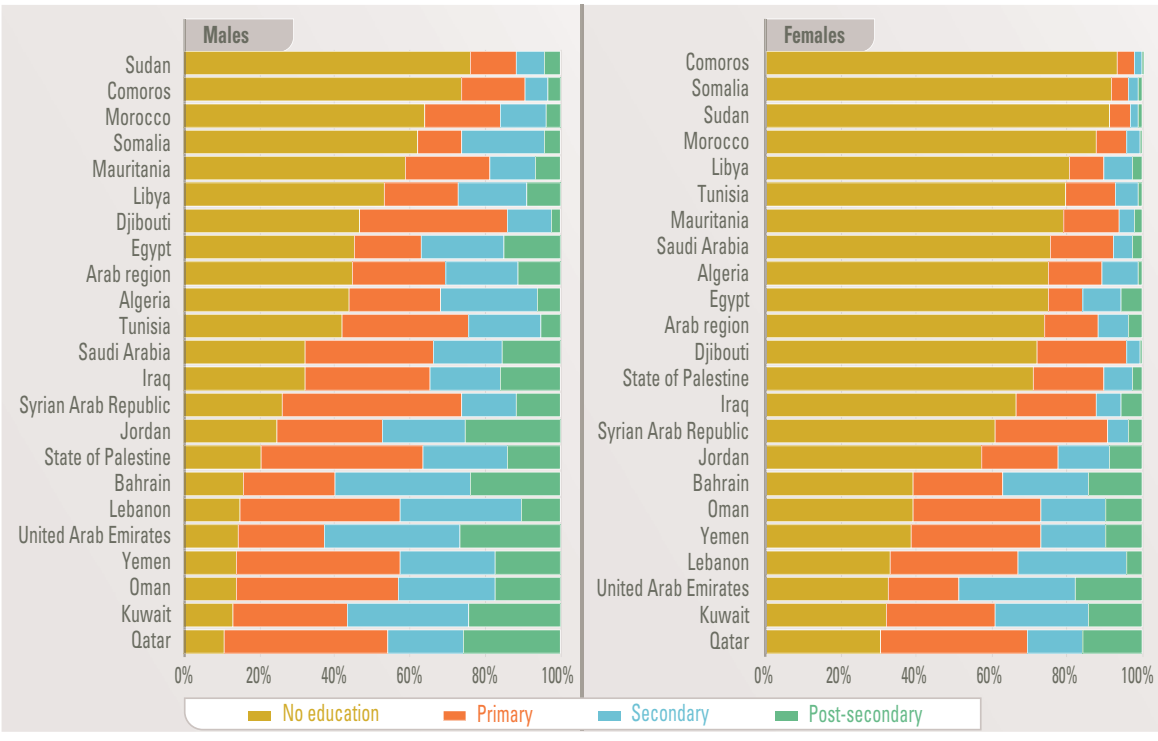
Improvement of the average level of education is predicted to be true for both women and men. In 2015, 44.5 per cent of older males were reported to have no education. Despite the predicted improvement, a quarter of older males (24.9 per cent) are still expected to have no education by 2030. This percentage is projected to drop to 11.3 per cent by 2050. The proportion of male older persons with at least secondary level education will increase from 30.4 per cent in 2015 to 50 per cent in 2030. However, by 2050 around 30 per cent of older males will not have attained a secondary education.

Women aged 60 and above will likely continue to attain lower levels of education than men. Almost three-quarters of older women had no education in 2015. This ratio is predicted to improve slightly; however, more than half of older women will not have an education in 2030, and over a fifth in 2050. These numbers are double those of older men who will have no education over the same period. Almost 7 out of 10 older women (71.3 per cent) are expected to not have a secondary level of education by 2030, and over 4 out of 10 (42.1 per cent) by 2050.

However, these figures mask wide disparities between Arab countries: in some countries, older populations are quite advanced in education, while others lag far behind, as shown in figures 18, 19 and 20 (see annexes XVIII and XIX for additional country-level data). In 2015, the Comoros, Mauritania, Morocco, Somalia and the Sudan had the highest proportions of older persons, both male and female, with no education; while Kuwait, Oman, Qatar and Yemen had the smallest proportions of older males with no education, and Kuwait, Lebanon, Qatar and the United Arab Emirates had the smallest proportions of older females with no education. However, these rankings are expected to change in the future. In 2030, the Comoros, Mauritania, Morocco, Somalia and the Sudan are still expected to have the highest proportions of older persons with no education; while Lebanon, Oman, the State of Palestine and Qatar will likely have the smallest percentage of older males with no education, and Bahrain, Lebanon, Qatar and the United Arab Emirates will have the smallest proportions of older females with no education. In 2050, Libya, Mauritania, Morocco, Somalia and the Sudan are projected to have the highest proportions of older persons with no education; while Bahrain, Lebanon, Qatar and the United Arab Emirates are expected to have the smallest proportion of older females with no education, and Lebanon, the State of Palestine, Qatar and Saudi Arabia will have the smallest proportion of older males with no education.

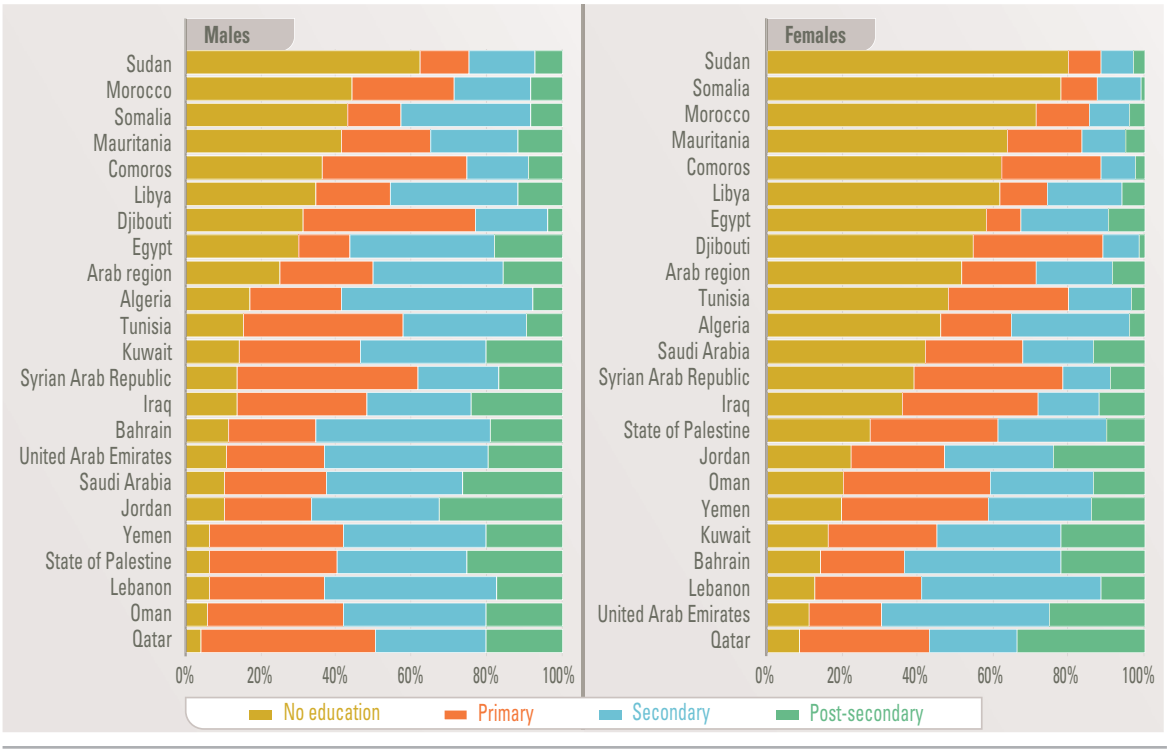
Literacy has a substantial effect on the interests, needs and abilities of older generations.[21] In addition to literacy, higher levels of education are also associated with additional socioeconomic benefits for older persons. Some Arab countries are likely to show improvement in these areas. Bahrain, Jordan, Lebanon, Saudi Arabia and the United Arab Emirates are expected to witness significant improvement in education for men. Moreover, Bahrain, Kuwait,

**Figure 18.** Males and females aged 60 and above by education level, 2015



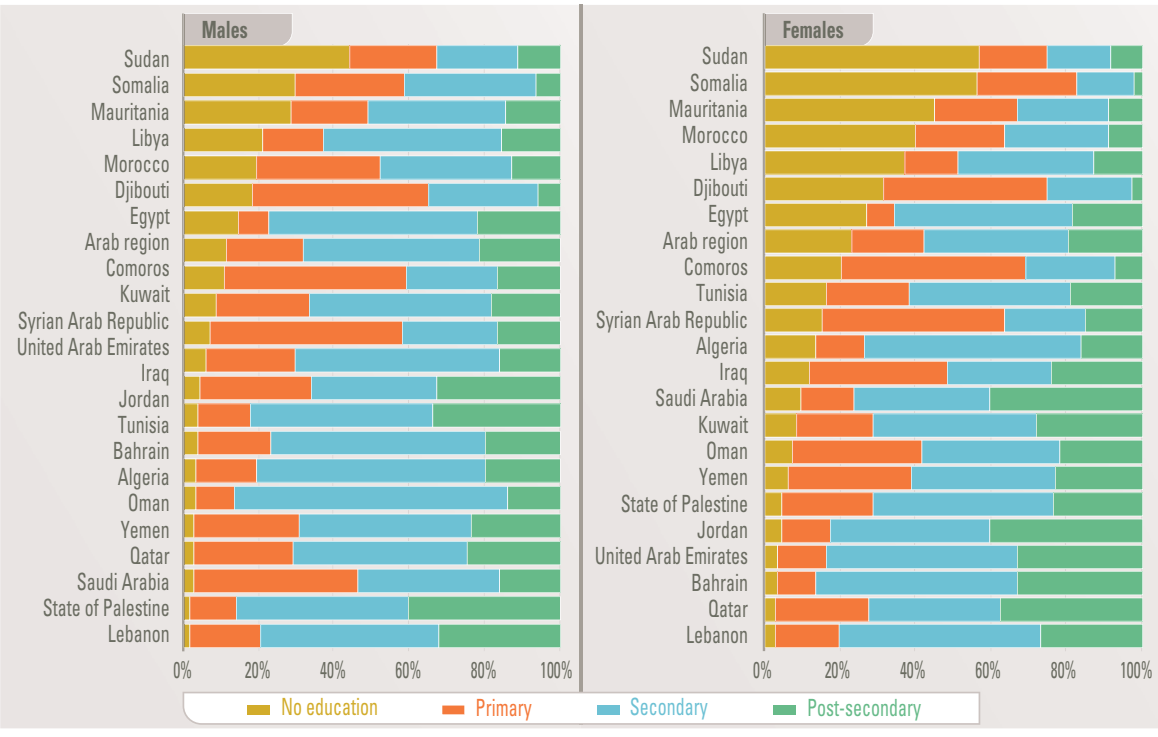

**Source:** ESCWA calculations based on Lutz, Butz and Samir K.C., 2014.

**Figure 19.** Males and females aged 60 and above by education level, 2030




**Source:** ESCWA calculations based on Lutz, Butz and Samir K.C., 2014.

**Figure 20.** Males and females aged 60 and above by education level, 2050




**Source:** ESCWA calculations based on Lutz, Butz and Samir K.C., 2014.

Lebanon, Qatar and the United Arab Emirates will experience improvements for women. Unfortunately, if no additional measures are taken to increase the education levels of the current working-age population, almost half of older men and over 65 per cent of older women in Arab countries are unlikely to reach the secondary level by 2030. Comoros, Djibouti, Mauritania, Morocco and the Sudan are likely to have the smallest proportion of older men and women with at least a secondary education by 2030. These rankings are projected to remain more or less the same by 2050, as shown in figures 19 and 20.

Education and literacy allow older persons to benefit from advances in technology. Many technologies have been developed that might help older adults age with dignity, while monitoring their health and safety (for example, mobile devices, wearable gadgets, Internet-based technologies, telemedicine, video-call doctors' visits and remote patient monitoring) and staying connected to friends and family through online social platforms.[22]

## E. Enabling environment: family care to older persons

As demonstrated in the previous chapters, the majority of care for older persons in the Arab region is provided by family. Nevertheless, demographic and social trends are weakening intergenerational ties and solidarity. Families often face challenges in meeting the care needs of their oldest members, leaving some older adults at risk of having unmet needs given the limited social protection systems in place.

Declining household size, changing living arrangements, rising female participation in the labour market, greater migratory movements, declining fertility and rising mean age of marriage, increased urbanization and higher youth unemployment are likely to decrease the availability of family caregivers and their ability to care for older persons.

Given the progress in life expectancy, and since dependence varies with age, demand for long-term

care is expected to grow in the future. The above-mentioned structural causes leading to the nuclearization of families are expected to persist in the future. Therefore, family caregiving for older persons is expected to face increasing limitations, which might exacerbate pressure on older persons' extended families and on public resources. Countries are therefore urged to take the lead in coordinating efforts to provide support to older persons and their families. Such efforts should include expanding the coverage of social protection systems; bolstering family members' skills and capacity to care for older family members; building stronger synergies with different stakeholders that provide care to older persons, including health institutions, nursing homes and other civil society organizations; and reinforcing long-term care systems.

## F. Conclusion and key findings

The projections provided in the present chapter paint a bleak picture of a rapidly growing group of older persons who will suffer from dire conditions unless Arab countries take immediate steps to remedy their situation, thus allowing older persons to age with dignity across the region. The challenges posed by ageing are compounded by the fast-paced ageing transition. By 2050, Algeria, Kuwait, Lebanon, Libya, Morocco, Saudi Arabia and Tunisia will be aged countries. Consequently, these countries have a very short timeframe to introduce measures that uphold and preserve the human rights of older persons, as enshrined in various global frameworks, including the 2030 Agenda.

A dignified life requires that older persons have a minimum income to survive. However, available statistics indicate that only a minority of older persons today receive pensions. Furthermore, the majority of working-age persons today will likely not receive a pension in the future, unless measures are taken to increase pension coverage.

In terms of health care, older persons, particularly in the Arab least developed countries, suffer from high out-of-pocket expenditure on health care. Therefore, as the number of older persons increases in the future, inclusive health-care coverage must be a priority to ensure their wellbeing. Countries should pay special attention to medical services targeting NCDs, which will likely increase with the rising numbers of older persons. An important dimension for tackling older persons' health needs is increasing the number of geriatric professionals and developing care institutions for older persons, as well as adapting the health-care system towards preventive, promotive, curative and rehabilitative aspects of health.

Older persons' vulnerability is exacerbated by illiteracy, which currently affects the majority of them. In the coming decades, older persons' education levels will improve, but a large share, especially women, will still be uneducated and therefore exposed to vulnerability and weak social integration. Reinforcing advocacy and information campaigns is necessary to encourage both men and women, particularly those who are currently in the working-age group, to achieve literacy.

In a region where care for older persons is primarily a familial responsibility, recent declines in fertility and changing gender roles and living arrangements will have a significant impact on the wellbeing of older persons. For many families, current socio-demographic changes are coinciding with high levels of poverty, unemployment, increased migration and urbanization, and with the outbreak of armed conflict in some countries. Those factors decrease family members' capacity to care for dependent older persons. Consequently, countries must prioritize developing policies that provide affordable, accessible and quality care services (such as day care and supplementary home-based care) for older persons who need them, especially women. Moreover, policies should support families providing care for older persons, promote intergenerational and intragenerational solidarity, and offer training to family caregivers.

Ensuring the wellbeing and human rights of older persons requires countries to adopt a holistic life-course approach to ageing, reflected in coordinated strategies and programmes and the involvement of all relevant stakeholders to ensure inclusive and comprehensive care for older persons. The collection of accurate, standardized and disaggregated data is also of vital importance for evidence-based and targeted policies.

To support older persons' right to age with dignity, a paradigm shift in how Governments and societies view older persons is required. The perspective that older persons are burdens who depend on State and family assistance must be replaced with a rights-based approach to protecting and empowering older persons which also values their contributions to society.

# 5. Developing Ageing Policies in the Arab Region: Addressing the Needs of Older Persons Now, in 2030 and beyond

## A. Introduction

The 2030 Agenda for Sustainable Development calls upon Governments to "leave no one behind". The SDGs aim to combat poverty experienced by various vulnerable groups, and to ensure human growth and reduce income and security inequalities. In the light of population ageing, it is essential for Governments to develop appropriate social protection systems, including pension schemes, and more inclusive and holistic care systems for older persons. Such parallel developments are paramount to ensuring the wellbeing, rights, social inclusion and income security of older persons. Addressing the needs of older persons is also relevant to achieving a number of SDGs, including ensuring poverty reduction and gender equality, reducing inequalities, and achieving economic growth, decent work, and inclusive and sustainable cities. Adopting a life-course perspective by developing social protection policies and schemes for all age groups enhances future generations' opportunities to enjoy more fulfilling and dignified experiences in old age. A life-course approach is consistent with the SDGs, particularly SDG3 on ensuring healthy lives and promoting wellbeing for all at all ages.

The comprehensive analyses provided in the present report show that the Arab region will experience considerable demographic and socioeconomic changes over the coming decades, including changes in family structures, migration, urbanization, social forces and ageing populations. Population ageing is a significant challenge for policymakers in the region: the number of older persons (aged 60 years and above) is currently close to 27 million and is projected to exceed 100 million by 2050, thus constituting over 15 per cent of the population in 2050. By 2030, the population of persons aged 60 and above and 75 and above will reach around 49.6 million and 10.5 million, respectively.

It is critical to acknowledge the economic and social value of older persons, while ensuring their social protection and income security in old age. Older persons will continue to make significant contributions to human and economic growth in the region through formal and informal participation in the labour market, asset and resource transfers to families and communities, instrumental support to their families, and political participation. However, the present report highlights the variable experiences of older persons, with many subjected to vulnerabilities regarding gender, lack of formal labour market participation, low education attainment and poor health, among other things. Universal social protection systems, including social protection floors, aim to ensure that all social groups are cared for and play a critical role in alleviating poverty and reducing inequalities in old age.

While higher life expectancy should be celebrated and the experiences of older persons should be harnessed and utilized, population ageing entails an increase in the need for long-term care, defined as a set of activities and relationships at the intersection of the State, market and family that aims to meet the health and social needs of older persons. There are two main (often parallel) long-term care systems: informal care providers, such as unpaid family members and paid homecare workers employed by the family; and formal care providers, such as nursing aides and support workers employed by regulated bodies. Chapter 3 of the present report shows that most long-term care delivered to older persons in the Arab region is provided by family members, mainly women, or

by other informal caregivers through family and intergenerational support traditions. Such two-directional intergenerational support is guided by 'unspoken' moral codes that emphasize respect for older persons within the family and set certain expectations and care exchange duties, including financial and other support for older generations.

However, social dynamics, such as changes in marriage and co-residency patterns and migration, threaten the viability and sustainability of traditional intergenerational support for older persons. Ageing policies must therefore take a more prominent position within wider social development initiatives in the region so that Governments can improve protection for all social groups and meet national and international development goals.

Other political and economic developments are taking place in the region, which add to the complexities facing policymakers in addressing ageing and long-term care needs, notably armed conflict with serious repercussions for societies and older persons caused by financial loss, environmental destruction, and loss of family members including caregivers. The region also faces broader economic challenges and limited resources. Even rich GCC countries are experiencing economic uncertainties associated with volatile oil prices and a global shift towards renewable energy, thus stressing the need for economic diversification. Such challenges, compounded by high unemployment and social and health inequalities, require flexible and adaptable policy reforms.

## B. Developing ageing policies in the Arab region

For Arab societies to meet the demands associated with aged populations, there is an immediate need to prioritize specific policy goals and plans under a consistent framework related to national and international policies, such as the SDGs and the International Conference on Population and Development. Such consistency can improve and expand current efforts to deliver high-quality ageing policies in many countries within an integrated structure.

The SDGs call on Governments to achieve three sets of goals simultaneously: economic growth and poverty reduction; social inclusion; and environmental sustainability. SDGs relevant to the needs of older persons include SDG3 on ensuring healthy lives and promoting wellbeing for all at all ages; SDG5 on achieving gender equality and empowering all women and girls; and SDG11 on making cities and human settlements inclusive, safe, resilient and sustainable. Success entails embracing new approaches that are more adapted to multisectoral action. In all fields, combining economic growth and social inclusion relies heavily on transforming economies and developing models and value systems that underpin social sectors such as education, health and social care. Consequently, the SDGs can only be achieved by adopting human rights-based well-planed policies and ensuring long-term investments in economic, human and environmental capital.

It is also important for Governments to be aware of relevant international policies and legislative frameworks that ensure the social inclusion and wellbeing of older persons when adopting the policy recommendations set out in the present report. International policies address the social protection of older persons (the 1948 Universal Declaration of Human Rights and the Social Protection Floors Recommendation, 2012 (No. 202)); active ageing (the 2002 Madrid International Plan of Action on Ageing, and the 2012 Vienna Ministerial Declaration on Ageing); age-based discrimination (Article 21 of the European Union Charter of Fundamental Rights); and accessibility to public transport, goods and services (the United Nations Principles for Older Persons resolution 46/91, recommendation 27 of the Convention on the Elimination of all Forms of Discrimination against Women and the European Disability Strategy 2010-2020).

Some Arab countries have developed strategies and implemented public policy measures to

**Table 20.** Legal frameworks and strategies on older persons in Arab countries

| Country | Iraq | Jordan | Kuwait | Oman | State of Palestine | Sudan | Tunisia |
|---|---|---|---|---|---|---|---|
| Legal framework or strategy | National Strategy for the Prevention and Control of Non-Communicable Diseases | Jordanian National Strategy for Old People (2008) | Five-year plan 2016-2021 and National Senior Health Care Strategy for Old People | Social Action Strategy (Ministry of Social Development) and Strategy for the Elderly (Ministry of Health) | National Strategy for the Elderly in Palestine 2016-2020 | National Policy for the Elderly 2009 | National Policy for the Elderly 2016-2020 |

**Source:** Madrid International Plan of Action on Ageing, 2017, based on the results of a survey carried out by ESCWA for the Third Regional Review of MIPAA, 2002.

improve the situation of older persons (table 20). While the adoption of those policies is a positive first step, their inclusiveness and the efficiency of operationalizing them into concrete and actionable programmes determine policy success in protecting older persons' rights and improving their lives.

In Egypt, Kuwait and the State of Palestine, public policy initiatives include the development of care centres and health hubs that provide health, social and psychological support to older adults. Jordan has established nursing homes (tax exempt) and day-care centres for older persons. The Syrian Arab Republic has set up several health-care centres that provide geriatric care. These public initiatives are supplemented by civil society initiatives. For example, Bahrain, Egypt, Morocco, the State of Palestine and Tunisia have developed home-based services, such as mobile health units, which provide care to older adults in their homes. In Lebanon, civil society plays an important role in caring for older persons.

The present report recommends that Arab countries adopt a set of ageing policies with the following two key components: ensuring adequate social protection systems and mechanisms for older persons; and developing sustainable long-term care systems, including policies and services for older persons.

## 1. Social protection systems for older persons

Social protection plays a crucial role in ensuring the income security, dignity and wellbeing of older persons, as recognized in recommendations from international organizations such as the Social Protection Floors Recommendation, 2012 (No. 202) and the SDGs. Pensions play a crucial role in guaranteeing income security in old age. Analysis from OECD countries shows a strong correlation between the level of pension coverage and poverty among older persons in different countries.[1]

One key recommendation for pension system reform is to ensure the diversification of pension systems: a mix of pension systems (public, private, contributory and non-contributory) should be put in place to address pension coverage in the Arab region. Given the prevalence of informal employment in the region, it is vital to develop supplementary pension systems accessible to informal workers. Furthermore, in view of the large number of migrant workers in the region, substantial efforts should be made to link migrant workers to their home countries' pension systems. In addition to developing a diverse basket of rights-based pension schemes, it is necessary to establish adequate standards and regulatory mechanisms to enhance the security of pension investments and ensure gender equality, non-discrimination and fairness in pension coverage for all older persons.

Guaranteeing cash income from pensions is a key area of policy development. It is however important to take into account the vulnerability of certain groups of older persons. For many older women with low levels of education, formal employment and access to the credit market, other social protection mechanisms (cash and in-kind) specific to old age are required. Access to housing and energy subsidies, health and social-care coverage, and other welfare benefits for older persons have not been covered in the present report because of data limitations, but should be considered. In addition to income security, national social protection floors should guarantee access to a nationally defined set of goods and services, constituting essential health care:[2] ensuring health and care coverage among older persons protects them from health-related poverty.

### 2. Long-term care systems for older persons

Gains in life expectancy require tackling the social and environmental determinants of health across the life course. Women in the Arab region bear a disproportionate amount of responsibility in caring for older and younger persons. As such, women's ability to take up employment is highly dependent on the provision of quality care services for older persons and a supportive enabling environment in both the family and society. Consequently, long-term care, including home care and retirement homes, is vital to assisting both older persons and family members caring for them.

Population growth combined with population ageing in most Arab countries place considerable pressure on economic, social and educational infrastructures. The number of older persons with non-communicable diseases in the region is expected to reach 1.3 million in 2030, which is nearly 50 per cent higher than in 2015. Stigma, denial and inadequate financial resources remain key barriers to proper treatment and care for chronic diseases, including dementia, whose direct and indirect economic costs are estimated to be higher than the costs of any other major disease.

Chapter 2 shows that older women, who constitute the majority of older persons due to differentials in gender life expectancy, experience higher burden of disease with higher rates of disability at old age than men. Older women in the region are over-reliant on intergenerational solidarity, subsidies and charities as the main source of support. Ageing policies must therefore be sensitive to a range of unmet health and social needs among older persons, while acknowledging the differentiated impact of sex, disability, and socioeconomic and health status. Such policies should also be mindful of the multiple roles of adult children and older persons, especially regarding the expectation to provide informal care to older parents.

Although some Arab countries provide good long-term care services, serious concerns remain about the quality, fairness and sustainability of such services in most countries, even when older persons and their families have sufficient funds to privately purchase services. There is a dire need for Arab countries to establish national plans that address these issues in comprehensive ways, towards a strong long-term care mixed-market provider base that is adequately staffed and regulated and accessible to all older persons with economic, health and social needs.

## C. Success factors for ageing policies

Guided by a life-course approach, initiatives that enhance social protection and security, and those specific to improving health and social outcomes among younger cohorts, should be viewed as integral to ageing policies. Ageing policies should acknowledge the following key dimensions: human rights and equality in old age; person-centeredness in providing care and support; ageing in place and enabling environments; the role of social capital and healthy ageing; and tackling health inequalities in old age. Other public policies that support sustainable ageing include: ensuring that central and local governments are taking the lead in shaping aged

care and support policies, programmes and providers; developing an appropriately trained long-term care workforce; utilizing developments in innovative technologies to support older populations; and ensuring strong data and evidence to inform practices and policies.

### 1. Human rights and equality in old age

Recent years have seen rising interest in the quality of life and dignity of older persons around the world. The human rights of older persons have become a prominent topic within the discussions and recommendations of regional and international organizations, such as the United Nations and the Council of Europe,[3] owing to the demographic changes unfolding across the world. There is also greater awareness that old age can exacerbate discrimination and vulnerability to human rights abuses. Consequently, there is increased advocacy for a human rights-based approach to care by international organizations, academics, policymakers and civil society organizations, with the broad aim of influencing policymakers and health-care providers to provide better quality services. This is taking place concurrently with a debate on private businesses as key players in long-term care markets, and their responsibility to respect international human rights.

### 2. Person-centeredness

Current international developments in long-term care are moving towards personalized services aimed at enabling people to plan their own futures and access the services that they need. Instead of providing services aimed at broad categories of needs, individual needs are assessed and a personalized plan of services is developed. Some elements of cash and in-kind benefits are usually included within such personalized plans. This approach embraces the principles of independence, choice, inclusion, equality and empowerment as the foundations of service provision. New services should continue to be developed under this framework, particularly those related to home and community-based care that support ageing in place, independence and the empowerment of older persons.[4]

### 3. Ageing in place and enabling environment

It is important to recognize the benefits of ageing in place, and apply them to long-term care policies in the region. Within the context of ageing in place, home-based care becomes a focal point of long-term care provision, under a framework of wider activities that promote community-based support networks and activities inclusive to older persons and their informal caregivers. Such policies encourage older persons to remain at home in their own communities for as long as possible by providing suitable and equitable support to them and their informal caregivers. In later phases of disease progression, such as the progressive stages of dementia, there is a need for residential, and in some cases tailored, care services for older persons. Residential care can be delivered in assisted-living facilities and nursing homes, among other locations. New approaches in residential care respect older persons' individuality, with places of care regarded as 'homes' rather than somewhere to keep older persons away from society. This model promotes dignity in later stages of life when individuals might require higher levels of support and care. Chapter 3 provided some examples of residential care services in Lebanon; there are also excellent examples from the European experience that could be adapted to the Arab cultural context such as the Dutch intergenerational senior residence programme;[5] the Norwegian Blidensol residential home that has developed clear guidelines to increase the autonomy of older persons, including those in the later stages of dementia;[6] and 'adopt a grandmother' projects introduced in Germany, Poland and the United Kingdom.[7]

Ageing in place policies must ensure that older persons live in an enabling environment. This is particularly important in addressing SDG11 on making cities and human settlements inclusive, safe, resilient and sustainable. A well-connected social environment for older persons in the

region is a key source of emotional, financial and practical support and care later in life. Access to adequate housing and transportation and the availability of local health and care services, leisure, and life-long learning and work opportunities have a significant impact on the health and wellbeing of older persons. However, the analysis in chapter 2 highlights the scarcity of data to establish the impact of environment on older persons' health and wellbeing in the region. Governments should therefore actively collect data and evidence to support new programmes aimed at improving the physical and social environments where older persons live.

### 4. Role of social capital within comprehensive social protection systems

Social capital is important for aged care across the region and should complement an inclusive system of social protection and support mechanisms. Social capital covers a wide range of services, including providing social support and specialist services such as home-based care, mobile health clinics and dementia services. A review of evidence shows that such support networks – through families, communities and charitable organizations – form the core system of aged care in the Arab region. Governments should adopt an ageing policy model that capitalizes on and enhances such resources. A social-capital aged-care model has become a priority in many developed countries owing to the following two factors: recognizing that supporting communities results in the indirect provision of long-term care, not only to the individual older person but also to a broader range of actors; and that social capital may be seen as a substitute for economic and human capital when State funding is inadequate. In the context of the Arab region, where family solidarity and community cohesion are considered key features of society, a social-capital care model could be adapted relatively easily. This would require Governments to invest in activities that grow social capital and positively impact people's lives by reducing their reliance on expensive formal-health and social-care systems, in addition to planning for social protection and formal health-care support mechanisms.

### 5. Addressing health and income inequalities in old age

There are various intersecting aspects of health inequalities in old age, including geographical, socioeconomic, ethnic, cultural and sex characteristics. While life expectancy at age 60 is increasing in all Arab countries, older persons' health status and quality of life are not necessarily good. Available data point to significant sex variations in health and quality of life at old age, with women reportedly suffering from a higher burden of disease. This is compounded, in many cases, by higher levels of poverty, lack of employment opportunities and weaker social protection coverage among women. It is paramount for Governments to explicitly address such sex variations in the region when developing their policies and programmes. This is particularly important for SDG5 on achieving gender equality and empowering all women and girls. Policies that target progressive redistribution of wealth/income with focused investments for deprived and vulnerable populations, combined with tight regulatory frameworks, have had the largest impact in reducing health inequalities in countries such as the United Kingdom.[8]

There is growing policy and public interest in active ageing and life-long learning to enhance the lives of older persons by improving health outcomes, ensuring participation, and reducing isolation among older persons. The WHO 'active ageing' policy framework emphasizes the need for a multisectoral approach to ensure that older persons remain a resource to their families, communities and economies.[9] This framework recommends the following four policy components: preventing and reducing disabilities, non-communicable disease and mortality burdens; reducing risk factors associated with major disease; developing high quality, accessible and affordable health and social-care services; and providing information and training to informal caregivers.

As previously discussed, low coverage of pensions and social assistance are of great

concern given their impact on people vulnerable to poverty and poor health. It is therefore necessary to adopt a systematic approach to pension and social assistance reforms, and to exploit population dividends by enhancing labour participation and setting tighter regulations to ensure fair and equitable contributions.
To that end, it is important to diversify pension coverage by establishing various pension membership channels, and to introduce means for accountability and investment governance.

### 6. Governments' role in market shaping

Arab countries should take the lead in achieving a responsive, diverse and sustainable market of long-term care providers, who can provide high-quality personalized care and meet older persons' needs. Central and local governments are expected to shape the market, primarily by commissioning quality outcome-based services that focus on wellbeing, among other interventions. This approach entails emphasizing prevention and enablement, reducing loneliness and social isolation, and promoting older persons' independence as a means of achieving desired outcomes while ensuring choice in how needs are met. Outcomes should therefore be used as principal measures of service quality. While central and local governments are not expected to collect the detailed financial metrics, accounts and business plans of long-term care providers, they must ensure that people in their area have a variety of high quality services to choose from. Central and local governments must therefore take into account the sustainability of the market as a whole, including schemes that adjust out-of-pocket expenses to older persons' income levels.

Personalization of care is also about ensuring an integrated community-based approach for all older persons, which involves building community capacity and local strategic commissioning so that people have a varied choice of support networks, regardless of age, disability, identity or wealth. This can be achieved by analysing the strengths and weaknesses of the community and groups, and working across governmental departments to ensure that older persons can access services such as transport, leisure, education, housing and health, as well as employment opportunities. The State should take the lead in identifying priorities for community groups and non-governmental organizations. Specific mechanisms that could form part of aged care national plans include reduced taxation and providing subsidized accommodation for organizations that provide services, such as mobile clinics for older persons in remote areas, sporting activities and day-care centres.

### 7. Ensuring a sustainable and well-trained long-term care workforce

With service expansion, there is a strong need to develop a long-term care workforce; however, the projected demand for different groups within this workforce depends on a detailed analysis of each Arab country, taking into account increased demand, levels of service expansion, new service variety, projected complexities of needs, and regulations related to the ratio of staff to users. International initiatives can improve recruitment when adapted to the Arab context. Possible initiatives include recruiting unemployed young people, particularly women, volunteers and healthy older persons as an integral part of the long-term care workforce;[10] establishing a career route with clear pathways that lead to professional status; and recruiting unemployed young people who are seeking new careers.[11]

It is important to ensure that long-term care providers have basic gerontological and geriatric skills, as well as the more general competencies needed to work in integrated systems, including communication skills, teamwork, and information and communication technology skills. Chapter 4 showed that geriatric training is still in its infancy in the region, but there are some good examples of developments in geriatric and gerontology training in Egypt and Lebanon. Despite these new initiatives, there will be a considerable increase in demand for geriatric physicians to match the projected increase in the number of older persons requiring such services by 2030. Governments

should therefore establish similar training programmes in all Arab countries. In addition to training highly skilled professional medical staff, including geriatric doctors and nurses, there is a need to form a new cadre of workers to provide long-term care in a dignifying, sensitive and respectful manner. Staff should be trained and supervised regularly to ensure that they have the right skills to meet older persons' needs. Since home-based care is provided within older persons' own environment, older persons should feel safe and comfortable with long-term care staff, meaning that gender-sensitive allocation of workers should be considered, among other issues.

### 8. Role of innovative technologies in supporting older persons

Innovative technologies are becoming increasingly important in supporting older persons across the world.[12] They can contribute to decreasing the burden of health and social-care costs. Assistive technology can encourage independence and autonomy in older persons, thus improving their quality of life. It can also aid in risk management, thus enabling older persons to live in their homes for longer and providing support and reassurance to caregivers.[13] Communication devices like smartphones and tablets make technology more easily accessible, and social media enhances access to emotional support from family members even if they live far away, as indicated in chapter 3.

Using assistive and advanced technologies has considerable benefits,[14] but their ability to meet older persons' health and social-care needs depends on several factors, including infrastructure, affordability of and access to technology, and individual characteristics such as levels of computer literacy, wealth and ability to access new technology. Based on the evidence in the present report, such technological solutions seem to be applicable to only a small share of current older persons in the region, who can afford and use them. However, given the high rate of access to mobile phones and Internet among younger age groups in the region,[15] advanced technology is a promising care option for the next generations of older people. Governments should work with the business sector to enhance the affordability, accessibility and usability of various devices and technological platforms to benefit current and future generations of older persons, their families and informal caregivers. Schemes aimed at increasing computer literacy among older (and near old) individuals should also be introduced, in line with recommended active ageing and life-long learning policies.

### 9. Need for better data and evidence

Current, representative and reliable data are essential for both policy formulation and evaluation. Progress in social indicators and wellbeing is determined by greater attention to the social inclusion and meaningful participation of all social groups, including women, children, young people and older persons. Comprehensive, up-to-date and representative data and indicators are essential to identify gaps in service provision and access; ensure the implementations of policy goals; monitor change and progress; evaluate programmes and activities; and enhance policies, programmes and services.

The comprehensive analyses presented in the present report make use of the most relevant data available in the region, and highlight several gaps in the range and quality of such data. There are clear gaps in relation to disaggregated data on the health, economic and social status of older persons, which should be bridged to better understand variations in quality of life according to different characteristics such as gender, marital status, geographic location (urban/rural) and socioeconomic status. Limited information exists on the prevalence of health conditions among older persons. Furthermore, there is fragmented data on the types and range of services available to older persons, with almost no indicators on quality of care or workforce structures. The same is true for data and information on pension systems and income security in old age. There is therefore an urgent need for country-specific reviews of the relevance, quality and usability of data available for policymakers and strategic development.

Without accurate data, planning and implementation of policies and programmes is not efficient or comprehensive. Data and indicators allow Governments to show progress towards achieving the SDGs. A new set of metrics to measure progress in wellbeing and in achieving social and economic policy synergies is also needed. International developments in ageing research provide valuable lessons and potential frameworks for collecting and utilizing data related to old age. There are several indicators recommended by the World Bank,[16] the United Nations[17] and WHO.[18] Furthermore, there are several international composite indices for older persons such as the OECD Better Life Index,[19] Global AgeWatch[20] and the Active Ageing Index,[21] which provide useful frameworks that guide data collection and ensure data consistency for use in planning appropriate services and policy programmes. These composite indices are useful in understanding the interplay between older persons' experiences by looking at their economic and social participation, as well as their health, income security, environment and capabilities.

## D. Financing ageing policies

The present report has shown that the main source of support for older persons is either their personal savings or assistance from family members. This situation is not sustainable given the growing number of older persons, limited social protection systems, high rates of chronic disease in old age, health inequalities among older persons, and changing social patterns. Arab countries must therefore adopt a life-course approach to development policies, and expand expenditures on health, education and social protection in the coming decades to support human capital development associated with ageing populations and growth.

Ageing will exert a financial burden on countries if they do not take appropriate measures to forecast and respond to it. Most Arab countries will benefit from a fast approaching demographic dividend, which if properly planned for could positively benefit the economy and finance ageing policies. Governments should work in a cost-effective manner when developing and implementing ageing policies. This implies designing evidence-based intervention programmes; considering how effective service provision can be achieved with existing institutions; and developing the necessary human resources. Cost-effective funding should also promote partnerships between governmental departments and bodies, so as to pool or work across budgets and funding streams.

There are several ways for Governments to fund ageing. A principal income-generating mechanism is tax revenue, including income taxation: the more people in active employment, the more tax is generated for social protection schemes, including ageing policies. The 2030 Agenda alludes to progressive taxation on income and wealth as a means of ensuring equitable sharing of wealth and financing universal social protection. Rethinking fiscal reform and taxation policies is therefore a priority for Arab countries to ensure sustainable and inclusive development. Policies to enhance access to employment can indirectly impact the ageing transition in two key ways: by ensuring that the greatest possible number of people are active in the labour market and contribute to income tax; and by enhancing informal caregivers' work-life balance, which enables them to maintain employment while providing informal care. Furthermore, subsidies can be used to expand long-term care services, which in turn promote the role of non-governmental organizations, charities and the third sector in providing affordable, accessible and high quality long-term care services. Subsidies could also take the form of tax-incentives to private long-term care providers that meet certain criteria, or that provide placements for older persons on very low income who are eligible for State funding through national social protection schemes.[22]

Another option is introducing a long-term care insurance system. There are several aspects to consider when deciding whether a care

insurance system is suitable for a country's social, demographic and economic situation. Existing care insurance systems in other countries require the presence of a strong care service market to allow privately insured individuals to purchase care services within a regulated, standardized and competitive market.[23] For this type of system to work, Arab countries must develop current long-term care services to include more diverse care-service products before introducing a long-term care insurance system. The role of central and local governments is paramount to ensuring the quality of care in people's homes and in other settings when developing a mixed market of long-term care products and services. However, a mixed-market approach requires improved financial regulation to control the insurance market, particularly one that includes pro-poor provisions and compliance rules (such as setting insurance premiums), to ensure that these schemes are beneficial to all.

Evidence in the present report suggests considerable gaps in public, private and other non-governmental provision of home-based care in the Arab region, with increasing numbers of private retirement homes that charge high fees where families are left with no alternative but to place their parents in these institutions. With care insurance, Governments are responsible for the provision of (in-kind or cash) benefits to the poor and maintain a social protection floor to meet relevant international goals. Moreover, based on the experience of OECD countries, it is also important for the State to consider funding care provision for the 'near poor' to reduce potential inequalities in old age.

The relatively young population structure in Arab countries might provide saving opportunities for a number of years, which could support the introduction of long-term care insurance schemes. This is based on the assumption of high employment rates where income from insurance premiums exceeds the cost of care for older persons.[24] However, the employment rate in the region, particularly among young people and women, is relatively modest, and female labour participation is the lowest globally. Therefore, in addition to creating jobs, Governments are advised to design financial instruments that encourage young people to save for old age, such as bonds and pension schemes.

The diverse economic and income structures in Arab countries, combined with variable employment rates and ageing, call for countries in the region to determine the precise financial implications of introducing long-term care insurance systems. It is highly recommended that Arab countries conduct country-specific and thorough studies to establish whether and when a long-term care insurance option is recommended; and the 'optimal' structure of an insurance system that is specific to their economic, social and demographic context to inform decision-making.

## E. Planning and implementation of ageing policies in the Arab region

The past decade has witnessed some policy developments in relation to ageing and long-term care in the region, such as the Egyptian constitution (2014); the Jordanian national strategy for older people (2008) and the five-year plan (2016-2021); and the Kuwaiti National Health Care Strategy for older people. However, even within these policies, long-term care is usually regarded as a family matter rather than a societal or governmental responsibility. For example, the Arab Plan of Action on Ageing (2002-2012) endorses intergenerational solidarity for social development, and urges countries to develop initiatives that strengthen continuous intergenerational exchange, train young people in activities aimed at benefiting older persons, and promote intergenerational reciprocity and exchange.[25]

To meet the 2030 Agenda, Governments are required to view ageing planning as an integral part of a wider national strategy and to consider

how it can be integrated into other public policy planning, such as national health, labour and social development strategies. A system approach is therefore required where social outcomes are influenced by how different parts of Government interconnect and how well they take into account underlying causal drivers. In that sense, an ageing framework needs to encompass a range of coordinated interventions, including social insurance, social assistance, and availability and access to essential services.

Reforming a system is a huge task: a clear planning strategy with achievable steps and phases is needed for the short term (first five years), medium term (5-10 years) and longer term (10-20 years). Many of the above recommendations require changes in culture, capacity-building, integrated work and effective social capital structure, and would need time to develop and flourish. A conceptual strategic plan for the short, medium and long term is proposed below. Some Arab countries are at a more advanced stage of population ageing, or have more developed health and social services capacity. Consequently, some countries might find that they need to address fewer issues listed under the short-term goals and would benefit from a combination of short and medium-term goals.

The core goals for recommended social protection and long-term care policies are to ensure income security, and to meet the long-term care needs of current older persons and those of younger individuals who will reach old age in the coming decades. Policies must therefore adopt a life-course approach, and include proactive and preventative policies to enhance the wellbeing and quality of life of current and future cohorts of older persons in the region. Governments also need to make use of current population dividends and acknowledge the role played by families and informal caregivers in supporting older persons. To that end, the present report recommends a social capital model of long-term care based on respecting older persons' human rights, which encourages the principles of person-centred care and ageing in place.

Guided by the 2030 Agenda and other international policy frameworks, the policies recommended in the present chapter should undertake the following:

1. **Ensure legislation is in place for a multisectoral approach to ageing that guarantees older persons' human rights and social inclusion;**

2. **Improve national and local pensions, benefits and cash-transfer schemes by:**

a. Providing pension coverage for different groups, including workers in the informal sector;
b. Focusing on regional, gender, race and socioeconomic status variations;
c. Improving the governance and scale of pension funds;
d. Improving the sustainability, affordability and equity of pension systems;
e. Ensuring portability of benefits for returning migrants to provide better social and income security;
f. Ensuring the availability of cash and in-kind social benefits to older persons, including:

   - Support with housing;
   - Utility subsidiary;
   - Access to transportation;
   - Access to leisure and life-long learning opportunities;

3. **Develop systems for long-term care provision by:**

a. Establishing the foundations necessary for developing long-term care systems;
b. Ensuring access to a diverse set of services (with a focus on personalized home-based care) that provide older persons with person-centred and integrated care;
c. Developing strategic plans to address the needs of future older persons throughout their life-course;
d. Setting regulations and evaluation mechanisms that ensure:

- An adequate range of long-term care services, including home-based, community and residential services;
- Regulatory standards for quality assurance of services and effective partnerships between various actors and sectors;
- Diverse quality long-term care services;

**4. Enhance support systems for informal caregivers by:**

a. Introducing adequate national and local policies, such as cash transfers and tax efficient policies, and flexible-working employment policies for employees with caring responsibilities;

**5. Generate and ring-fence adequate funding to expand social protection systems and ensure universal health and long-term care provision;**

**6. Improve measurement, monitoring and understanding of the situation of older persons and their caregivers by:**

a. Identifying gaps in data and indicators at the national and local levels:
   - In relation to older persons' health and wellbeing, and access to services, civic participation, housing and active ageing, among others;
   - In relation to financial and social security coverage among older persons;

b. Agreeing on metrics, measures and analytical approaches to wellbeing, income security and social inclusion in old age;

c. Establishing new data collection programmes:
   - Including data on the health and economic and social status of older persons and those aged 40 and above as the next generation of older persons;

d. Developing monitoring and evaluation systems to ensure the progress of social protection and long-term care programmes to achieve the SDGs;

**7. Build and maintain a sustainable and well-trained health and long-term care workforce by:**

a. Investing in training and qualification programmes for professional long-term care staff, as well as other less qualified but well-trained staff such as care workers, personal assistants, support workers and nursing aides;

b. Setting up recruitment campaigns to attract new recruits to the sector from across society;

c. Offering career pathways within the sector;

**8. Ensure the representation of older persons and their informal caregivers in the decision-making process through the following mechanisms:**

a. Establishing consultative processes in policy development;

b. Ensuring advocacy and voice of various groups of older persons;

c. Forming working and advisory groups for different work programmes that include active representation from older persons;

**9. Create age-friendly environments by:**

a. Combatting ageism;

b. Enabling autonomy;

c. Supporting health ageing policies at the local and national levels.

## 1. Short-term goals for developing and implementing ageing policies

Strong foundations are needed for a new policy approach to guarantee that older persons age with dignity. To that end, Governments need to work with other social sectors to closely link policies to the economy and to other broader goals, such as the SDGs, so as to thoroughly assess gaps in social protection and long-term care coverage at the national and local levels and develop national strategies to implement and follow over the medium and long term. It is important to develop SMART objectives and action plans to accompany national ageing strategies, so as to achieve specified goals by keeping different stakeholders focused on outcomes within a proposed timeline for various activities (box 4). Short-term goals should be achievable in under five years, depending on how fast and effectively Governments work.

Short-term policy recommendations require Arab countries to undertake the following:

**Box 4.** SMART objective-outcome action planning

### Objective

Record objectives that can be monitored through observation, quantitative and qualitative indicators, and evaluations.

### Outcome

Think about what each programme aims to achieve. To know whether this programme has met its targets, it is important to establish exactly what outcomes are required. An outcome stating that older persons should be 'happy' is too vague, because how would one measure if the programme has achieved this? Is this actually a realistic outcome as no human being is happy all the time? Consequently, outcomes should be SMART, and programmes need to provide evidence that the outcome has been met.

### SMART outcomes:

S: specific
M: measurable
A: achievable
R: reliable
T: time-bound

### Accountability

Specify responsibilities for each stakeholder/actor in achieving outcomes, and establish monitoring mechanisms.

**Source:** Doran, 1981.

**Table 21.** Phase I: short-term actions (over the next five years)

| Goal | Objective | Action |
|---|---|---|
| **Mobilize government support** | Ensure government buy-in | • Ensure policy commitment at the highest levels of Government. |
| **Assess current situation** | Assess legal framework | • Assess current legislation and policies related to older persons from a rights-based perspective, which could include social protection floors, and access to welfare and health-care benefits. |
| | Assess health and long-term care | • Assess current public and private health and long-term care service provision. |
| | Assess social protection | • Assess current social protection schemes, including pension coverage, with a focus on inclusivity, efficiency and sustainability. |

| Goal | Objective | Action |
|---|---|---|
| **Assess current situation** | Develop data collection | • Collect data on coverage, access and inequalities pertaining to social protection systems and health and long-term care services.<br>• Collect data on older persons' needs at the national and local levels.<br>• Ensure data is disaggregated by variables including age, sex, location, marital status and economic status. |
| | Assess capacity | • Evaluate the existing capacity of the public and private sectors to provide social protection and health and long-term care services.<br>• Provide evidence-based assessments on the needs of the public and private sectors to provide services to older persons. |
| **Build partnerships** | Develop collaborative working models | • Ensure a cross-sectoral, whole-of-government approach to ageing policies by generating partnership working models.<br>• Develop public-private partnerships between the State and the health and social work sectors, civil society, community partners, and formal and informal caregivers, and technology and business sectors. |
| | Conduct consultations | • Ensure a participatory approach to ageing policies by setting up consultation mechanisms with all stakeholders, including Government, parliament, older persons and their families, caregivers, civil society organizations, and technology and business sectors. |
| **Develop national ageing strategy** | Develop strategy | • Ensure an evidence-based multi-sectoral and inclusive approach to developing a national ageing strategy.<br>• Ensure alignment of ageing strategies with existing development strategies and programmes.<br>• Assign clear responsibilities to relevant government bodies.<br>• Design an action plan for social protection and long-term care service-delivery models.<br>• Develop financial models for supporting sustainable social protection and health and long-term care provision.<br>• Design monitoring and evaluation mechanisms. |
| **Implement strategy** | Reform government policies | • Adopt legislative reforms to address policy gaps.<br>• Undertake fiscal reforms to address budget requirements. |
| | Support civil society and the private sector | • Build the capacity of civil society organizations to support their engagement and enhance their service reach.<br>• Build the capacity of older persons' formal and informal care providers. |
| | Monitor and evaluate | • Ensure cross-sectoral collaboration by establishing an ageing steering committee to monitor progress in delivering an ageing strategy and associated ageing policies.<br>• Establish mechanisms for periodic data collection. |

## 2. Medium-term goals for implementing ageing policies

Medium-term goals should generally be accomplished within 5 to 10 years. During this period, the implementation and concurrent evaluation of different services should take place. Implementing policies is a recursive process in terms of monitoring, evaluation and improving services and policies that are relevant to the changing profile and structure of older persons. New services need to be piloted before rolling them out nationally to establish the most effective delivery models that ensure desired outcomes in a cost-effective manner (figure 21). Along with implementing short-term interventions and programmes, Governments should invest in building the capacity of formal and informal long-term care sectors, including non-governmental and charitable organizations, the community and social capital. Governments should also identify funding options that best suit regional and country level variations.

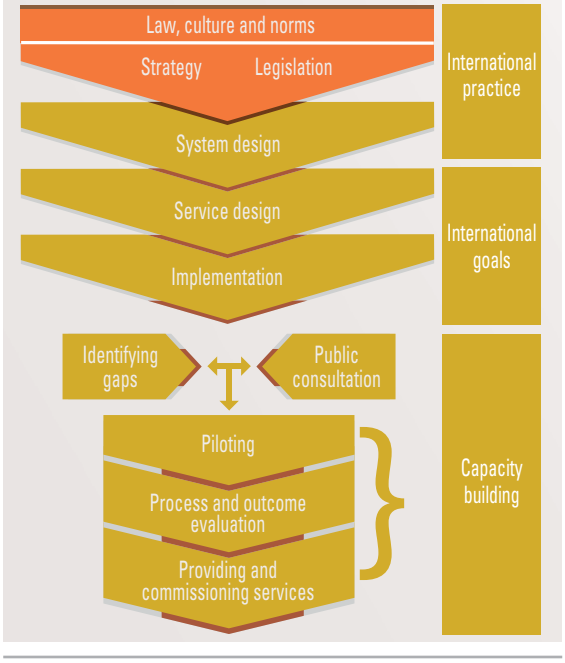
Medium-term policy recommendations require Arab countries to undertake the following:

**Table 22.** Phase II: intermediate and medium-term actions (over the next 5-10 years)

| Goal | Objective | Action |
|---|---|---|
| **Pilot and implement** | Address gaps in social protection coverage | • Increase accessibility and inclusivity of pension schemes by establishing a mix of public and private pension schemes that include workers from different sectors, including the informal sector, particularly women.<br>• Enhance the security of pension funds by developing regulatory mechanisms.<br>• Establish mechanisms to reduce pension contribution evasion.<br>• Strengthen bilateral and regional coordination to enhance portability of benefits for returning migrants. |
| | Address gaps in health and long-term care provision | • Expand and improve the public health infrastructure to meet the needs of older persons identified in phase I, and encourage and facilitate the development of private health infrastructure.<br>• Encourage development of the long-term care market to ensure high quality and diverse long-term care services to provide support for self-care, including support for informal caregivers.<br>• Promote healthy ageing by establishing proactive and preventative programmes targeting older persons and younger cohorts, including persons aged 40 and above.<br>• Encourage individuals to cope and live well with their health conditions by equipping them, their families and caregivers with the necessary knowledge and skills.<br>• Establish more disease-specific care management services and schemes.<br>• Aim to slow health deterioration and prevent complications that necessitate the need for admission to hospital/intensive residential care.<br>• Establish more programmes aimed at addressing complex care, including advanced dementia care.<br>• Coordinate multidisciplinary, multi-agency care packages to ensure quality of end of life.<br>• Encourage the technology and business sectors to develop innovative technologies to be used in aged care. |

| Goal | Objective | Action |
|---|---|---|
| | Support capability and an enabling environment | • Enhance and optimize the role of civil society in the provision of support to older persons and their informal caregivers.<br>• Create sustainable opportunities for older persons to contribute to the wider society through paid and volunteering work.<br>• Develop programmes to assess the built environment and ensure adequate, accessible and affordable housing, transportation, and public spaces for older persons. |
| | Develop awareness campaigns | • Set up campaigns to prevent and curb discrimination and abuse against older persons.<br>• Establish awareness raising campaigns to enhance the public understanding of active ageing and social inclusion of older persons. |
| | Foster partnerships | • Continue to foster public-private partnerships between the State and the health and social work sectors, civil society, community partners, formal and informal caregivers, and technology and business sectors.<br>• Continue using a participatory approach by maintaining a platform for the engagement of all stakeholders in ageing policies and programmes. |
| **Monitor and evaluate** | Ensure recursive monitoring | • Create a strong set of gender-sensitive regulatory and monitoring frameworks to evaluate implementation.<br>• Monitor the budgeting and implementation of social protection, health and care policies.<br>• Revise social protection and aged care financing following piloting and implementation of phase II. |

**Figure 21.** Recursive process of long-term care policy and service development




**Source:** Prepared by ESCWA.

### 3. Long-term goals for implementing ageing policies

Long-term goals should be accomplished within 10 to 20 years. This is a critical period of time, as it coincides with the shift to aged populations in some Arab countries, and the beginning of the ageing transition for others. This period should result in a range of services and programmes developed in the short and medium terms, and therefore requires continued monitoring, evaluation and improvement. Governments should work towards sustainable income and programmes to address the changing structure of the population and the associated demands on infrastructure, education, health and social assistance systems.

Long-term policy recommendations require Arab countries to undertake the following:

**Table 23.** Phase III: long-term actions (over the next 10-20 years, or by the onset of the ageing transition)

| Goal | Objective | Action |
|---|---|---|
| **Expand and improve existing frameworks and schemes** | Expand pension coverage | • Expand pension schemes to include formal and informal labour markets, and migrant workers.<br>• Revise and develop mechanisms to enhance funding of social protection. |
| | Improve health and long-term care provision | • Revise and develop mechanisms to enhance funding of health and long-term care provision<br>• Emphasize the life-course approach to health at the national and local levels through, for example, developing preventive integrated services in schools and community centers, and working with relevant stakeholders to increase the scope of preventative work.<br>• Build the health infrastructure for specialized services to cater to specific health conditions, including non-communicable diseases.<br>• Assess, expand and enhance the role of assistive technologies as part of health and long-term care service provision.<br>• Encourage investment in research on geriatrics and long-term care. |
| | Support an enabling environment | • Continue to invest in ensuring adequate, accessible and affordable housing, transportation and public spaces for older persons based on the assessment conducted in phase II.<br>• Continue to support the role of civil society in the provision of support to older persons and their informal caregivers. |
| **Monitor and evaluate** | Ensure recursive monitoring | • Monitor the budgeting and implementation of social protection, health and long-term care policies.<br>• Revise data collection mechanisms and ensure periodical data collection and dissamination.<br>• Identify and address gaps in social protection coverage and long-term care service provision. |

## F. Conclusion

A fundamental shift in understanding ageing is required across the region. Developing cohesive strategies and planning for comprehensive policy action on ageing are urgently needed to address current gaps in the health and social needs of older persons, as well as escalating future demands owing to population ageing. Although there are major knowledge gaps, there is already compelling evidence for policymakers to act swiftly to address the current and future needs of older persons. The short transition period from ageing to aged populations in the region calls for immediate planning and action by Governments, regardless of country specificities or development levels. An efficient policy and societal response to population ageing requires reform of health and social care systems, by moving away from disease-based curative models towards policies and services that are person-centred and integrated. Consequently, comprehensive mulitsectoral social protection and long-term care systems are needed, which actively involve multiple levels of Government. These new models should acknowledge and address the diversity of older persons, respond to their health and social inequities, and identify better ways of measuring and monitoring the health and functioning of older persons. It is essential to capitalize on existing population dividends and social capital, and formulate new sustainable financing streams. As such, population ageing is not to be

ignored. It is essential for Governments to begin developing policies now to meet their national and international social development goals.

The ageing transition in the Arab region is advancing, albeit at different rates. The associated risks for older persons present an urgent need for policymakers to develop solutions to improve social and economic conditions for nearly 27 million older persons today, and over 100 million by 2050 (15 per cent of the population). The limited amount of time available to tackle this demographic challenge is unique to the Arab region, as other regions had more time and resources to prepare.

The present report has focused on unveiling the daily vulnerabilities faced by many older persons. Income insecurity, whether from inadequate or non-existent pensions, is a major cause for concern. Little or no change has been introduced in most social protection systems in the Arab region, which are still inadequate in providing for the needs of older persons.

The rising incidence of non-communicable diseases and other health concerns associated with older persons anticipated by 2050, combined with significant of out-of-pocket expenditure, portray a future of ill health for older persons unless significant improvements are made in health specialization and coverage. Older persons living in poverty and in the least developed countries face reduced life expectancy because of inadequate care; they also have the lowest pension coverage. Disability is also associated with ageing, with a high prevalence in the Arab region, especially among women.

Older persons' longevity and health issues demand long-term care, and the family remains the primary institution expected to support older persons. However, socioeconomic changes in the coming decades will make this a more undependable safety net. Such changes include family structure, migration, urbanization, social forces and ageing populations.

It is critical to remember that, within the context of population dividends and population ageing experienced in most of the Arab region, a life-course approach aimed at enhancing the lives of current populations from early ages provides a promising framework for future generations of older persons. Presently, many older men and women have low education attainment and, as a result, are more vulnerable in old age, since they might not receive pensions or other forms of social and financial security.

Given that more educated and healthier cohorts are projected to replace current cohorts of older persons, policymakers should not only invest in improving the situation of current older persons, but must also carefully invest in the capacity of the current young and working-age populations. The long-term consequences of childhood and early adulthood experiences, including formal education and family and community life, must be considered when developing policies to promote dignity and reduce inequality over the life course. Therefore, cumulative education, long-term planning, investment and healthy habits over the life course promote the ability of future older generations to age with dignity.

In preparing the young and working-age persons of today for future old age, the Arab region faces a unique challenge when compared with other countries that have experienced ageing, such as OECD countries. Two key aspects are unique to the region. Firstly, many Arab countries have both large cohorts of young and rapidly growing numbers and proportions of older persons. These co-existing large populations put pressure on working-age individuals who support both dependent groups. Secondly, while some Arab countries are in the early stage of population ageing, many will have aged populations at significantly faster rates than most developed countries. This means that policymakers have less time to prepare.

Consequently, it is important to integrate policies that make the most of current human capital and population dividends, while preparing for future aged populations, since greater numbers of

people will age in the near future. This situation requires the swift development of policies to address the exponential demands projected in the next few decades.

The present report has emphasized the importance of preparing income security and social protection systems for people to age with dignity. It also acknowledges the economic and social value and contributions of older persons, who are often able to continue making significant contributions to human and economic growth through formal and informal participation in the labour market, asset and resource transfers to families and communities, unpaid care for grandchildren, and political participation. However, the present report also highlights the varying experiences of older persons, with many subjected to intersectional vulnerabilities of gender, lack of pervious formal labour market participation, low education attainment and poor health.

Universal social protection systems, including social protection floors, aim to ensure that all social groups are cared for, and play a critical role in alleviating poverty and reducing inequalities in old age. The 2030 Agenda seeks to combat poverty experienced by various vulnerable groups, ensure human growth, and reduce income and security inequalities. With population ageing, it is essential for Governments to develop appropriate social protection systems, including pension schemes, alongside more inclusive and holistic aged care systems. Such parallel developments are paramount to ensuring the wellbeing, rights, social inclusion and income security of older persons.

Taking a life-course perspective and implementing social protection policies and schemes for all age groups enhances the opportunities of future generations for a more fulfilling and dignified experience in old age. A life-course approach is consistent with the SDGs, particularly SDG3 on ensuring healthy lives and promoting wellbeing for all at all ages. Countries adopting a life-course approach will ensure that older persons are not ‘left behind’ and can age with dignity.

# Annex I

## Methodology: comparison of low, medium and high variant projections

**Table AI.1** Size and proportion of the population aged 60 and above in the Arab region (in thousands and percentages)

| Projection variants | 2015 | | 2030 | | 2050 | |
|---|---|---|---|---|---|---|
| | Size | % | Size | % | Size | % |
| Medium variant | 26 826 | 6.7 | 49 594 | 9.5 | 102 087 | 15.1 |
| High variant | 26 826 | 6.7 | 49 594 | 9.5 | 102 087 | 13.6 |
| Low variant | 26 826 | 6.7 | 49 594 | 9.5 | 102 087 | 16.8 |
| Constant-mortality | 26 826 | | 47 753 | | 89 907 | |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision.*

**Table AI.2** Population of individuals aged 60 and above and 75 and above (thousands)

| Country | Variants | 60+ | | | 75+ | | |
|---|---|---|---|---|---|---|---|
| | | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 |
| Algeria | Medium variant | 3 564 | 6 478 | 13 222 | 926 | 1 718 | 4 062 |
| | High variant | 3 564 | 6 478 | 13 222 | 926 | 1 718 | 4 062 |
| | Low variant | 3 564 | 6 478 | 13 222 | 926 | 1 718 | 4 062 |
| | Constant-mortality | 3 564 | 6 254 | 11 819 | 926 | 1 592 | 3 217 |
| Bahrain | Medium variant | 57 | 185 | 405 | 10 | 25 | 126 |
| | High variant | 57 | 185 | 405 | 10 | 25 | 126 |
| | Low variant | 57 | 185 | 405 | 10 | 25 | 126 |
| | Constant-mortality | 57 | 179 | 353 | 10 | 22 | 93 |
| Comoros | Medium variant | 37 | 64 | 133 | 7 | 11 | 24 |
| | High variant | 37 | 64 | 133 | 7 | 11 | 24 |
| | Low variant | 37 | 64 | 133 | 7 | 11 | 24 |
| | Constant-mortality | 37 | 63 | 122 | 7 | 10 | 21 |
| Djibouti | Medium variant | 57 | 103 | 203 | 11 | 19 | 43 |
| | High variant | 57 | 103 | 203 | 11 | 19 | 43 |
| | Low variant | 57 | 103 | 203 | 11 | 19 | 43 |
| | Constant-mortality | 57 | 101 | 192 | 11 | 19 | 39 |

| Country | Variants | 60+ | | | 75+ | | |
|---|---|---|---|---|---|---|---|
| | | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 |
| **Egypt** | Medium variant | 7 226 | 11 831 | 23 689 | 1 518 | 2 499 | 5 612 |
| | High variant | 7 226 | 11 831 | 23 689 | 1 518 | 2 499 | 5 612 |
| | Low variant | 7 226 | 11 831 | 23 689 | 1 518 | 2 499 | 5 612 |
| | Constant-mortality | 7 226 | 11 305 | 20 453 | 1 518 | 2 265 | 4 071 |
| **Iraq** | Medium variant | 1 812 | 3 172 | 7 454 | 375 | 627 | 1 661 |
| | High variant | 1 812 | 3 172 | 7 454 | 375 | 627 | 1 661 |
| | Low variant | 1 812 | 3 172 | 7 454 | 375 | 627 | 1 661 |
| | Constant-mortality | 1 812 | 3 096 | 6 775 | 375 | 594 | 1 355 |
| **Jordan** | Medium variant | 506 | 970 | 2 178 | 115 | 180 | 595 |
| | High variant | 506 | 970 | 2 178 | 115 | 180 | 595 |
| | Low variant | 506 | 970 | 2 178 | 115 | 180 | 595 |
| | Constant-mortality | 506 | 936 | 1 940 | 115 | 164 | 460 |
| **Kuwait** | Medium variant | 160 | 588 | 1 158 | 21 | 64 | 358 |
| | High variant | 160 | 588 | 1 158 | 21 | 64 | 358 |
| | Low variant | 160 | 588 | 1 158 | 21 | 64 | 358 |
| | Constant-mortality | 160 | 571 | 1 009 | 21 | 57 | 259 |
| **Lebanon** | Medium variant | 671 | 1 022 | 1 688 | 188 | 299 | 601 |
| | High variant | 671 | 1 022 | 1 688 | 188 | 299 | 601 |
| | Low variant | 671 | 1 022 | 1 688 | 188 | 299 | 601 |
| | Constant-mortality | 671 | 973 | 1 457 | 188 | 268 | 435 |
| **Libya** | Medium variant | 402 | 806 | 1 848 | 98 | 144 | 491 |
| | High variant | 402 | 806 | 1 848 | 98 | 144 | 491 |
| | Low variant | 402 | 806 | 1 848 | 98 | 144 | 491 |
| | Constant-mortality | 402 | 783 | 1 662 | 98 | 133 | 392 |
| **Mauritania** | Medium variant | 206 | 377 | 789 | 37 | 61 | 147 |
| | High variant | 206 | 377 | 789 | 37 | 61 | 147 |
| | Low variant | 206 | 377 | 789 | 37 | 61 | 147 |
| | Constant-mortality | 206 | 372 | 749 | 37 | 59 | 132 |
| **Morocco** | Medium variant | 3 464 | 6 435 | 10 977 | 833 | 1 519 | 3 642 |
| | High variant | 3 464 | 6 435 | 10 977 | 833 | 1 519 | 3 642 |
| | Low variant | 3 464 | 6 435 | 10 977 | 833 | 1 519 | 3 642 |
| | Constant-mortality | 3 464 | 6 154 | 9 405 | 833 | 1 345 | 2 493 |
| **Oman** | Medium variant | 161 | 422 | 1 373 | 34 | 76 | 345 |
| | High variant | 161 | 422 | 1 373 | 34 | 76 | 345 |
| | Low variant | 161 | 422 | 1 373 | 34 | 76 | 345 |
| | Constant-mortality | 161 | 401 | 1 175 | 34 | 68 | 243 |

| Country | Variants | 60+ | | | 75+ | | |
|---|---|---|---|---|---|---|---|
| | | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 |
| **Qatar** | Medium variant | 58 | 278 | 689 | 9 | 31 | 216 |
| | High variant | 58 | 278 | 689 | 9 | 31 | 216 |
| | Low variant | 58 | 278 | 689 | 9 | 31 | 216 |
| | Constant-mortality | 58 | 270 | 602 | 9 | 28 | 162 |
| **Saudi Arabia** | Medium variant | 1 653 | 4 356 | 10 323 | 312 | 672 | 2 895 |
| | High variant | 1 653 | 4 356 | 10 323 | 312 | 672 | 2 895 |
| | Low variant | 1 653 | 4 356 | 10 323 | 312 | 672 | 2 895 |
| | Constant-mortality | 1 653 | 4 192 | 9 000 | 312 | 604 | 2 130 |
| **Somalia** | Medium variant | 602 | 962 | 1 883 | 102 | 180 | 353 |
| | High variant | 602 | 962 | 1 883 | 102 | 180 | 353 |
| | Low variant | 602 | 962 | 1 883 | 102 | 180 | 353 |
| | Constant-mortality | 602 | 937 | 1 696 | 102 | 173 | 309 |
| **State of Palestine** | Medium variant | 211 | 423 | 1 022 | 41 | 82 | 244 |
| | High variant | 211 | 423 | 1 022 | 41 | 82 | 244 |
| | Low variant | 211 | 423 | 1 022 | 41 | 82 | 244 |
| | Constant-mortality | 211 | 408 | 901 | 41 | 75 | 184 |
| **Sudan** | Medium variant | 2 078 | 3 544 | 6 700 | 410 | 718 | 1 465 |
| | High variant | 2 078 | 3 544 | 6 700 | 410 | 718 | 1 465 |
| | Low variant | 2 078 | 3 544 | 6 700 | 410 | 718 | 1 465 |
| | Constant-mortality | 2 078 | 3 505 | 6 383 | 410 | 708 | 1 386 |
| **Syrian Arab Republic** | Medium variant | 1 192 | 2 486 | 5 461 | 277 | 547 | 1 503 |
| | High variant | 1 192 | 2 486 | 5 461 | 277 | 547 | 1 503 |
| | Low variant | 1 192 | 2 486 | 5 461 | 277 | 547 | 1 503 |
| | Constant-mortality | 1 192 | 2 339 | 4 517 | 277 | 488 | 1 046 |
| **Tunisia** | Medium variant | 1 316 | 2 273 | 3 675 | 355 | 556 | 1 217 |
| | High variant | 1 316 | 2 273 | 3 675 | 355 | 556 | 1 217 |
| | Low variant | 1 316 | 2 273 | 3 675 | 355 | 556 | 1 217 |
| | Constant-mortality | 1 316 | 2 165 | 3 142 | 355 | 497 | 867 |
| **United Arab Emirates** | Medium variant | 179 | 896 | 2 461 | 22 | 80 | 770 |
| | High variant | 179 | 896 | 2 461 | 22 | 80 | 770 |
| | Low variant | 179 | 896 | 2 461 | 22 | 80 | 770 |
| | Constant-mortality | 179 | 867 | 2 137 | 22 | 73 | 579 |
| **Yemen** | Medium variant | 1 213 | 1 921 | 4 758 | 213 | 370 | 727 |
| | High variant | 1 213 | 1 921 | 4 758 | 213 | 370 | 727 |
| | Low variant | 1 213 | 1 921 | 4 758 | 213 | 370 | 727 |
| | Constant-mortality | 1 213 | 1 882 | 4 417 | 213 | 358 | 635 |
| **Arab region** | Medium variant | 26 826 | 49 594 | 10 2087 | 5 915 | 10 477 | 27 096 |
| | High variant | 26 826 | 49 594 | 102 087 | 5 915 | 10 477 | 27 096 |
| | Low variant | 26 826 | 49 594 | 102 087 | 5 915 | 10 477 | 27 096 |
| | Constant-mortality | 26 826 | 47 753 | 89 907 | 5 915 | 9 601 | 20 508 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision.*

**Table AI.3** Fertility, mortality and migration projections for Arab countries

| Country | Variant | Total fertility rate | | | Number of migrants (thousands) | | | Life expectancy at birth (years) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 |
| **Algeria** | Medium variant | 2.8 | 2.2 | 3.9 | -96.6 | -50.0 | -48.8 | 75.8 | 78.9 | 82.3 |
| | High variant | 2.8 | 2.7 | 4.9 | -96.6 | -50.0 | -48.8 | 75.8 | 78.9 | 82.3 |
| | Low variant | 2.8 | 1.7 | 1.5 | -96.6 | -50.0 | -48.8 | 75.8 | 78.9 | 82.3 |
| | Constant-mortality | 2.8 | 2.2 | 3.9 | -96.6 | -50.0 | -48.8 | 75.8 | 75.8 | 75.8 |
| **Bahrain** | Medium variant | 2.1 | 1.8 | 3.3 | 138.5 | 47.5 | 19.5 | 76.8 | 78.8 | 81.4 |
| | High variant | 2.1 | 2.3 | 4.3 | 138.5 | 47.5 | 19.5 | 76.8 | 78.8 | 81.4 |
| | Low variant | 2.1 | 1.3 | 1.2 | 138.5 | 47.5 | 19.5 | 76.8 | 78.8 | 81.4 |
| | Constant-mortality | 2.1 | 1.8 | 3.3 | 138.5 | 47.5 | 19.5 | 76.8 | 76.8 | 76.8 |
| **Comoros** | Medium variant | 4.4 | 3.5 | 5.6 | -10.0 | -10.0 | -9.8 | 63.4 | 66.3 | 69.1 |
| | High variant | 4.4 | 4.0 | 6.6 | -10.0 | -10.0 | -9.8 | 63.4 | 66.3 | 69.1 |
| | Low variant | 4.4 | 3.0 | 2.3 | -10.0 | -10.0 | -9.8 | 63.4 | 66.3 | 69.1 |
| | Constant-mortality | 4.4 | 3.5 | 5.6 | -10.0 | -10.0 | -9.8 | 63.4 | 63.4 | 63.4 |
| **Djibouti** | Medium variant | 2.9 | 2.3 | 3.8 | 5.3 | 4.5 | 4.4 | 62.1 | 65.0 | 68.0 |
| | High variant | 2.9 | 2.8 | 4.8 | 5.3 | 4.5 | 4.4 | 62.1 | 65.0 | 68.0 |
| | Low variant | 2.9 | 1.8 | 1.4 | 5.3 | 4.5 | 4.4 | 62.1 | 65.0 | 68.0 |
| | Constant-mortality | 2.9 | 2.3 | 3.8 | 5.3 | 4.5 | 4.4 | 62.1 | 62.1 | 62.1 |
| **Egypt** | Medium variant | 3.3 | 2.7 | 4.6 | -275.0 | -225.0 | -219.4 | 71.3 | 73.8 | 76.7 |
| | High variant | 3.3 | 3.2 | 5.6 | -275.0 | -225.0 | -219.4 | 71.3 | 73.8 | 76.7 |
| | Low variant | 3.3 | 2.2 | 1.8 | -275.0 | -225.0 | -219.4 | 71.3 | 73.8 | 76.7 |
| | Constant-mortality | 3.3 | 2.7 | 4.6 | -275.0 | -225.0 | -219.4 | 71.3 | 71.3 | 71.3 |
| **Iraq** | Medium variant | 4.4 | 3.7 | 6.1 | 251.4 | -56.2 | -29.3 | 69.7 | 72.0 | 74.7 |
| | High variant | 4.4 | 4.2 | 7.1 | 251.4 | -56.2 | -29.3 | 69.7 | 72.0 | 74.7 |
| | Low variant | 4.4 | 3.2 | 2.5 | 251.4 | -56.2 | -29.3 | 69.7 | 72.0 | 74.7 |
| | Constant-mortality | 4.4 | 3.7 | 6.1 | 251.4 | -56.2 | -29.3 | 69.7 | 69.7 | 69.7 |
| **Jordan** | Medium variant | 3.4 | 2.7 | 4.3 | 487.6 | -295.0 | -19.5 | 74.2 | 76.3 | 79.0 |
| | High variant | 3.4 | 3.2 | 5.3 | 487.6 | -295.0 | -19.5 | 74.2 | 76.3 | 79.0 |
| | Low variant | 3.4 | 2.2 | 1.7 | 487.6 | -295.0 | -19.5 | 74.2 | 76.3 | 79.0 |
| | Constant-mortality | 3.4 | 2.7 | 4.3 | 487.6 | -295.0 | -19.5 | 74.2 | 74.2 | 74.2 |
| **Kuwait** | Medium variant | 2.0 | 1.9 | 3.6 | 385.0 | 65.0 | 43.9 | 74.6 | 76.3 | 78.8 |
| | High variant | 2.0 | 2.4 | 4.6 | 385.0 | 65.0 | 43.9 | 74.6 | 76.3 | 78.8 |
| | Low variant | 2.0 | 1.4 | 1.3 | 385.0 | 65.0 | 43.9 | 74.6 | 76.3 | 78.8 |
| | Constant-mortality | 2.0 | 1.9 | 3.6 | 385.0 | 65.0 | 43.9 | 74.6 | 74.6 | 74.6 |
| **Lebanon** | Medium variant | 1.7 | 1.7 | 3.4 | 550.0 | -310.0 | -19.5 | 79.4 | 82.0 | 85.2 |
| | High variant | 1.7 | 2.2 | 4.4 | 550.0 | -310.0 | -19.5 | 79.4 | 82.0 | 85.2 |
| | Low variant | 1.7 | 1.2 | 1.2 | 550.0 | -310.0 | -19.5 | 79.4 | 82.0 | 85.2 |
| | Constant-mortality | 1.7 | 1.7 | 3.4 | 550.0 | -310.0 | -19.5 | 79.4 | 79.4 | 79.4 |

| Country | Variant | Total fertility rate | | | Number of migrants (thousands) | | | Life expectancy at birth (years) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 |
| **Libya** | Medium variant | 2.3 | 1.9 | 3.5 | -221.7 | -10.0 | -9.7 | 71.9 | 74.1 | 76.8 |
| | High variant | 2.3 | 2.4 | 4.5 | -221.7 | -10.0 | -9.7 | 71.9 | 74.1 | 76.8 |
| | Low variant | 2.3 | 1.4 | 1.3 | -221.7 | -10.0 | -9.7 | 71.9 | 74.1 | 76.8 |
| | Constant-mortality | 2.3 | 1.9 | 3.5 | -221.7 | -10.0 | -9.7 | 71.9 | 71.9 | 71.9 |
| **Mauritania** | Medium variant | 4.7 | 3.9 | 6.3 | 32.8 | 15.3 | 14.9 | 63.0 | 65.1 | 67.4 |
| | High variant | 4.7 | 4.4 | 7.3 | 32.8 | 15.3 | 14.9 | 63.0 | 65.1 | 67.4 |
| | Low variant | 4.7 | 3.4 | 2.7 | 32.8 | 15.3 | 14.9 | 63.0 | 65.1 | 67.4 |
| | Constant-mortality | 4.7 | 3.9 | 6.3 | 32.8 | 15.3 | 14.9 | 63.0 | 63.0 | 63.0 |
| **Morocco** | Medium variant | 2.5 | 2.1 | 3.8 | -282.1 | -257.1 | -250.7 | 75.5 | 78.9 | 82.6 |
| | High variant | 2.5 | 2.6 | 4.8 | -282.1 | -257.1 | -250.7 | 75.5 | 78.9 | 82.6 |
| | Low variant | 2.5 | 1.6 | 1.4 | -282.1 | -257.1 | -250.7 | 75.5 | 78.9 | 82.6 |
| | Constant-mortality | 2.5 | 2.1 | 3.8 | -282.1 | -257.1 | -250.7 | 75.5 | 75.5 | 75.5 |
| **Oman** | Medium variant | 2.7 | 2.0 | 3.5 | 711.3 | 30.0 | 19.5 | 76.8 | 80.1 | 83.8 |
| | High variant | 2.7 | 2.5 | 4.5 | 711.3 | 30.0 | 19.5 | 76.8 | 80.1 | 83.8 |
| | Low variant | 2.7 | 1.5 | 1.2 | 711.3 | 30.0 | 19.5 | 76.8 | 80.1 | 83.8 |
| | Constant-mortality | 2.7 | 2.0 | 3.5 | 711.3 | 30.0 | 19.5 | 76.8 | 76.8 | 76.8 |
| **Qatar** | Medium variant | 1.9 | 1.7 | 3.3 | 401.0 | 95.0 | 58.5 | 78.0 | 80.3 | 83.3 |
| | High variant | 1.9 | 2.2 | 4.3 | 401.0 | 95.0 | 58.5 | 78.0 | 80.3 | 83.3 |
| | Low variant | 1.9 | 1.2 | 1.1 | 401.0 | 95.0 | 58.5 | 78.0 | 80.3 | 83.3 |
| | Constant-mortality | 1.9 | 1.7 | 3.3 | 401.0 | 95.0 | 58.5 | 78.0 | 78.0 | 78.0 |
| **Saudi Arabia** | Medium variant | 2.6 | 2.1 | 3.5 | 1 090.0 | 300.0 | 195.0 | 74.4 | 76.6 | 79.6 |
| | High variant | 2.6 | 2.6 | 4.5 | 1 090.0 | 300.0 | 195.0 | 74.4 | 76.6 | 79.6 |
| | Low variant | 2.6 | 1.6 | 1.3 | 1 090.0 | 300.0 | 195.0 | 74.4 | 76.6 | 79.6 |
| | Constant-mortality | 2.6 | 2.1 | 3.5 | 1 090.0 | 300.0 | 195.0 | 74.4 | 74.4 | 74.4 |
| **Somalia** | Medium variant | 6.4 | 5.0 | 7.4 | -213.3 | -149.8 | -146.1 | 55.9 | 61.5 | 66.8 |
| | High variant | 6.4 | 5.5 | 8.4 | -213.3 | -149.8 | -146.1 | 55.9 | 61.5 | 66.8 |
| | Low variant | 6.4 | 4.5 | 3.2 | -213.3 | -149.8 | -146.1 | 55.9 | 61.5 | 66.8 |
| | Constant-mortality | 6.4 | 5.0 | 7.4 | -213.3 | -149.8 | -146.1 | 55.9 | 55.9 | 55.9 |
| **State of Palestine** | Medium variant | 4.1 | 3.2 | 5.2 | -38.3 | -25.0 | -24.4 | 73.3 | 75.8 | 78.7 |
| | High variant | 4.1 | 3.7 | 6.2 | -38.3 | -25.0 | -24.4 | 73.3 | 75.8 | 78.7 |
| | Low variant | 4.1 | 2.7 | 2.1 | -38.3 | -25.0 | -24.4 | 73.3 | 75.8 | 78.7 |
| | Constant-mortality | 4.1 | 3.2 | 5.2 | -38.3 | -25.0 | -24.4 | 73.3 | 73.3 | 73.3 |

| Country | Variant | Total fertility rate | | | Number of migrants (thousands) | | | Life expectancy at birth (years) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 | 2015 | 2030 | 2050 |
| **Sudan** | Medium variant | 4.6 | 3.8 | 6.1 | -419.7 | -50.0 | -48.8 | 64.2 | 67.3 | 70.5 |
| | High variant | 4.6 | 4.3 | 7.1 | -419.7 | -50.0 | -48.8 | 64.2 | 67.3 | 70.5 |
| | Low variant | 4.6 | 3.3 | 2.5 | -419.7 | -50.0 | -48.8 | 64.2 | 67.3 | 70.5 |
| | Constant-mortality | 4.6 | 3.8 | 6.1 | -419.7 | -50.0 | -48.8 | 64.2 | 64.2 | 64.2 |
| **Syrian Arab Republic** | Medium variant | 3.0 | 2.4 | 3.9 | -2 698.9 | 715.0 | -48.7 | 70.6 | 78.3 | 81.0 |
| | High variant | 3.0 | 2.9 | 4.9 | -2 698.9 | 715.0 | -48.7 | 70.6 | 78.3 | 81.0 |
| | Low variant | 3.0 | 1.9 | 1.4 | -2 698.9 | 715.0 | -48.7 | 70.6 | 78.3 | 81.0 |
| | Constant-mortality | 3.0 | 2.4 | 3.9 | -2 698.9 | 715.0 | -48.7 | 70.6 | 70.6 | 70.6 |
| **Tunisia** | Medium variant | 2.2 | 2.0 | 3.7 | -43.0 | -20.0 | -19.5 | 75.6 | 78.3 | 81.6 |
| | High variant | 2.2 | 2.5 | 4.7 | -43.0 | -20.0 | -19.5 | 75.6 | 78.3 | 81.6 |
| | Low variant | 2.2 | 1.5 | 1.4 | -43.0 | -20.0 | -19.5 | 75.6 | 78.3 | 81.6 |
| | Constant-mortality | 2.2 | 2.0 | 3.7 | -43.0 | -20.0 | -19.5 | 75.6 | 75.6 | 75.6 |
| **United Arab Emirates** | Medium variant | 1.8 | 1.6 | 3.3 | 390.5 | 275.0 | 243.8 | 77.1 | 79.4 | 82.5 |
| | High variant | 1.8 | 2.1 | 4.3 | 390.5 | 275.0 | 243.8 | 77.1 | 79.4 | 82.5 |
| | Low variant | 1.8 | 1.1 | 1.1 | 390.5 | 275.0 | 243.8 | 77.1 | 79.4 | 82.5 |
| | Constant-mortality | 1.8 | 1.6 | 3.3 | 390.5 | 275.0 | 243.8 | 77.1 | 77.1 | 77.1 |
| **Yemen** | Medium variant | 4.1 | 2.9 | 4.2 | -112.5 | -135.0 | -97.5 | 64.7 | 67.5 | 70.4 |
| | High variant | 4.1 | 3.4 | 5.2 | -112.5 | -135.0 | -97.5 | 64.7 | 67.5 | 70.4 |
| | Low variant | 4.1 | 2.4 | 1.6 | -112.5 | -135.0 | -97.5 | 64.7 | 67.5 | 70.4 |
| | Constant-mortality | 4.1 | 2.9 | 4.2 | -112.5 | -135.0 | -97.5 | 64.7 | 64.7 | 64.7 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision.*

# Annex II

Share of the population aged 60 years and above in 2050 based on three scenarios on fertility, mortality and migration

| Country | Sustainability scenario | | | | Continuation scenario | | | | Fragmentation scenario | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Share 60+ | TFR[a] | $E_0$[b] | Mig[c] | Share 60+ | TFR[a] | $E_0$[b] | Mig[c] | Share 60+ | TFR[a] | $E_0$[b] | Mig[c] |
| Algeria | 30% | 1.3 | 85.9 | -76 | 26% | 1.8 | 81.5 | -84 | 21% | 2.5 | 76.4 | -43 |
| Bahrain | 31% | 1.3 | 88.0 | 136 | 28% | 1.8 | 83.8 | 135 | 26% | 2.4 | 79.2 | 87 |
| Comoros | 13% | 1.5 | 71.3 | -11 | 10% | 2.1 | 66.8 | -13 | 8% | 3 | 60.7 | -7 |
| Djibouti | 18% | 1.4 | 78.8 | 0 | 13% | 2 | 67.4 | 0 | 11% | 2.6 | 57.9 | 0 |
| Egypt | 24% | 1.4 | 84.6 | -285 | 20% | 1.9 | 80.3 | -312 | 16% | 2.5 | 75.3 | -157 |
| Iraq | 16% | 1.6 | 85.8 | -210 | 13% | 2.1 | 81.4 | -234 | 9% | 3.1 | 75.7 | -125 |
| Jordan | 20% | 1.4 | 86.6 | 123 | 17% | 1.9 | 82.3 | 153 | 14% | 2.5 | 77.4 | 104 |
| Kuwait | 28% | 1.3 | 87.8 | 151 | 24% | 1.7 | 83.5 | 171 | 22% | 2.3 | 79.1 | 113 |
| Lebanon | 32% | 1.2 | 85.5 | 22 | 27% | 1.6 | 81.2 | 27 | 23% | 2.2 | 76.3 | 18 |
| Libya | 30% | 1.3 | 88.9 | -8 | 25% | 1.8 | 84.6 | -8 | 20% | 2.5 | 79.9 | -3 |
| Mauritania | 14% | 1.5 | 69.9 | 6 | 11% | 2.1 | 65.4 | 8 | 9% | 2.9 | 59.5 | 5 |
| Morocco | 30% | 1.2 | 85.0 | -408 | 25% | 1.7 | 80.7 | -466 | 19% | 2.4 | 75.3 | -248 |
| Oman | 30% | 1.3 | 87.5 | 127 | 27% | 1.7 | 82.7 | 126 | 23% | 2.4 | 78.5 | 104 |
| State of Palestine | 17% | 1.5 | 86.7 | -113 | 13% | 2.1 | 82.4 | -127 | 10% | 3 | 77.3 | -69 |
| Qatar | 37% | 1.3 | 90.4 | 244 | 38% | 1.8 | 86.3 | 200 | 36% | 2.3 | 81.7 | 138 |
| Saudi Arabia | 25% | 1.4 | 86.6 | 884 | 21% | 1.9 | 82.4 | 1 044 | 18% | 2.6 | 77.6 | 695 |
| Somalia | 11% | 1.8 | 64.7 | -368 | 8% | 2.6 | 59.8 | -436 | 6% | 3.8 | 53.9 | -237 |
| Sudan | 14% | 1.5 | 72.1 | 100 | 12% | 2.1 | 67.5 | 124 | 10% | 2.9 | 61.7 | 80 |
| Syrian Arab Republic | 23% | 1.3 | 88.7 | -70 | 19% | 1.8 | 84.4 | -73 | 15% | 2.5 | 79.6 | -33 |
| Tunisia | 35% | 1.2 | 86.3 | -7 | 30% | 1.6 | 82.1 | -8 | 25% | 2.2 | 77.2 | -4 |
| United Arab Emirates | 35% | 1.1 | 88.7 | 920 | 34% | 1.5 | 84.4 | 850 | 32% | 2 | 79.9 | 551 |
| Yemen | 11% | 1.7 | 76.0 | -264 | 9% | 2.5 | 71.5 | -301 | 7% | 3.5 | 66 | -153 |
| **Arab region** | **22%** | | | | **18%** | | | | **14%** | | | |

**Source:** ESCWA calculation based on Wittgenstein Centre for Demography and Global Human Capital, Wittgenstein Centre data explorer, 2015. Available at www.wittgensteincentre.org/dataexplorer (accessed on 18 February 2018).

**Notes:** [a] TFR, total fertility rate.

[b] $E_0$, life expectancy at birth for both sexes (in years).

[c] Net number of migrants over the period 2045-2050 (in thousands).

# Annex III

## Population size (thousands), 1970-2050

| Region, subregion or country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|
| World | 3 700 578 | 4 458 412 | 5 330 943 | 6 145 007 | 6 958 169 | 7 383 009 | 7 795 482 | 8 551 199 | 9 210 337 | 9 771 823 |
| More developed regions | 1 009 082 | 1 084 244 | 1 146 999 | 1 190 505 | 1 235 143 | 1 253 207 | 1 269 277 | 1 289 937 | 1 297 496 | 1 298 069 |
| Less developed regions | 2 691 496 | 3 374 167 | 4 183 944 | 4 954 502 | 5 723 027 | 6 129 802 | 6 526 205 | 7 261 262 | 7 912 841 | 8 473 754 |
| Least developed regions | 308 486 | 393 279 | 510 828 | 664 805 | 848 792 | 9 566 31 | 1 073 984 | 1 334 196 | 1 618 985 | 1 916 742 |
| High-income countries | 851 319 | 929 939 | 1 000 109 | 1 070 130 | 1 148 592 | 1 180 061 | 1 207 775 | 1 249 896 | 1 275 679 | 1 287 798 |
| Middle-income countries | 2 652 001 | 3 275 988 | 4 006 282 | 4 647 490 | 5 246 882 | 5 558 264 | 5 852 576 | 6 362 054 | 6 764 840 | 7 067 079 |
| Low-income countries | 195 911 | 250 969 | 322 686 | 425 130 | 560 007 | 641 859 | 732 133 | 935 905 | 1 166 159 | 1 413 034 |
| Algeria | 14 550 | 19 338 | 25 912 | 31 184 | 36 118 | 39 872 | 43 333 | 48 822 | 53 249 | 57 437 |
| Bahrain | 213 | 360 | 496 | 665 | 1 241 | 1 372 | 1 698 | 2 013 | 2 205 | 2 327 |
| Comoros | 230 | 308 | 412 | 542 | 690 | 777 | 870 | 1 062 | 1 262 | 1 463 |
| Djibouti | 160 | 359 | 590 | 718 | 851 | 927 | 1 000 | 1 133 | 1 237 | 1 308 |
| Egypt | 35 046 | 44 099 | 57 412 | 69 906 | 84 108 | 93 778 | 102 941 | 119 746 | 137 066 | 153 433 |
| Iraq | 9 918 | 13 653 | 17 469 | 23 565 | 30 763 | 36 116 | 41 503 | 53 298 | 66 752 | 81 490 |
| Jordan | 1 719 | 2 374 | 3 561 | 5 103 | 7 182 | 9 159 | 10 209 | 11 122 | 12 680 | 14 188 |
| Kuwait | 747 | 1 372 | 2 100 | 2 051 | 2 998 | 3 936 | 4 303 | 4 874 | 5 324 | 5 644 |
| Lebanon | 2 297 | 2 605 | 2 703 | 3 235 | 4 337 | 5 851 | 6 020 | 5 369 | 5 392 | 5 412 |
| Libya | 2 134 | 3 219 | 4 437 | 5 356 | 6 169 | 6 235 | 6 662 | 7 342 | 7 825 | 8 124 |
| Mauritania | 1 149 | 1 534 | 2 030 | 2 709 | 3 610 | 4 182 | 4 784 | 6 077 | 7 482 | 8 965 |
| Morocco | 16 000 | 20 020 | 24 879 | 28 850 | 32 410 | 34 803 | 37 071 | 40 874 | 43 714 | 45 660 |
| Oman | 724 | 1 154 | 1 812 | 2 268 | 3 041 | 4 200 | 5 150 | 5 897 | 6 344 | 6 757 |
| Qatar | 110 | 224 | 476 | 592 | 1 780 | 2 482 | 2 792 | 3 232 | 3 537 | 3 773 |
| Saudi Arabia | 5 836 | 9 741 | 16 327 | 20 764 | 27 426 | 31 557 | 34 710 | 39 480 | 42 778 | 45 056 |
| Somalia | 3 445 | 6 359 | 7 397 | 9 011 | 12 053 | 13 908 | 16 105 | 21 535 | 28 146 | 35 852 |

| Region, subregion or country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|
| State of Palestine | 1 125 | 1 509 | 2 101 | 3 223 | 4 067 | 4 663 | 5 323 | 6 739 | 8 208 | 9 704 |
| Sudan | 10 282 | 14 507 | 20 148 | 27 251 | 34 386 | 38 648 | 43 541 | 54 842 | 67 357 | 80 386 |
| Syrian Arab Republic | 6 351 | 8 931 | 12 446 | 16 411 | 21 019 | 18 735 | 18 924 | 26 608 | 30 799 | 34 021 |
| Tunisia | 5 060 | 6 368 | 8 233 | 9 699 | 10 640 | 11 274 | 11 903 | 12 842 | 13 435 | 13 884 |
| United Arab Emirates | 235 | 1 042 | 1 860 | 3 155 | 8 271 | 9 154 | 9 813 | 11 055 | 12 207 | 13 164 |
| Yemen | 6 194 | 8 120 | 12 057 | 17 875 | 23 607 | 26 916 | 30 245 | 36 815 | 42 986 | 48 304 |
| Arab region | 123 523 | 167 199 | 224 858 | 284 133 | 356 765 | 398 546 | 438 899 | 520 776 | 599 984 | 676 350 |
| Arab region/ world (%) | 3.3 | 3.8 | 4.2 | 4.6 | 5.1 | 5.4 | 5.6 | 6.1 | 6.5 | 6.9 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex IV

## Annual population growth rate (percentage)

| Region, subregion or country | 1970-1980 | 1980-1990 | 1990-2000 | 2000-2010 | 2010-2015 | 2015-2020 | 2020-2030 | 2030-2040 | 2040-2050 |
|---|---|---|---|---|---|---|---|---|---|
| World | 1.88 | 1.80 | 1.43 | 1.25 | 1.19 | 1.09 | 0.93 | 0.75 | 0.59 |
| More developed regions | 0.72 | 0.56 | 0.37 | 0.37 | 0.29 | 0.26 | 0.16 | 0.06 | 0.00 |
| Less developed regions | 2.29 | 2.17 | 1.70 | 1.45 | 1.38 | 1.26 | 1.07 | 0.86 | 0.69 |
| Least developed regions | 2.46 | 2.65 | 2.67 | 2.47 | 2.42 | 2.34 | 2.19 | 1.95 | 1.70 |
| High-income countries | 0.89 | 0.73 | 0.68 | 0.71 | 0.54 | 0.47 | 0.34 | 0.20 | 0.09 |
| Middle-income countries | 2.14 | 2.03 | 1.50 | 1.22 | 1.16 | 1.04 | 0.84 | 0.62 | 0.44 |
| Low-income countries | 2.51 | 2.55 | 2.80 | 2.79 | 2.77 | 2.67 | 2.49 | 2.22 | 1.94 |
| Algeria | 2.89 | 2.97 | 1.87 | 1.48 | 2.00 | 1.68 | 1.20 | 0.87 | 0.76 |
| Bahrain | 5.40 | 3.26 | 2.97 | 6.44 | 2.03 | 4.36 | 1.72 | 0.92 | 0.54 |
| Comoros | 2.96 | 2.95 | 2.80 | 2.43 | 2.42 | 2.27 | 2.02 | 1.74 | 1.49 |
| Djibouti | 8.44 | 5.10 | 1.97 | 1.72 | 1.73 | 1.52 | 1.25 | 0.88 | 0.56 |
| Egypt | 2.32 | 2.67 | 1.99 | 1.87 | 2.20 | 1.88 | 1.52 | 1.36 | 1.13 |
| Iraq | 3.25 | 2.50 | 3.04 | 2.70 | 3.26 | 2.82 | 2.53 | 2.28 | 2.02 |
| Jordan | 3.28 | 4.13 | 3.66 | 3.48 | 4.98 | 2.19 | 0.86 | 1.32 | 1.13 |
| Kuwait | 6.27 | 4.34 | -0.24 | 3.87 | 5.59 | 1.80 | 1.25 | 0.89 | 0.58 |
| Lebanon | 1.27 | 0.37 | 1.81 | 2.97 | 6.17 | 0.57 | -1.14 | 0.04 | 0.04 |
| Libya | 4.20 | 3.26 | 1.90 | 1.42 | 0.21 | 1.33 | 0.98 | 0.64 | 0.37 |
| Mauritania | 2.93 | 2.84 | 2.93 | 2.91 | 2.99 | 2.72 | 2.42 | 2.10 | 1.82 |
| Morocco | 2.27 | 2.20 | 1.49 | 1.17 | 1.44 | 1.27 | 0.98 | 0.67 | 0.44 |
| Oman | 4.78 | 4.61 | 2.27 | 2.98 | 6.67 | 4.16 | 1.37 | 0.73 | 0.63 |
| Qatar | 7.41 | 7.85 | 2.20 | 11.63 | 6.87 | 2.38 | 1.47 | 0.91 | 0.65 |
| Saudi Arabia | 5.26 | 5.30 | 2.43 | 2.82 | 2.85 | 1.92 | 1.30 | 0.81 | 0.52 |

| Region, subregion or country | 1970-1980 | 1980-1990 | 1990-2000 | 2000-2010 | 2010-2015 | 2015-2020 | 2020-2030 | 2030-2040 | 2040-2050 |
|---|---|---|---|---|---|---|---|---|---|
| Somalia | 6.32 | 1.52 | 1.99 | 2.95 | 2.90 | 2.98 | 2.95 | 2.71 | 2.45 |
| State of Palestine | 2.98 | 3.36 | 4.37 | 2.35 | 2.77 | 2.68 | 2.39 | 1.99 | 1.69 |
| Sudan | 3.50 | 3.34 | 3.07 | 2.35 | 2.36 | 2.41 | 2.33 | 2.08 | 1.78 |
| Syrian Arab Republic | 3.47 | 3.37 | 2.80 | 2.51 | -2.27 | 0.20 | 3.47 | 1.47 | 1.00 |
| Tunisia | 2.33 | 2.60 | 1.65 | 0.93 | 1.16 | 1.09 | 0.76 | 0.45 | 0.33 |
| United Arab Emirates | 16.04 | 5.96 | 5.42 | 10.12 | 2.05 | 1.40 | 1.20 | 1.00 | 0.76 |
| Yemen | 2.75 | 4.03 | 4.02 | 2.82 | 2.66 | 2.36 | 1.99 | 1.56 | 1.17 |
| Arab region | 3.07 | 3.01 | 2.37 | 2.30 | 2.24 | 1.95 | 1.73 | 1.43 | 1.21 |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex V

## Total fertility (children per woman)

| Region, subregion or country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2050 |
|---|---|---|---|---|---|---|---|---|---|
| World | 4.7 | 3.7 | 3.2 | 2.7 | 2.5 | 2.5 | 2.5 | 2.4 | 2.2 |
| More developed regions | 2.3 | 1.9 | 1.7 | 1.6 | 1.7 | 1.7 | 1.7 | 1.8 | 1.8 |
| Less developed regions | 5.7 | 4.4 | 3.6 | 2.9 | 2.7 | 2.6 | 2.6 | 2.4 | 2.3 |
| Least developed regions | 6.8 | 6.6 | 6.0 | 5.2 | 4.5 | 4.2 | 3.9 | 3.4 | 2.9 |
| High-income countries | 2.5 | 2.0 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.8 | 1.8 |
| Middle-income countries | 5.3 | 4.1 | 3.4 | 2.6 | 2.4 | 2.4 | 2.3 | 2.2 | 2.1 |
| Low-income countries | 6.6 | 6.6 | 6.3 | 5.9 | 5.2 | 4.8 | 4.4 | 3.8 | 3.0 |
| Algeria | 7.6 | 6.7 | 4.7 | 2.6 | 2.8 | 2.8 | 2.5 | 2.2 | 2.0 |
| Bahrain | 6.5 | 4.9 | 3.7 | 2.8 | 2.2 | 2.1 | 1.9 | 1.8 | 1.7 |
| Comoros | 7.1 | 7.1 | 6.4 | 5.4 | 4.8 | 4.4 | 4.1 | 3.5 | 2.8 |
| Djibouti | 6.8 | 6.5 | 6.0 | 4.5 | 3.3 | 2.9 | 2.6 | 2.3 | 1.9 |
| Egypt | 6.2 | 5.6 | 4.6 | 3.3 | 3.2 | 3.3 | 3.1 | 2.7 | 2.3 |
| Iraq | 7.3 | 6.6 | 5.9 | 4.9 | 4.6 | 4.4 | 4.1 | 3.7 | 3.0 |
| Jordan | 7.9 | 7.2 | 5.5 | 4.1 | 3.7 | 3.4 | 3.1 | 2.7 | 2.2 |
| Kuwait | 7.1 | 5.3 | 3.1 | 2.8 | 2.2 | 2.0 | 1.9 | 1.9 | 1.8 |
| Lebanon | 4.9 | 4.0 | 3.0 | 2.2 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 |
| Libya | 8.0 | 7.2 | 5.0 | 2.9 | 2.4 | 2.3 | 2.1 | 1.9 | 1.8 |
| Mauritania | 6.8 | 6.5 | 6.0 | 5.5 | 5.0 | 4.7 | 4.4 | 3.9 | 3.2 |
| Morocco | 6.6 | 5.7 | 4.1 | 2.8 | 2.6 | 2.5 | 2.4 | 2.1 | 1.9 |
| Oman | 7.4 | 8.2 | 7.1 | 3.8 | 2.9 | 2.7 | 2.4 | 2.0 | 1.7 |
| Qatar | 6.9 | 5.8 | 4.1 | 3.2 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 |
| Saudi Arabia | 7.3 | 7.1 | 5.9 | 4.0 | 3.0 | 2.6 | 2.4 | 2.1 | 1.8 |
| Somalia | 7.2 | 7.0 | 7.4 | 7.6 | 6.9 | 6.4 | 5.9 | 5.0 | 3.7 |
| State of Palestine | 7.8 | 7.3 | 6.7 | 5.4 | 4.4 | 4.1 | 3.8 | 3.2 | 2.6 |
| Sudan | 6.9 | 6.8 | 6.2 | 5.5 | 4.9 | 4.6 | 4.3 | 3.8 | 3.0 |
| Syrian Arab Republic | 7.6 | 7.0 | 5.3 | 4.1 | 3.2 | 3.0 | 2.7 | 2.4 | 1.9 |
| Tunisia | 6.7 | 5.2 | 3.5 | 2.2 | 2.1 | 2.2 | 2.1 | 2.0 | 1.9 |
| United Arab Emirates | 6.6 | 5.5 | 4.4 | 2.7 | 1.9 | 1.8 | 1.7 | 1.6 | 1.6 |
| Yemen | 7.9 | 8.7 | 8.5 | 6.4 | 4.7 | 4.1 | 3.6 | 2.9 | 2.1 |
| Arab region | 6.9 | 6.3 | 5.2 | 3.9 | 3.5 | 3.4 | 3.2 | 2.8 | 2.4 |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex VI

Proportion of the population age 75 years and above (percentage)

| Country | Variants | 2015 | 2030 | 2050 |
|---|---|---|---|---|
| Algeria | Medium variant | 2.3 | 3.5 | 7.1 |
| | High variant | 2.3 | 3.4 | 6.4 |
| | Low variant | 2.3 | 3.7 | 7.9 |
| | Constant-mortality | 2.3 | 3.3 | 5.8 |
| Bahrain | Medium variant | 0.7 | 1.2 | 5.4 |
| | High variant | 0.7 | 1.2 | 4.9 |
| | Low variant | 0.7 | 1.3 | 5.9 |
| | Constant-mortality | 0.7 | 1.1 | 4.1 |
| Comoros | Medium variant | 0.9 | 1.0 | 1.6 |
| | High variant | 0.9 | 1.0 | 1.5 |
| | Low variant | 0.9 | 1.1 | 1.8 |
| | Constant-mortality | 0.9 | 1.0 | 1.5 |
| Djibouti | Medium variant | 1.2 | 1.7 | 3.3 |
| | High variant | 1.2 | 1.6 | 2.9 |
| | Low variant | 1.2 | 1.8 | 3.7 |
| | Constant-mortality | 1.2 | 1.7 | 3.1 |
| Egypt | Medium variant | 1.6 | 2.1 | 3.7 |
| | High variant | 1.6 | 2.0 | 3.3 |
| | Low variant | 1.6 | 2.2 | 4.1 |
| | Constant-mortality | 1.6 | 1.9 | 2.8 |
| Iraq | Medium variant | 1.0 | 1.2 | 2.0 |
| | High variant | 1.0 | 1.1 | 1.8 |
| | Low variant | 1.0 | 1.2 | 2.3 |
| | Constant-mortality | 1.0 | 1.1 | 1.7 |
| Jordan | Medium variant | 1.3 | 1.6 | 4.2 |
| | High variant | 1.3 | 1.6 | 3.8 |
| | Low variant | 1.3 | 1.7 | 4.7 |
| | Constant-mortality | 1.3 | 1.5 | 3.3 |
| Kuwait | Medium variant | 0.5 | 1.3 | 6.3 |
| | High variant | 0.5 | 1.3 | 5.7 |
| | Low variant | 0.5 | 1.4 | 7.0 |
| | Constant-mortality | 0.5 | 1.2 | 4.7 |

| Country | Variants | 2015 | 2030 | 2050 |
|---|---|---|---|---|
| Lebanon | Medium variant | 3.2 | 5.6 | 11.1 |
| | High variant | 3.2 | 5.3 | 9.9 |
| | Low variant | 3.2 | 5.9 | 12.6 |
| | Constant-mortality | 3.2 | 5.0 | 8.5 |
| Libya | Medium variant | 1.6 | 2.0 | 6.1 |
| | High variant | 1.6 | 1.9 | 5.4 |
| | Low variant | 1.6 | 2.0 | 6.8 |
| | Constant-mortality | 1.6 | 1.8 | 5.0 |
| Mauritania | Medium variant | 0.9 | 1.0 | 1.6 |
| | High variant | 0.9 | 1.0 | 1.5 |
| | Low variant | 0.9 | 1.0 | 1.8 |
| | Constant-mortality | 0.9 | 1.0 | 1.5 |
| Morocco | Medium variant | 2.4 | 3.7 | 8.0 |
| | High variant | 2.4 | 3.6 | 7.2 |
| | Low variant | 2.4 | 3.9 | 8.9 |
| | Constant-mortality | 2.4 | 3.3 | 5.7 |
| Oman | Medium variant | 0.8 | 1.3 | 5.1 |
| | High variant | 0.8 | 1.3 | 4.7 |
| | Low variant | 0.8 | 1.3 | 5.6 |
| | Constant-mortality | 0.8 | 1.2 | 3.8 |
| Qatar | Medium variant | 0.3 | 0.9 | 5.7 |
| | High variant | 0.3 | 0.9 | 5.3 |
| | Low variant | 0.3 | 1.0 | 6.2 |
| | Constant-mortality | 0.3 | 0.9 | 4.4 |
| Saudi Arabia | Medium variant | 1.0 | 1.7 | 6.4 |
| | High variant | 1.0 | 1.6 | 5.8 |
| | Low variant | 1.0 | 1.8 | 7.1 |
| | Constant-mortality | 1.0 | 1.5 | 4.9 |
| Somalia | Medium variant | 0.7 | 0.8 | 1.0 |
| | High variant | 0.7 | 0.8 | 0.9 |
| | Low variant | 0.7 | 0.9 | 1.1 |
| | Constant-mortality | 0.7 | 0.8 | 1.0 |
| State of Palestine | Medium variant | 0.9 | 1.2 | 2.5 |
| | High variant | 0.9 | 1.2 | 2.3 |
| | Low variant | 0.9 | 1.3 | 2.8 |
| | Constant-mortality | 0.9 | 1.1 | 1.9 |
| Sudan | Medium variant | 1.1 | 1.3 | 1.8 |
| | High variant | 1.1 | 1.3 | 1.7 |
| | Low variant | 1.1 | 1.4 | 2.0 |
| | Constant-mortality | 1.1 | 1.3 | 1.8 |

| Country | Variants | 2015 | 2030 | 2050 |
|---|---|---|---|---|
| Syrian Arab Republic | Medium variant | 1.5 | 2.1 | 4.4 |
| | High variant | 1.5 | 2.0 | 4.0 |
| | Low variant | 1.5 | 2.1 | 4.9 |
| | Constant-mortality | 1.5 | 1.9 | 3.3 |
| Tunisia | Medium variant | 3.1 | 4.3 | 8.8 |
| | High variant | 3.1 | 4.2 | 7.9 |
| | Low variant | 3.1 | 4.5 | 9.8 |
| | Constant-mortality | 3.1 | 3.9 | 6.6 |
| United Arab Emirates | Medium variant | 0.2 | 0.7 | 5.8 |
| | High variant | 0.2 | 0.7 | 5.4 |
| | Low variant | 0.2 | 0.7 | 6.3 |
| | Constant-mortality | 0.2 | 0.7 | 4.5 |
| Yemen | Medium variant | 0.8 | 1.0 | 1.5 |
| | High variant | 0.8 | 1.0 | 1.4 |
| | Low variant | 0.8 | 1.0 | 1.7 |
| | Constant-mortality | 0.8 | 1.0 | 1.4 |
| Arab region | Medium variant | 1.5 | 2.0 | 4.0 |
| | High variant | 1.5 | 1.9 | 3.6 |
| | Low variant | 1.5 | 2.1 | 4.5 |
| | Constant-mortality | 1.5 | 1.9 | 3.2 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision.*

# Annex VII

Life expectancy at birth (both sexes, in years)

| Region, subregion or country | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|
| World | 50.3 | 56.8 | 61.2 | 64.1 | 66.4 | 69.9 | 71.4 | 72.4 | 74.3 | 77.3 |
| More developed regions | 68.6 | 70.7 | 72.4 | 74.1 | 75.2 | 77.7 | 78.9 | 79.7 | 81.3 | 84.2 |
| Less developed regions | 45.1 | 53.2 | 58.5 | 61.9 | 64.6 | 68.2 | 69.7 | 70.9 | 72.8 | 76.1 |
| Least developed regions | 39.8 | 43.8 | 47.3 | 51.1 | 55.1 | 61.2 | 63.6 | 65.3 | 68.1 | 72.6 |
| High-income countries | 68.0 | 70.4 | 73.1 | 75.4 | 77.7 | 79.9 | 80.8 | 81.6 | 83.1 | 85.7 |
| Middle-income countries | 46.9 | 54.9 | 60.0 | 63.3 | 65.8 | 69.1 | 70.5 | 71.6 | 73.5 | 76.7 |
| Low-income countries | 38.5 | 42.8 | 46.6 | 49.1 | 52.1 | 58.9 | 61.7 | 63.7 | 66.9 | 71.6 |
| Algeria | 46.1 | 50.5 | 58.3 | 66.5 | 70.3 | 74.6 | 75.8 | 76.9 | 78.9 | 82.3 |
| Bahrain | 51.9 | 63.2 | 69.4 | 72.4 | 74.4 | 76.0 | 76.8 | 77.4 | 78.8 | 81.4 |
| Comoros | 41.5 | 45.7 | 50.7 | 56.6 | 59.4 | 61.9 | 63.4 | 64.5 | 66.3 | 69.1 |
| Djibouti | 44.1 | 49.1 | 53.6 | 56.6 | 57.2 | 60.3 | 62.1 | 63.2 | 65.0 | 68.0 |
| Egypt | 47.8 | 52.3 | 58.3 | 64.5 | 68.5 | 70.4 | 71.3 | 72.2 | 73.8 | 76.7 |
| Iraq | 47.9 | 57.9 | 60.4 | 65.9 | 69.0 | 68.6 | 69.7 | 70.5 | 72.0 | 74.7 |
| Jordan | 52.6 | 60.1 | 66.1 | 69.8 | 71.7 | 73.4 | 74.2 | 74.9 | 76.3 | 79.0 |
| Kuwait | 60.1 | 65.9 | 69.5 | 72.0 | 73.1 | 74.0 | 74.6 | 75.2 | 76.3 | 78.8 |
| Lebanon | 63.2 | 66.0 | 68.0 | 70.3 | 74.4 | 78.3 | 79.4 | 80.3 | 82.0 | 85.2 |
| Libya | 42.9 | 55.9 | 64.0 | 68.4 | 70.5 | 71.6 | 71.9 | 72.6 | 74.1 | 76.8 |
| Mauritania | 43.5 | 49.1 | 54.2 | 58.3 | 60.1 | 62.0 | 63.0 | 63.8 | 65.1 | 67.4 |
| Morocco | 48.5 | 52.6 | 57.7 | 64.6 | 68.8 | 73.9 | 75.5 | 76.7 | 78.9 | 82.6 |
| Oman | 42.6 | 50.4 | 59.7 | 67.1 | 72.1 | 75.6 | 76.8 | 77.9 | 80.1 | 83.8 |
| Qatar | 61.1 | 68.2 | 72.6 | 74.9 | 76.3 | 77.3 | 78.0 | 78.8 | 80.3 | 83.3 |
| Saudi Arabia | 45.7 | 52.9 | 62.9 | 68.9 | 72.3 | 73.6 | 74.4 | 75.2 | 76.6 | 79.6 |
| Somalia | 37.0 | 40.9 | 44.6 | 45.7 | 50.6 | 54.0 | 55.9 | 57.9 | 61.5 | 66.8 |
| State of Palestine | 49.5 | 55.8 | 62.7 | 68.0 | 70.7 | 72.4 | 73.3 | 74.2 | 75.8 | 78.7 |
| Sudan | 48.2 | 52.1 | 54.2 | 55.6 | 58.5 | 62.5 | 64.2 | 65.3 | 67.3 | 70.5 |
| Syrian Arab Republic | 52.0 | 58.8 | 65.7 | 70.5 | 73.1 | 72.2 | 70.6 | 73.7 | 78.3 | 81.0 |
| Tunisia | 42.2 | 51.2 | 61.8 | 68.7 | 73.1 | 74.8 | 75.6 | 76.5 | 78.3 | 81.6 |
| United Arab Emirates | 52.2 | 61.6 | 67.6 | 71.5 | 74.2 | 76.3 | 77.1 | 77.9 | 79.4 | 82.5 |
| Yemen | 34.7 | 41.2 | 50.6 | 57.7 | 60.4 | 63.5 | 64.7 | 65.7 | 67.5 | 70.4 |
| Arab region | 46.8 | 52.5 | 58.5 | 64.2 | 67.6 | 70.0 | 71.0 | 72.0 | 73.7 | 76.4 |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex VIII

Life expectancy at birth (male and female, in years)

| Country | 1970 | | 1980 | | 1990 | | 2000 | | 2010 | | 2020 | | 2030 | | 2040 | | 2050 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sex | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| Algeria | 49.6 | 51.3 | 57.1 | 59.5 | 65.0 | 68.1 | 68.9 | 71.8 | 73.4 | 75.8 | 75.7 | 78.2 | 77.6 | 80.1 | 79.5 | 81.7 | 81.4 | 83.3 |
| Bahrain | 61.3 | 65.8 | 68.2 | 71.2 | 71.4 | 73.6 | 73.6 | 75.4 | 75.3 | 77.1 | 76.6 | 78.6 | 77.9 | 79.9 | 79.3 | 81.2 | 80.7 | 82.4 |
| Comoros | 44.1 | 47.3 | 49.1 | 52.3 | 55.0 | 58.1 | 57.9 | 61.0 | 60.3 | 63.5 | 62.7 | 66.3 | 64.4 | 68.3 | 65.6 | 70.0 | 66.8 | 71.6 |
| Djibouti | 47.7 | 50.5 | 52.1 | 55.2 | 55.0 | 58.2 | 55.6 | 58.7 | 58.8 | 61.9 | 61.5 | 64.9 | 63.1 | 66.9 | 64.4 | 68.7 | 65.7 | 70.4 |
| Egypt | 50.5 | 54.0 | 56.2 | 60.5 | 62.2 | 66.9 | 66.1 | 70.9 | 68.2 | 72.6 | 69.9 | 74.6 | 71.4 | 76.3 | 72.8 | 77.8 | 74.3 | 79.3 |
| Iraq | 58.1 | 57.7 | 57.2 | 64.2 | 62.4 | 69.5 | 66.7 | 71.4 | 66.0 | 71.3 | 68.2 | 72.9 | 69.5 | 74.6 | 70.7 | 76.1 | 72.0 | 77.5 |
| Jordan | 59.2 | 61.2 | 64.8 | 67.6 | 68.5 | 71.3 | 70.4 | 73.3 | 71.9 | 75.1 | 73.2 | 76.7 | 74.5 | 78.2 | 75.9 | 79.5 | 77.4 | 80.8 |
| Kuwait | 64.8 | 67.7 | 68.5 | 71.1 | 71.3 | 73.3 | 72.4 | 74.3 | 73.2 | 75.1 | 74.2 | 76.6 | 75.2 | 77.9 | 76.4 | 79.1 | 77.6 | 80.3 |
| Lebanon | 64.3 | 67.9 | 66.3 | 69.8 | 68.8 | 71.9 | 72.8 | 76.1 | 76.7 | 80.3 | 78.7 | 82.0 | 80.7 | 83.5 | 82.6 | 84.8 | 84.4 | 86.2 |
| Libya | 54.3 | 57.6 | 62.3 | 66.0 | 66.9 | 70.3 | 68.9 | 72.4 | 69.2 | 74.4 | 69.8 | 75.6 | 71.1 | 77.1 | 72.6 | 78.4 | 74.0 | 79.7 |
| Mauritania | 48.1 | 50.2 | 52.9 | 55.6 | 57.0 | 59.6 | 58.5 | 61.6 | 60.5 | 63.5 | 62.2 | 65.4 | 63.4 | 67.0 | 64.3 | 68.3 | 65.2 | 69.6 |
| Morocco | 51.6 | 53.6 | 56.4 | 58.9 | 63.0 | 66.2 | 67.2 | 70.3 | 72.5 | 75.2 | 75.5 | 77.9 | 77.6 | 80.1 | 79.6 | 81.8 | 81.6 | 83.5 |
| Oman | 49.2 | 51.6 | 58.0 | 61.3 | 65.3 | 69.1 | 70.3 | 74.4 | 73.8 | 78.1 | 76.3 | 80.3 | 78.5 | 82.2 | 80.7 | 83.7 | 82.9 | 85.3 |
| Qatar | 67.0 | 69.8 | 71.7 | 73.7 | 74.1 | 76.1 | 75.3 | 77.7 | 76.4 | 79.0 | 78.0 | 80.5 | 79.7 | 81.8 | 81.3 | 83.1 | 83.0 | 84.3 |
| Saudi Arabia | 51.0 | 54.9 | 61.1 | 64.8 | 67.4 | 70.9 | 70.8 | 74.2 | 72.3 | 75.2 | 73.9 | 77.0 | 75.4 | 78.6 | 76.9 | 80.0 | 78.4 | 81.3 |
| Somalia | 39.4 | 42.5 | 43.1 | 46.2 | 44.2 | 47.2 | 49.1 | 52.3 | 52.5 | 55.7 | 56.2 | 59.7 | 59.7 | 63.4 | 62.1 | 66.3 | 64.5 | 69.1 |
| State of Palestine | 54.0 | 57.7 | 61.0 | 64.4 | 66.4 | 69.5 | 69.1 | 72.4 | 70.7 | 74.3 | 72.2 | 76.2 | 73.7 | 77.9 | 75.3 | 79.3 | 76.8 | 80.7 |
| Sudan | 50.7 | 53.6 | 52.8 | 55.7 | 54.1 | 57.1 | 56.7 | 60.3 | 60.9 | 64.2 | 63.6 | 67.0 | 65.4 | 69.2 | 66.8 | 71.1 | 68.2 | 72.9 |
| Syrian Arab Republic | 57.5 | 60.2 | 64.5 | 67.0 | 69.0 | 72.0 | 71.0 | 75.2 | 68.2 | 76.8 | 69.5 | 78.4 | 76.1 | 80.3 | 77.5 | 81.7 | 79.0 | 83.1 |
| Tunisia | 50.1 | 52.3 | 60.6 | 63.1 | 66.7 | 70.9 | 70.8 | 75.7 | 72.7 | 77.1 | 74.5 | 78.6 | 76.3 | 80.3 | 78.2 | 81.7 | 80.0 | 83.0 |
| United Arab Emirates | 59.8 | 63.9 | 66.4 | 69.6 | 70.6 | 73.0 | 73.4 | 75.6 | 75.6 | 77.8 | 77.2 | 79.4 | 78.7 | 80.8 | 80.3 | 82.2 | 81.9 | 83.5 |
| Yemen | 39.9 | 42.6 | 49.0 | 52.0 | 56.1 | 59.1 | 59.1 | 61.9 | 62.1 | 64.9 | 64.2 | 67.3 | 65.7 | 69.3 | 67.0 | 70.9 | 68.2 | 72.6 |
| Arab region | 51.3 | 53.8 | 56.8 | 60.3 | 62.3 | 66.2 | 65.8 | 69.6 | 68.2 | 72.0 | 70.1 | 74.0 | 71.8 | 75.7 | 73.1 | 77.1 | 74.4 | 78.5 |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex IX

Life expectancy at age 60 (both sexes, in years)

| Region, subregion or country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2050 |
|---|---|---|---|---|---|---|---|---|---|
| World | 16.3 | 17.2 | 18.0 | 18.8 | 20.0 | 20.5 | 20.9 | 21.7 | 23.1 |
| More developed regions | 18.0 | 19.0 | 19.9 | 20.7 | 22.5 | 23.2 | 23.7 | 24.8 | 26.8 |
| Less developed regions | 14.9 | 16.0 | 16.7 | 17.7 | 18.7 | 19.2 | 19.7 | 20.6 | 22.2 |
| Least developed countries | 13.6 | 14.3 | 15.0 | 16.0 | 17.1 | 17.6 | 18.0 | 18.7 | 20.3 |
| High-income countries | 18.0 | 19.2 | 20.5 | 22.0 | 23.6 | 24.2 | 24.8 | 25.8 | 27.8 |
| Middle-income countries | 15.3 | 16.3 | 16.9 | 17.6 | 18.7 | 19.2 | 19.6 | 20.5 | 22.2 |
| Low-income countries | 13.6 | 14.4 | 15.0 | 15.5 | 16.6 | 17.1 | 17.4 | 18.1 | 19.5 |
| Algeria | 14.7 | 15.8 | 17.2 | 18.9 | 21.2 | 21.8 | 22.3 | 23.2 | 25.1 |
| Bahrain | 15.3 | 16.3 | 17.4 | 18.3 | 19.2 | 19.7 | 20.2 | 21.1 | 23.3 |
| Comoros | 13.8 | 14.5 | 15.3 | 15.7 | 16.0 | 16.3 | 16.5 | 16.8 | 17.4 |
| Djibouti | 15.1 | 15.8 | 16.4 | 16.7 | 17.3 | 17.6 | 17.7 | 17.9 | 18.3 |
| Egypt | 16.5 | 16.8 | 17.0 | 17.1 | 17.2 | 17.4 | 17.8 | 18.8 | 20.6 |
| Iraq | 15.5 | 16.2 | 17.3 | 17.7 | 17.3 | 17.6 | 17.8 | 18.3 | 19.7 |
| Jordan | 15.7 | 16.7 | 17.5 | 18.1 | 18.8 | 19.2 | 19.6 | 20.4 | 22.2 |
| Kuwait | 15.9 | 16.3 | 16.6 | 17.0 | 17.5 | 17.8 | 18.2 | 19.0 | 21.0 |
| Lebanon | 16.7 | 17.0 | 17.6 | 19.2 | 21.6 | 22.4 | 23.0 | 24.3 | 26.9 |
| Libya | 14.9 | 16.2 | 17.1 | 17.6 | 18.2 | 18.4 | 18.7 | 19.4 | 20.9 |
| Mauritania | 14.1 | 15.0 | 15.7 | 16.0 | 16.4 | 16.5 | 16.6 | 16.8 | 17.3 |
| Morocco | 15.0 | 15.7 | 16.8 | 17.6 | 19.8 | 20.4 | 21.0 | 22.1 | 24.8 |
| Oman | 14.3 | 15.5 | 17.0 | 18.5 | 20.2 | 21.0 | 21.7 | 23.2 | 25.9 |
| Qatar | 17.9 | 18.9 | 19.5 | 19.8 | 20.3 | 20.9 | 21.4 | 22.6 | 25.0 |
| Saudi Arabia | 15.2 | 16.5 | 17.4 | 18.0 | 18.2 | 18.6 | 19.1 | 20.0 | 22.2 |
| Somalia | 13.6 | 14.4 | 14.6 | 15.5 | 16.0 | 16.2 | 16.4 | 16.7 | 17.2 |
| State of Palestine | 15.1 | 16.2 | 17.1 | 17.8 | 18.4 | 18.7 | 19.1 | 20.0 | 21.9 |
| Sudan | 15.6 | 16.0 | 16.3 | 16.8 | 17.5 | 17.8 | 17.9 | 18.0 | 18.4 |
| Syrian Arab Republic | 15.8 | 16.8 | 17.8 | 18.8 | 19.3 | 19.3 | 20.0 | 21.6 | 23.6 |
| Tunisia | 14.4 | 15.9 | 17.5 | 18.9 | 19.6 | 20.0 | 20.6 | 21.7 | 24.0 |
| United Arab Emirates | 15.5 | 16.4 | 17.5 | 18.5 | 19.6 | 20.1 | 20.6 | 21.8 | 24.3 |
| Yemen | 13.7 | 14.9 | 15.7 | 15.9 | 16.2 | 16.3 | 16.5 | 16.8 | 17.5 |
| **Arab region** | **15.5** | **16.2** | **16.9** | **17.6** | **18.5** | **18.9** | **19.3** | **20.2** | **22.0** |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex X

Number of migrants by age group in Arab countries (thousands), 1990-2017

| Year | Country of destination | Both Sexes | | | | | Male | | | | | Female | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0-14 | 15-24 | 25-59 | 60+ | Total | 0-14 | 15-24 | 25-59 | 60+ | Total | 0-14 | 15-24 | 25-59 | 60+ | Total |
| 1990 | Algeria | 51 399 | 42 595 | 145 217 | 34 743 | 273 954 | 29 110 | 23 344 | 77 795 | 19 985 | 150 234 | 22 289 | 19 251 | 67 422 | 14 758 | 123 720 |
| 1995 | Algeria | 47 737 | 38 960 | 141 494 | 33 841 | 262 032 | 25 682 | 20 756 | 80 951 | 16 307 | 143 696 | 22 055 | 18 204 | 60 543 | 17 534 | 118 336 |
| 2000 | Algeria | 44 087 | 35 339 | 137 752 | 32 932 | 250 110 | 23 757 | 18 852 | 78 655 | 15 894 | 137 158 | 20 330 | 16 487 | 59 097 | 17 038 | 112 952 |
| 2005 | Algeria | 33 527 | 26 302 | 111 053 | 26 540 | 197 422 | 18 100 | 14 053 | 63 282 | 12 831 | 108 266 | 15 427 | 12 249 | 47 771 | 13 709 | 89 156 |
| 2010 | Algeria | 35 314 | 26 990 | 124 838 | 29 822 | 216 964 | 18 397 | 13 897 | 68 655 | 13 778 | 114 727 | 16 917 | 13 093 | 56 183 | 16 044 | 102 237 |
| 2015 | Algeria | 38 194 | 29 078 | 140 584 | 31 617 | 239 473 | 19 813 | 14 900 | 77 192 | 14 617 | 126 522 | 18 381 | 14 178 | 63 392 | 17 000 | 112 951 |
| 2017 | Algeria | 42 181 | 23 807 | 139 810 | 42 826 | 248 624 | 21 988 | 12 255 | 76 947 | 20 002 | 131 192 | 20 193 | 11 552 | 62 863 | 22 824 | 117 432 |
| 1990 | Bahrain | 26 972 | 19 147 | 125 418 | 1 675 | 173 212 | 13 952 | 11 472 | 96 145 | 1 161 | 122 730 | 13 020 | 7 675 | 29 273 | 514 | 50 482 |
| 1995 | Bahrain | 37 455 | 22 113 | 139 020 | 7 391 | 205 979 | 19 076 | 12 615 | 107 565 | 4 971 | 144 227 | 18 379 | 9 498 | 31 455 | 2 420 | 61 752 |
| 2000 | Bahrain | 42 812 | 34 530 | 147 450 | 14 569 | 239 361 | 21 877 | 19 701 | 114 065 | 9 701 | 165 344 | 20 935 | 14 829 | 33 385 | 4 868 | 74 017 |
| 2005 | Bahrain | 48 922 | 46 934 | 298 293 | 9 869 | 404 018 | 25 198 | 27 749 | 228 950 | 6 717 | 288 614 | 23 724 | 19 185 | 69 343 | 3 152 | 115 404 |
| 2010 | Bahrain | 65 835 | 69 700 | 514 988 | 7 333 | 657 856 | 33 802 | 44 452 | 392 602 | 5 049 | 475 905 | 32 033 | 25 248 | 122 386 | 2 284 | 181 951 |
| 2015 | Bahrain | 87 349 | 60 771 | 531 398 | 24 619 | 704 137 | 47 338 | 37 877 | 406 724 | 17 027 | 508 966 | 40 011 | 22 894 | 124 674 | 7 592 | 195 171 |
| 2017 | Bahrain | 90 357 | 67 297 | 534 986 | 30 009 | 722 649 | 49 215 | 42 080 | 410 352 | 20 700 | 522 347 | 41 142 | 25 217 | 124 634 | 9 309 | 200 302 |
| 1990 | Comoros | 2 497 | 2 396 | 8 395 | 791 | 14 079 | 1 045 | 1 093 | 4 163 | 416 | 6 717 | 1 452 | 1 303 | 4 232 | 375 | 7 362 |
| 1995 | Comoros | 2 424 | 2 379 | 8 330 | 806 | 13 939 | 1 031 | 1 070 | 4 091 | 422 | 6 614 | 1 393 | 1 309 | 4 239 | 384 | 7 325 |
| 2000 | Comoros | 2 356 | 2 366 | 8 276 | 801 | 13 799 | 1 016 | 1 047 | 4 021 | 427 | 6 511 | 1 340 | 1 319 | 4 255 | 374 | 7 288 |
| 2005 | Comoros | 1 681 | 2 083 | 8 232 | 1 213 | 13 209 | 734 | 926 | 3 992 | 634 | 6 286 | 947 | 1 157 | 4 240 | 579 | 6 923 |
| 2010 | Comoros | 1 489 | 1 860 | 8 012 | 1 257 | 12 618 | 663 | 840 | 3 897 | 660 | 6 060 | 826 | 1 020 | 4 115 | 597 | 6 558 |
| 2015 | Comoros | 1 466 | 1 891 | 7 922 | 1 276 | 12 555 | 663 | 861 | 3 869 | 678 | 6 071 | 803 | 1 030 | 4 053 | 598 | 6 484 |
| 2017 | Comoros | 1 394 | 1 774 | 7 978 | 1 409 | 12 555 | 629 | 806 | 3 891 | 745 | 6 071 | 765 | 968 | 4 087 | 664 | 6 484 |
| 1990 | Djibouti | 24 406 | 37 556 | 55 339 | 4 920 | 122 221 | 14 387 | 17 605 | 29 359 | 2 891 | 64 242 | 10 019 | 19 951 | 25 980 | 2 029 | 57 979 |
| 1995 | Djibouti | 18 764 | 26 882 | 49 664 | 4 464 | 99 774 | 11 020 | 12 456 | 26 398 | 2 602 | 52 476 | 7 744 | 14 426 | 23 266 | 1 862 | 47 298 |

| Year | Country of destination | Both Sexes | | | | | Male | | | | | Female | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0-14 | 15-24 | 25-59 | 60+ | Total | 0-14 | 15-24 | 25-59 | 60+ | Total | 0-14 | 15-24 | 25-59 | 60+ | Total |
| 2000 | Djibouti | 17 608 | 22 870 | 55 037 | 4 992 | 100 507 | 10 298 | 10 433 | 29 303 | 2 886 | 52 920 | 7 310 | 12 437 | 25 734 | 2 106 | 47 587 |
| 2005 | Djibouti | 16 837 | 20 938 | 49 300 | 5 016 | 92 091 | 10 149 | 10 432 | 27 743 | 2 991 | 51 315 | 6 688 | 10 506 | 21 557 | 2 025 | 40 776 |
| 2010 | Djibouti | 19 343 | 23 078 | 53 156 | 5 998 | 101 575 | 10 907 | 10 818 | 28 232 | 3 338 | 53 295 | 8 436 | 12 260 | 24 924 | 2 660 | 48 280 |
| 2015 | Djibouti | 20 790 | 24 479 | 60 191 | 6 891 | 112 351 | 11 944 | 11 567 | 31 724 | 3 846 | 59 081 | 8 846 | 12 912 | 28 467 | 3 045 | 53 270 |
| 2017 | Djibouti | 18 628 | 23 067 | 66 269 | 8 125 | 116 089 | 10 742 | 10 855 | 34 922 | 4 506 | 61 025 | 7 886 | 12 212 | 31 347 | 3 619 | 55 064 |
| 1990 | Egypt | 56 234 | 39 241 | 66 651 | 11 582 | 173 708 | 27 547 | 21 488 | 37 627 | 5 266 | 91 928 | 28 687 | 17 753 | 29 024 | 6 316 | 81 780 |
| 1995 | Egypt | 43 919 | 37 542 | 73 961 | 11 533 | 166 955 | 21 503 | 20 691 | 40 768 | 5 583 | 88 545 | 22 416 | 16 851 | 33 193 | 5 950 | 78 410 |
| 2000 | Egypt | 26 490 | 38 456 | 95 856 | 12 650 | 173 452 | 13 298 | 21 724 | 50 378 | 6 805 | 92 205 | 13 192 | 16 732 | 45 478 | 5 845 | 81 247 |
| 2005 | Egypt | 42 098 | 61 109 | 150 696 | 20 098 | 274 001 | 22 947 | 38 294 | 85 415 | 11 621 | 158 277 | 19 151 | 22 815 | 65 281 | 8 477 | 115 724 |
| 2010 | Egypt | 41 734 | 39 685 | 187 842 | 26 453 | 295 714 | 22 211 | 24 319 | 104 629 | 14 912 | 166 071 | 19 523 | 15 366 | 83 213 | 11 541 | 129 643 |
| 2015 | Egypt | 71 833 | 91 345 | 358 236 | 44 517 | 565 931 | 38 079 | 55 948 | 198 604 | 25 193 | 317 824 | 33 754 | 35 397 | 159 632 | 19 324 | 248 107 |
| 2017 | Egypt | 60 222 | 69 386 | 307 270 | 41 432 | 478 310 | 30 478 | 41 119 | 163 581 | 22 483 | 257 661 | 29 744 | 28 267 | 143 689 | 18 949 | 220 649 |
| 1990 | Iraq | 17 763 | 21 758 | 39 580 | 4 537 | 83 638 | 11 074 | 14 064 | 27 882 | 2 731 | 55 751 | 6 689 | 7 694 | 11 698 | 1 806 | 27 887 |
| 1995 | Iraq | 33 921 | 51 497 | 103 829 | 10 213 | 199 460 | 17 397 | 28 082 | 64 283 | 5 059 | 114 821 | 16 524 | 23 415 | 39 546 | 5 154 | 84 639 |
| 2000 | Iraq | 30 709 | 54 131 | 115 320 | 10 365 | 210 525 | 15 592 | 29 179 | 70 612 | 5 081 | 120 464 | 15 117 | 24 952 | 44 708 | 5 284 | 90 061 |
| 2005 | Iraq | 19 387 | 34 175 | 72 804 | 6 549 | 132 915 | 10 660 | 19 902 | 46 880 | 3 441 | 80 883 | 8 727 | 14 273 | 25 924 | 3 108 | 52 032 |
| 2010 | Iraq | 17 121 | 30 182 | 64 296 | 5 790 | 117 389 | 9 315 | 18 504 | 42 028 | 3 118 | 72 965 | 7 806 | 11 678 | 22 268 | 2 672 | 44 424 |
| 2015 | Iraq | 34 891 | 70 111 | 231 321 | 23 058 | 359 381 | 18 418 | 40 536 | 140 032 | 10 247 | 209 233 | 16 473 | 29 575 | 91 289 | 12 811 | 150 148 |
| 2017 | Iraq | 32 435 | 61 196 | 245 442 | 27 495 | 366 568 | 17 130 | 35 415 | 148 655 | 12 218 | 213 418 | 15 305 | 25 781 | 96 787 | 15 277 | 153 150 |
| 1990 | Jordan | 453 312 | 209 087 | 408 943 | 75 007 | 1 146 349 | 231 536 | 107 083 | 209 731 | 38 123 | 586 473 | 221 776 | 102 004 | 199 212 | 36 884 | 559 876 |
| 1995 | Jordan | 605 084 | 264 420 | 567 022 | 100 571 | 1 537 097 | 304 883 | 134 132 | 294 976 | 50 734 | 784 725 | 300 201 | 130 288 | 272 046 | 49 837 | 752 372 |
| 2000 | Jordan | 756 965 | 320 389 | 724 358 | 126 133 | 1 927 845 | 378 346 | 161 798 | 379 488 | 63 345 | 982 977 | 378 619 | 158 591 | 344 870 | 62 788 | 944 868 |
| 2005 | Jordan | 913 068 | 386 460 | 873 736 | 152 150 | 2 325 414 | 458 837 | 194 069 | 454 398 | 76 341 | 1 183 645 | 454 231 | 192 391 | 419 338 | 75 809 | 1 141 769 |
| 2010 | Jordan | 1 069 171 | 452 531 | 1 023 114 | 178 167 | 2 722 983 | 539 172 | 226 449 | 529 321 | 89 371 | 1 384 313 | 529 999 | 226 082 | 493 793 | 88 796 | 1 338 670 |
| 2015 | Jordan | 1 242 101 | 464 294 | 1 168 770 | 236 861 | 3 112 026 | 620 738 | 230 269 | 598 321 | 117 849 | 1 567 177 | 621 363 | 234 025 | 570 449 | 119 012 | 1 544 849 |
| 2017 | Jordan | 1 299 086 | 493 830 | 1 179 512 | 261 125 | 3 233 553 | 649 303 | 244 921 | 604 216 | 129 937 | 1 628 377 | 649 783 | 248 909 | 575 296 | 131 188 | 1 605 176 |
| 1990 | Kuwait | 399 295 | 182 439 | 463 620 | 29 037 | 1 074 391 | 207 788 | 99 518 | 328 883 | 18 689 | 654 878 | 191 507 | 82 921 | 134 737 | 10 348 | 419 513 |
| 1995 | Kuwait | 287 048 | 151 639 | 453 925 | 29 342 | 921 954 | 154 995 | 87 869 | 329 324 | 19 264 | 591 452 | 132 053 | 63 770 | 124 601 | 10 078 | 330 502 |
| 2000 | Kuwait | 280 324 | 179 789 | 629 970 | 37 557 | 1 127 640 | 161 781 | 112 185 | 462 141 | 25 405 | 761 512 | 118 543 | 67 604 | 167 829 | 12 152 | 366 128 |
| 2005 | Kuwait | 311 621 | 207 906 | 773 588 | 40 212 | 1 333 327 | 182 393 | 132 560 | 575 392 | 28 235 | 918 580 | 129 228 | 75 346 | 198 196 | 11 977 | 414 747 |
| 2010 | Kuwait | 420 193 | 288 072 | 1 113 531 | 49 741 | 1 871 537 | 274 519 | 198 842 | 797 398 | 39 055 | 1 309 814 | 145 674 | 89 230 | 316 133 | 10 686 | 561 723 |
| 2015 | Kuwait | 424 374 | 277 955 | 2 065 900 | 97 907 | 2 866 136 | 251 508 | 164 349 | 1 397 717 | 74 646 | 1 888 220 | 172 866 | 113 606 | 668 183 | 23 261 | 977 916 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2017 | Kuwait | 497 737 | 331 899 | 2 177 751 | 116 044 | 3 123 431 | 381 638 | 222 150 | 1 427 509 | 91 995 | 2 123 292 | 116 099 | 109 749 | 750 242 | 24 049 | 1 000 139 |
| 1990 | Lebanon | 181 804 | 110 173 | 203 490 | 28 226 | 523 693 | 92 514 | 56 638 | 105 138 | 13 632 | 267 922 | 89 290 | 53 535 | 98 352 | 14 594 | 255 771 |
| 1995 | Lebanon | 208 600 | 110 335 | 256 422 | 32 946 | 608 303 | 105 800 | 56 548 | 132 432 | 15 833 | 310 613 | 102 800 | 53 787 | 123 990 | 17 113 | 297 690 |
| 2000 | Lebanon | 235 364 | 110 274 | 309 605 | 37 670 | 692 913 | 119 073 | 56 369 | 159 830 | 18 033 | 353 305 | 116 291 | 53 905 | 149 775 | 19 637 | 339 608 |
| 2005 | Lebanon | 257 057 | 120 437 | 338 142 | 41 148 | 756 784 | 128 701 | 63 233 | 178 264 | 20 133 | 390 331 | 128 356 | 57 204 | 159 878 | 21 015 | 366 453 |
| 2010 | Lebanon | 296 982 | 108 609 | 364 362 | 50 702 | 820 655 | 154 230 | 57 047 | 191 468 | 24 613 | 427 358 | 142 752 | 51 562 | 172 894 | 26 089 | 393 297 |
| 2015 | Lebanon | 764 816 | 303 673 | 794 965 | 109 750 | 1 973 204 | 364 573 | 144 917 | 387 990 | 50 945 | 948 425 | 400 243 | 158 756 | 406 975 | 58 805 | 1 024 779 |
| 2017 | Lebanon | 696 752 | 307 919 | 811 212 | 123 329 | 1 939 212 | 332 234 | 146 951 | 395 982 | 57 282 | 932 449 | 364 518 | 160 968 | 415 230 | 66 047 | 1 006 763 |
| 1990 | Libya | 92 489 | 102 121 | 245 792 | 16 673 | 457 075 | 30 373 | 39 061 | 164 520 | 8 753 | 242 707 | 62 116 | 63 060 | 81 272 | 7 920 | 214 368 |
| 1995 | Libya | 102 172 | 103 601 | 281 123 | 21 145 | 508 041 | 41 876 | 46 609 | 200 228 | 12 193 | 300 906 | 60 296 | 56 992 | 80 895 | 8 952 | 207 135 |
| 2000 | Libya | 113 541 | 106 655 | 321 236 | 26 004 | 567 436 | 55 525 | 55 178 | 241 842 | 16 405 | 368 950 | 58 016 | 51 477 | 79 394 | 9 599 | 198 486 |
| 2005 | Libya | 117 950 | 111 538 | 363 590 | 32 134 | 625 212 | 67 946 | 67 665 | 287 726 | 22 260 | 445 597 | 50 004 | 43 873 | 75 864 | 9 874 | 179 615 |
| 2010 | Libya | 129 038 | 122 025 | 397 773 | 35 162 | 683 998 | 75 393 | 75 704 | 314 115 | 24 525 | 489 737 | 53 645 | 46 321 | 83 658 | 10 637 | 194 261 |
| 2015 | Libya | 145 477 | 137 571 | 448 450 | 39 648 | 771 146 | 84 335 | 84 714 | 351 602 | 28 502 | 549 153 | 61 142 | 52 857 | 96 848 | 11 146 | 221 993 |
| 2017 | Libya | 153 142 | 122 155 | 461 218 | 51 904 | 788 419 | 87 947 | 74 455 | 362 143 | 36 909 | 561 454 | 65 195 | 47 700 | 99 075 | 14 995 | 226 965 |
| 1990 | Mauritania | 34 434 | 24 381 | 49 177 | 3 658 | 111 650 | 16 855 | 11 394 | 27 680 | 1 640 | 57 569 | 17 579 | 12 987 | 21 497 | 2 018 | 54 081 |
| 1995 | Mauritania | 28 190 | 16 297 | 42 018 | 3 057 | 89 562 | 13 448 | 7 729 | 24 295 | 1 543 | 47 015 | 14 742 | 8 568 | 17 723 | 1 514 | 42 547 |
| 2000 | Mauritania | 18 072 | 9 376 | 27 705 | 2 213 | 57 366 | 8 835 | 4 577 | 16 518 | 1 233 | 31 163 | 9 237 | 4 799 | 11 187 | 980 | 26 203 |
| 2005 | Mauritania | 18 010 | 9 155 | 28 371 | 2 583 | 58 119 | 9 022 | 4 626 | 17 389 | 1 551 | 32 588 | 8 988 | 4 529 | 10 982 | 1 032 | 25 531 |
| 2010 | Mauritania | 30 381 | 15 562 | 34 736 | 4 000 | 84 679 | 16 417 | 8 999 | 21 006 | 2 183 | 48 605 | 13 964 | 6 563 | 13 730 | 1 817 | 36 074 |
| 2015 | Mauritania | 62 601 | 32 137 | 63 802 | 8 012 | 166 552 | 33 296 | 18 348 | 38 127 | 4 299 | 94 070 | 29 305 | 13 789 | 25 675 | 3 713 | 72 482 |
| 2017 | Mauritania | 53 509 | 30 856 | 75 203 | 8 870 | 168 438 | 28 230 | 17 502 | 44 665 | 4 739 | 95 136 | 25 279 | 13 354 | 30 538 | 4 131 | 73 302 |
| 1990 | Morocco | 11 335 | 8 109 | 26 543 | 8 908 | 54 895 | 6 379 | 4 627 | 14 128 | 3 890 | 29 024 | 4 956 | 3 482 | 12 415 | 5 018 | 25 871 |
| 1995 | Morocco | 10 152 | 7 214 | 24 975 | 8 019 | 50 360 | 5 548 | 4 100 | 13 153 | 3 463 | 26 264 | 4 604 | 3 114 | 11 822 | 4 556 | 24 096 |
| 2000 | Morocco | 10 541 | 7 329 | 26 735 | 8 429 | 53 034 | 5 594 | 4 115 | 13 913 | 3 611 | 27 233 | 4 947 | 3 214 | 12 822 | 4 818 | 25 801 |
| 2005 | Morocco | 10 807 | 7 514 | 27 410 | 8 648 | 54 379 | 5 584 | 4 116 | 14 144 | 3 699 | 27 543 | 5 223 | 3 398 | 13 266 | 4 949 | 26 836 |
| 2010 | Morocco | 12 644 | 9 741 | 38 109 | 10 415 | 70 909 | 6 471 | 5 168 | 19 593 | 4 506 | 35 738 | 6 173 | 4 573 | 18 516 | 5 909 | 35 171 |
| 2015 | Morocco | 15 942 | 12 855 | 51 579 | 12 048 | 92 424 | 8 076 | 6 629 | 26 396 | 5 286 | 46 387 | 7 866 | 6 226 | 25 183 | 6 762 | 46 037 |
| 2017 | Morocco | 16 726 | 12 459 | 53 980 | 12 670 | 95 835 | 8 476 | 6 427 | 27 634 | 5 562 | 48 099 | 8 250 | 6 032 | 26 346 | 7 108 | 47 736 |
| 1990 | Oman | 35 336 | 25 616 | 240 944 | 2 104 | 304 000 | 18 527 | 18 571 | 203 961 | 1 418 | 242 477 | 16 809 | 7 045 | 36 983 | 686 | 61 523 |
| 1995 | Oman | 62 729 | 45 473 | 427 705 | 3 736 | 539 643 | 29 341 | 31 479 | 354 248 | 2 376 | 417 444 | 33 388 | 13 994 | 73 457 | 1 360 | 122 199 |
| 2000 | Oman | 76 599 | 55 869 | 482 015 | 9 125 | 623 608 | 46 087 | 36 959 | 398 547 | 6 796 | 488 389 | 30 512 | 18 910 | 83 468 | 2 329 | 135 219 |
| 2005 | Oman | 76 796 | 57 257 | 522 483 | 9 624 | 666 160 | 45 579 | 37 891 | 437 130 | 7 242 | 527 842 | 31 217 | 19 366 | 85 353 | 2 382 | 138 318 |

| Year | Country of destination | Both Sexes | | | | | Male | | | | | Female | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0-14 | 15-24 | 25-59 | 60+ | Total | 0-14 | 15-24 | 25-59 | 60+ | Total | 0-14 | 15-24 | 25-59 | 60+ | Total |
| 2015 | Oman | 90 979 | 144 274 | 1 554 004 | 25 334 | 1 814 591 | 46 685 | 115 129 | 1 318 740 | 20 068 | 1 500 622 | 44 294 | 29 145 | 235 264 | 5 266 | 313 969 |
| 2017 | Oman | 93 371 | 177 087 | 1 772 306 | 30 528 | 2 073 292 | 49 405 | 147 256 | 1 519 948 | 24 717 | 1 741 326 | 43 966 | 29 831 | 252 358 | 5 811 | 331 966 |
| 1990 | Qatar | 70 950 | 37 973 | 196 098 | 4 732 | 309 753 | 39 823 | 25 118 | 157 867 | 3 124 | 225 932 | 31 127 | 12 855 | 38 231 | 1 608 | 83 821 |
| 1995 | Qatar | 84 087 | 45 108 | 225 857 | 6 621 | 361 673 | 52 007 | 31 038 | 182 095 | 4 832 | 269 972 | 32 080 | 14 070 | 43 762 | 1 789 | 91 701 |
| 2000 | Qatar | 49 360 | 47 372 | 258 011 | 4 954 | 359 697 | 30 116 | 29 605 | 210 871 | 3 650 | 274 242 | 19 244 | 17 767 | 47 140 | 1 304 | 85 455 |
| 2005 | Qatar | 117 326 | 88 928 | 428 105 | 11 667 | 646 026 | 79 194 | 64 563 | 345 641 | 9 030 | 498 428 | 38 132 | 24 365 | 82 464 | 2 637 | 147 598 |
| 2010 | Qatar | 140 645 | 206 268 | 1 092 737 | 16 763 | 1 456 413 | 87 926 | 162 012 | 943 912 | 12 721 | 1 206 571 | 52 719 | 44 256 | 148 825 | 4 042 | 249 842 |
| 2015 | Qatar | 204 107 | 207 474 | 1 259 544 | 16 515 | 1 687 640 | 156 809 | 172 877 | 1 072 409 | 14 266 | 1 416 361 | 47 298 | 34 597 | 187 135 | 2 249 | 271 279 |
| 2017 | Qatar | 210 956 | 214 937 | 1 249 747 | 45 752 | 1 721 392 | 164 476 | 172 649 | 1 070 729 | 36 834 | 1 444 688 | 46 480 | 42 288 | 179 018 | 8 918 | 276 704 |
| 1990 | Saudi Arabia | 1 094 888 | 562 577 | 3 276 209 | 64 771 | 4 998 445 | 492 571 | 337 674 | 2 455 837 | 38 791 | 3 324 873 | 602 317 | 224 903 | 820 372 | 25 980 | 1 673 572 |
| 1995 | Saudi Arabia | 1 046 859 | 604 459 | 3 391 343 | 80 041 | 5 122 702 | 485 119 | 353 081 | 2 527 470 | 50 815 | 3 416 485 | 561 740 | 251 378 | 863 873 | 29 226 | 1 706 217 |
| 2000 | Saudi Arabia | 1 051 095 | 563 868 | 3 557 796 | 90 628 | 5 263 387 | 496 273 | 317 848 | 2 644 888 | 58 759 | 3 517 768 | 554 822 | 246 020 | 912 908 | 31 869 | 1 745 619 |
| 2005 | Saudi Arabia | 1 256 050 | 793 492 | 4 334 430 | 117 847 | 6 501 819 | 633 337 | 473 231 | 3 283 608 | 79 629 | 4 469 805 | 622 713 | 320 261 | 1 050 822 | 38 218 | 2 032 014 |
| 2010 | Saudi Arabia | 1 651 432 | 830 256 | 5 787 414 | 160 854 | 8 429 956 | 883 959 | 490 633 | 4 447 474 | 111 215 | 5 933 281 | 767 473 | 339 623 | 1 339 940 | 49 639 | 2 496 675 |
| 2015 | Saudi Arabia | 1 937 051 | 1 082 058 | 7 542 625 | 209 632 | 10 771 366 | 992 308 | 617 538 | 5 709 912 | 141 744 | 7 461 502 | 944 743 | 464 520 | 1 832 713 | 67 888 | 3 309 864 |
| 2017 | Saudi Arabia | 2 191 322 | 1 224 096 | 8 532 719 | 237 147 | 12 185 284 | 1 094 198 | 684 651 | 6 404 405 | 158 310 | 8 341 564 | 1 097 124 | 539 445 | 2 128 314 | 78 837 | 3 843 720 |
| 1990 | Somalia | 200 677 | 75 233 | 189 913 | 12 471 | 478 294 | 95 727 | 32 500 | 108 924 | 7 050 | 244 201 | 104 950 | 42 733 | 80 989 | 5 421 | 234 093 |
| 1995 | Somalia | 8 111 | 3 070 | 7 816 | 530 | 19 527 | 4 003 | 1 383 | 4 595 | 301 | 10 282 | 4 108 | 1 687 | 3 221 | 229 | 9 245 |
| 2000 | Somalia | 6 432 | 3 173 | 9 726 | 756 | 20 087 | 3 115 | 1 403 | 5 685 | 419 | 10 622 | 3 317 | 1 770 | 4 041 | 337 | 9 465 |
| 2005 | Somalia | 6 541 | 3 138 | 10 167 | 824 | 20 670 | 3 196 | 1 441 | 5 944 | 466 | 11 047 | 3 345 | 1 697 | 4 223 | 358 | 9 623 |
| 2010 | Somalia | 7 528 | 3 525 | 11 972 | 970 | 23 995 | 3 697 | 1 667 | 6 989 | 561 | 12 914 | 3 831 | 1 858 | 4 983 | 409 | 11 081 |
| 2015 | Somalia | 13 197 | 6 008 | 20 481 | 1 892 | 41 578 | 6 282 | 2 772 | 11 753 | 1 097 | 21 904 | 6 915 | 3 236 | 8 728 | 795 | 19 674 |
| 2017 | Somalia | 13 523 | 6 623 | 22 195 | 2 527 | 44 868 | 6 380 | 3 031 | 12 680 | 1 458 | 23 549 | 7 143 | 3 592 | 9 515 | 1 069 | 21 319 |
| 1990 | State of Palestine | 72 382 | 61 194 | 112 168 | 42 588 | 288 332 | 37 353 | 29 036 | 45 699 | 20 013 | 132 101 | 35 029 | 32 158 | 66 469 | 22 575 | 156 231 |
| 1995 | State of Palestine | 92 337 | 58 341 | 82 054 | 49 035 | 281 767 | 47 602 | 27 589 | 32 383 | 20 754 | 128 328 | 44 735 | 30 752 | 49 671 | 28 281 | 153 439 |
| 2000 | State of Palestine | 63 026 | 64 636 | 103 237 | 44 303 | 275 202 | 32 817 | 31 065 | 42 108 | 18 565 | 124 555 | 30 209 | 33 571 | 61 129 | 25 738 | 150 647 |
| 2005 | State of Palestine | 33 897 | 81 934 | 100 854 | 49 932 | 266 617 | 17 384 | 41 365 | 40 418 | 20 454 | 119 621 | 16 513 | 40 569 | 60 436 | 29 478 | 146 996 |
| 2010 | State of Palestine | 32 188 | 69 965 | 109 013 | 46 866 | 258 032 | 16 542 | 34 767 | 44 440 | 18 939 | 114 688 | 15 646 | 35 198 | 64 573 | 27 927 | 143 344 |
| 2015 | State of Palestine | 27 389 | 64 014 | 120 360 | 43 744 | 255 507 | 14 153 | 31 578 | 50 104 | 17 402 | 113 237 | 13 236 | 32 436 | 70 256 | 26 342 | 142 270 |
| 2017 | State of Palestine | 22 232 | 55 336 | 135 818 | 40 349 | 253 735 | 11 605 | 27 540 | 57 055 | 16 252 | 112 452 | 10 627 | 27 796 | 78 763 | 24 097 | 141 283 |
| 1990 | Sudan | 536 136 | 255 598 | 490 018 | 121 144 | 1 402 896 | 270 374 | 124 674 | 239 192 | 62 145 | 696 385 | 265 762 | 130 924 | 250 826 | 58 999 | 706 511 |
| 1995 | Sudan | 394 274 | 190 740 | 365 969 | 102 413 | 1 053 396 | 199 255 | 94 093 | 179 630 | 52 723 | 525 701 | 195 019 | 96 647 | 186 339 | 49 690 | 527 695 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2000 | Sudan | 285 275 | 150 481 | 280 804 | 85 323 | 801 883 | 144 812 | 75 166 | 139 057 | 44 013 | 403 048 | 140 463 | 75 315 | 141 747 | 41 310 | 398 835 |
| 2005 | Sudan | 181 174 | 104 824 | 191 745 | 64 251 | 541 994 | 92 565 | 53 321 | 96 566 | 33 463 | 275 915 | 88 609 | 51 503 | 95 179 | 30 788 | 266 079 |
| 2010 | Sudan | 183 435 | 113 719 | 210 270 | 70 939 | 578 363 | 93 795 | 58 010 | 106 171 | 36 806 | 294 782 | 89 640 | 55 709 | 104 099 | 34 133 | 283 581 |
| 2015 | Sudan | 188 943 | 122 284 | 235 122 | 77 529 | 623 878 | 96 009 | 61 354 | 116 788 | 39 377 | 313 528 | 92 934 | 60 930 | 118 334 | 38 152 | 310 350 |
| 2017 | Sudan | 189 508 | 140 617 | 323 604 | 82 092 | 735 821 | 96 088 | 70 370 | 160 319 | 41 605 | 368 382 | 93 420 | 70 247 | 163 285 | 40 487 | 367 439 |
| 1990 | Syrian Arab Republic | 105 850 | 83 156 | 518 700 | 6 434 | 714 140 | 53 446 | 40 060 | 267 658 | 2 913 | 364 077 | 52 404 | 43 096 | 251 042 | 3 521 | 350 063 |
| 1995 | Syrian Arab Republic | 129 722 | 73 010 | 616 424 | 11 454 | 830 610 | 64 857 | 34 853 | 318 297 | 5 108 | 423 115 | 64 865 | 38 157 | 298 127 | 6 346 | 407 495 |
| 2000 | Syrian Arab Republic | 133 524 | 65 186 | 615 257 | 18 306 | 832 273 | 66 704 | 31 466 | 320 224 | 8 239 | 426 633 | 66 820 | 33 720 | 295 033 | 10 067 | 405 640 |
| 2005 | Syrian Arab Republic | 141 586 | 68 469 | 636 125 | 30 230 | 876 410 | 70 622 | 33 289 | 331 740 | 13 819 | 449 470 | 70 964 | 35 180 | 304 385 | 16 411 | 426 940 |
| 2010 | Syrian Arab Republic | 259 712 | 234 390 | 1 264 288 | 26 725 | 1 785 115 | 130 221 | 115 104 | 654 032 | 12 399 | 911 756 | 129 491 | 119 286 | 610 256 | 14 326 | 873 359 |
| 2015 | Syrian Arab Republic | 145 515 | 126 991 | 698 733 | 22 701 | 993 940 | 72 926 | 62 681 | 361 448 | 10 605 | 507 660 | 72 589 | 64 310 | 337 285 | 12 096 | 486 280 |
| 2017 | Syrian Arab Republic | 148 971 | 120 575 | 706 237 | 38 035 | 1 013 818 | 74 670 | 59 530 | 365 845 | 17 768 | 517 813 | 74 301 | 61 045 | 340 392 | 20 267 | 496 005 |
| 1990 | Tunisia | 6 188 | 6 036 | 22 359 | 3 401 | 37 984 | 3 115 | 3 147 | 11 089 | 1 549 | 18 900 | 3 073 | 2 889 | 11 270 | 1 852 | 19 084 |
| 1995 | Tunisia | 5 831 | 5 505 | 22 693 | 3 838 | 37 867 | 2 975 | 2 906 | 11 384 | 1 780 | 19 045 | 2 856 | 2 599 | 11 309 | 2 058 | 18 822 |
| 2000 | Tunisia | 5 374 | 4 945 | 22 648 | 3 479 | 36 446 | 2 773 | 2 638 | 11 477 | 1 635 | 18 523 | 2 601 | 2 307 | 11 171 | 1 844 | 17 923 |
| 2005 | Tunisia | 4 979 | 4 542 | 21 849 | 3 670 | 35 040 | 2 606 | 2 443 | 11 199 | 1 752 | 18 000 | 2 373 | 2 099 | 10 650 | 1 918 | 17 040 |
| 2010 | Tunisia | 6 192 | 5 784 | 27 234 | 3 962 | 43 172 | 3 249 | 3 110 | 13 979 | 1 898 | 22 236 | 2 943 | 2 674 | 13 255 | 2 064 | 20 936 |
| 2015 | Tunisia | 7 872 | 7 058 | 35 069 | 6 702 | 56 701 | 4 171 | 3 799 | 18 143 | 3 238 | 29 351 | 3 701 | 3 259 | 16 926 | 3 464 | 27 350 |
| 2017 | Tunisia | 8 107 | 6 774 | 35 086 | 7 696 | 57 663 | 4 301 | 3 652 | 18 172 | 3 724 | 29 849 | 3 806 | 3 122 | 16 914 | 3 972 | 27 814 |
| 1990 | United Arab Emirates | 262 851 | 186 798 | 844 867 | 12 058 | 1 306 574 | 139 583 | 121 489 | 663 173 | 7 801 | 932 046 | 123 268 | 65 309 | 181 694 | 4 257 | 374 528 |
| 1995 | United Arab Emirates | 366 969 | 260 790 | 1 179 521 | 16 838 | 1 824 118 | 198 625 | 171 599 | 928 702 | 11 026 | 1 309 952 | 168 344 | 89 191 | 250 819 | 5 812 | 514 166 |
| 2000 | United Arab Emirates | 416 571 | 348 923 | 1 659 204 | 21 977 | 2 446 675 | 220 994 | 224 669 | 1 296 657 | 14 824 | 1 757 144 | 195 577 | 124 254 | 362 547 | 7 153 | 689 531 |
| 2005 | United Arab Emirates | 487 058 | 454 568 | 2 311 184 | 28 226 | 3 281 036 | 261 315 | 292 453 | 1 814 883 | 19 627 | 2 388 278 | 225 743 | 162 115 | 496 301 | 8 599 | 892 758 |
| 2010 | United Arab Emirates | 820 502 | 985 098 | 5 443 181 | 67 830 | 7 316 611 | 352 642 | 652 045 | 4 411 343 | 47 485 | 5 463 515 | 467 860 | 333 053 | 1 031 838 | 20 345 | 1 853 096 |
| 2015 | United Arab Emirates | 958 473 | 806 091 | 6 107 232 | 123 330 | 7 995 126 | 476 215 | 543 909 | 4 859 712 | 90 474 | 5 970 310 | 482 258 | 262 182 | 1 247 520 | 32 856 | 2 024 816 |
| 2017 | United Arab Emirates | 1 040 155 | 893 654 | 6 241 978 | 136 737 | 8 312 524 | 547 913 | 620 159 | 4 936 792 | 102 460 | 6 207 324 | 492 242 | 273 495 | 1 305 186 | 34 277 | 2 105 200 |
| 1990 | Yemen | 47 100 | 22 966 | 44 900 | 3 897 | 118 863 | 23 124 | 13 612 | 28 469 | 1 805 | 67 010 | 23 976 | 9 354 | 16 431 | 2 092 | 51 853 |
| 1995 | Yemen | 48 919 | 22 949 | 58 296 | 6 351 | 136 515 | 24 153 | 13 655 | 37 035 | 2 989 | 77 832 | 24 766 | 9 294 | 21 261 | 3 362 | 58 683 |
| 2000 | Yemen | 41 844 | 30 096 | 66 177 | 5 378 | 143 495 | 22 277 | 16 791 | 37 810 | 2 797 | 79 675 | 19 567 | 13 305 | 28 367 | 2 581 | 63 820 |
| 2005 | Yemen | 47 825 | 26 765 | 87 380 | 9 103 | 171 073 | 26 318 | 15 383 | 51 746 | 4 932 | 98 379 | 21 507 | 11 382 | 35 634 | 4 171 | 72 694 |
| 2010 | Yemen | 73 095 | 38 982 | 153 429 | 20 331 | 285 837 | 37 959 | 20 985 | 85 925 | 9 841 | 154 710 | 35 136 | 17 997 | 67 504 | 10 490 | 131 127 |
| 2015 | Yemen | 96 939 | 50 789 | 202 834 | 29 337 | 379 899 | 48 703 | 26 523 | 110 529 | 13 644 | 199 399 | 48 236 | 24 266 | 92 305 | 15 693 | 180 500 |
| 2017 | Yemen | 101 688 | 47 509 | 202 661 | 32 463 | 384 321 | 51 161 | 24 823 | 110 631 | 15 105 | 201 720 | 50 527 | 22 686 | 92 030 | 17 358 | 182 601 |

**Source:** ESCWA calculations based on DESA, Population Division, *Trends in International Migrant Stock: The 2017 Revision* (Geneva, 2017). POP/DB/MIG/Stock/Rev.2017.

# Annex XI

Net number of migrants (both sexes, in thousands)

| Region, subregion or country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 |
|---|---|---|---|---|---|---|---|
| More developed regions | 5 120.9 | 6 269.9 | 9 148.6 | 14 529.9 | 13 790.4 | 11 560.5 | 11 629.9 |
| Less developed regions | -5 120.9 | -6 269.9 | -9 148.6 | -14 529.9 | -13 790.4 | -11 560.5 | -11 629.9 |
| Least developed countries | -2 812.7 | -4 965.3 | -1 258.9 | -3 976.3 | -7 650.3 | -5 548.7 | -4 714.4 |
| High-income countries | 6 138.8 | 7 210.0 | 10 070.1 | 16 360.9 | 19 152.8 | 15 257.3 | 13 611.4 |
| Middle-income countries | -5 403.1 | -3 115.2 | -9 054.6 | -14 984.2 | -16 538.0 | -13 079.9 | -11 464.2 |
| Low-income countries | -681.1 | -4 104.3 | -1 042.4 | -1 446.3 | -2 586.0 | -2 167.1 | -2 164.8 |
| Algeria | -184.6 | -152.9 | -111.0 | -184.8 | -250.3 | -96.6 | -50.0 |
| Bahrain | 5.5 | 26.1 | 9.2 | 97.3 | 157.0 | 138.5 | 155.0 |
| Comoros | -5.5 | 2.8 | -3.8 | -8.0 | -10.0 | -10.0 | -10.0 |
| Djibouti | 30.0 | 50.6 | 22.5 | 0.5 | 2.3 | 5.3 | 4.5 |
| Egypt | -393.2 | -476.7 | -336.3 | -142.7 | -279.3 | -275.0 | -275.0 |
| Iraq | -7.7 | -123.9 | -392.1 | -142.1 | 3.2 | 251.4 | -6.5 |
| Jordan | 112.3 | 0.4 | 291.5 | -122.0 | 812.6 | 487.6 | -300.0 |
| Kuwait | 121.2 | 128.2 | -267.6 | 134.3 | 574.8 | 385.0 | 85.0 |
| Lebanon | -40.0 | -242.2 | -69.0 | 260.3 | 716.7 | 550.0 | -425.0 |
| Libya | 53.3 | 85.5 | 4.7 | -39.0 | -276.0 | -221.7 | -10.0 |
| Mauritania | -4.4 | -12.9 | -30.1 | 10.0 | 25.0 | 32.8 | 22.9 |
| Morocco | -487.7 | -307.0 | -442.6 | -607.1 | -436.1 | -282.1 | -257.1 |
| Oman | 10.2 | 79.0 | 57.9 | -89.2 | 542.3 | 711.3 | 357.5 |
| Qatar | 27.7 | 65.2 | 23.7 | 121.7 | 721.7 | 401.0 | 165.0 |
| Saudi Arabia | 339.4 | 1 106.5 | 310.0 | 190.0 | 1 292.5 | 1 090.0 | 445.0 |
| Somalia | 1.0 | 734.7 | -603.0 | -142.4 | -206.6 | -213.3 | -174.8 |
| State of Palestine | -157.9 | -72.6 | -2.2 | -60.0 | -66.9 | -38.3 | -28.9 |
| Sudan | 10.0 | 200.0 | 401.7 | -589.5 | -833.8 | -419.7 | -150.0 |
| Syrian Arab Republic | -48.8 | -124.3 | -108.3 | -255.0 | -1 893.9 | -2 698.9 | 770.0 |
| Tunisia | -96.8 | 6.8 | 94.7 | -87.9 | -49.5 | -43.0 | -20.0 |
| United Arab Emirates | 159.5 | 286.0 | 314.7 | 822.7 | 1 905.5 | 390.5 | 295.5 |
| Yemen | -299.3 | -62.5 | 282.5 | -106.1 | -70.4 | -112.5 | -150.0 |
| Arab region | -855.7 | 1 196.8 | -552.7 | -938.9 | 2 380.7 | 32.1 | 443.1 |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex XII

Population age composition in the Arab region by country and age group (percentage)

| Country | Age group | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Algeria | 0-14 | 46.8 | 46.3 | 43.3 | 34.3 | 27.2 | 28.7 | 29.7 | 24.7 | 20.5 | 20.0 |
| | 15-24 | 18.5 | 20.2 | 20.6 | 22.7 | 20.7 | 16.6 | 13.6 | 17.2 | 15.6 | 12.5 |
| | 25-59 | 29.0 | 28.2 | 30.9 | 36.6 | 44.3 | 45.8 | 46.6 | 44.8 | 46.2 | 44.5 |
| | 60+ | 5.7 | 5.3 | 5.2 | 6.4 | 7.8 | 8.9 | 10.1 | 13.3 | 17.7 | 23.0 |
| Bahrain | 0-14 | 44.8 | 34.6 | 32.7 | 30.1 | 20.3 | 20.8 | 18.2 | 16.7 | 15.4 | 13.5 |
| | 15-24 | 17.9 | 22.1 | 16.4 | 16.6 | 15.0 | 13.2 | 11.0 | 12.2 | 11.4 | 10.6 |
| | 25-59 | 33.2 | 39.6 | 47.2 | 49.5 | 61.1 | 61.9 | 65.4 | 61.9 | 58.9 | 58.5 |
| | 60+ | 4.1 | 3.7 | 3.7 | 3.8 | 3.6 | 4.1 | 5.4 | 9.2 | 14.3 | 17.4 |
| Comoros | 0-14 | 44.6 | 44.8 | 46.0 | 44.0 | 41.0 | 40.1 | 39.0 | 35.6 | 32.5 | 30.1 |
| | 15-24 | 17.5 | 19.6 | 18.9 | 20.2 | 20.6 | 19.9 | 19.5 | 19.7 | 18.9 | 17.8 |
| | 25-59 | 32.8 | 30.4 | 30.2 | 31.1 | 33.9 | 35.3 | 36.4 | 38.6 | 41.4 | 43.0 |
| | 60+ | 5.1 | 5.2 | 4.9 | 4.7 | 4.5 | 4.7 | 5.1 | 6.1 | 7.2 | 9.1 |
| Djibouti | 0-14 | 45.4 | 46.5 | 45.0 | 41.0 | 34.8 | 32.0 | 29.7 | 26.5 | 23.3 | 20.7 |
| | 15-24 | 18.8 | 20.4 | 19.7 | 20.4 | 21.7 | 20.5 | 19.5 | 17.0 | 16.0 | 14.8 |
| | 25-59 | 31.8 | 29.2 | 31.1 | 33.8 | 37.7 | 41.3 | 43.9 | 47.4 | 48.9 | 48.9 |
| | 60+ | 4.0 | 3.9 | 4.2 | 4.8 | 5.8 | 6.2 | 6.9 | 9.1 | 11.8 | 15.6 |
| Egypt | 0-15 | 42.0 | 40.9 | 41.0 | 36.6 | 32.1 | 33.1 | 33.2 | 29.5 | 26.9 | 25.4 |
| | 15-25 | 18.7 | 19.1 | 18.2 | 20.4 | 20.3 | 17.4 | 16.4 | 18.2 | 17.0 | 15.4 |
| | 25-60 | 32.7 | 33.2 | 33.8 | 35.8 | 40.1 | 41.8 | 42.2 | 42.4 | 43.9 | 43.8 |
| | 60+ | 6.6 | 6.8 | 7.0 | 7.2 | 7.5 | 7.7 | 8.2 | 9.9 | 12.2 | 15.4 |
| Iraq | 0-14 | 44.6 | 46.8 | 45.9 | 43.0 | 41.7 | 40.7 | 39.9 | 37.1 | 34.6 | 32.4 |
| | 15-24 | 18.0 | 18.0 | 21.1 | 20.9 | 19.8 | 19.7 | 19.2 | 19.4 | 18.9 | 18.1 |
| | 25-59 | 30.9 | 29.0 | 27.5 | 30.9 | 33.7 | 34.6 | 35.9 | 37.5 | 38.9 | 40.4 |
| | 60+ | 6.5 | 6.2 | 5.5 | 5.2 | 4.8 | 5.0 | 5.0 | 6.0 | 7.6 | 9.1 |
| Jordan | 0-14 | 46.0 | 49.0 | 45.8 | 39.4 | 37.0 | 36.0 | 34.4 | 29.8 | 26.4 | 23.9 |
| | 15-24 | 18.1 | 19.6 | 21.6 | 21.3 | 19.5 | 19.2 | 18.7 | 18.6 | 17.0 | 15.5 |
| | 25-59 | 31.0 | 26.7 | 27.8 | 34.4 | 38.1 | 39.3 | 40.8 | 42.9 | 44.5 | 45.3 |
| | 60+ | 4.9 | 4.7 | 4.8 | 4.9 | 5.4 | 5.5 | 6.1 | 8.7 | 12.1 | 15.3 |
| Kuwait | 0-14 | 44.0 | 40.3 | 34.9 | 28.4 | 23.2 | 20.9 | 21.3 | 19.1 | 17.2 | 17.1 |
| | 15-24 | 18.2 | 18.0 | 17.8 | 16.2 | 15.2 | 11.3 | 12.2 | 13.3 | 12.7 | 11.4 |
| | 25-59 | 34.8 | 39.2 | 45.1 | 52.4 | 58.2 | 63.7 | 60.3 | 55.5 | 51.9 | 51.0 |
| | 60+ | 3.0 | 2.5 | 2.2 | 3.0 | 3.4 | 4.1 | 6.1 | 12.1 | 18.2 | 20.5 |

| Country | Age group | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lebanon | 0-14 | 41.9 | 39.0 | 34.1 | 28.6 | 23.7 | 24.0 | 21.6 | 18.9 | 16.5 | 13.8 |
| | 15-24 | 18.4 | 20.6 | 19.2 | 19.1 | 20.0 | 19.5 | 17.1 | 11.2 | 11.6 | 11.5 |
| | 25-59 | 32.2 | 33.1 | 37.5 | 41.9 | 44.4 | 45.1 | 48.2 | 50.9 | 48.3 | 43.5 |
| | 60+ | 7.5 | 7.3 | 9.2 | 10.4 | 11.9 | 11.4 | 13.1 | 19.0 | 23.6 | 31.2 |
| Libya | 0-15 | 46.2 | 47.9 | 41.7 | 33.8 | 28.4 | 28.6 | 27.2 | 22.5 | 19.2 | 18.2 |
| | 15-25 | 16.6 | 17.5 | 21.4 | 22.6 | 20.0 | 17.3 | 16.3 | 16.5 | 14.4 | 12.3 |
| | 25-60 | 32.4 | 30.1 | 31.9 | 37.9 | 45.6 | 47.6 | 49.4 | 50.0 | 48.7 | 46.7 |
| | 60+ | 4.8 | 4.5 | 5.0 | 5.7 | 6.0 | 6.5 | 7.1 | 11.0 | 17.7 | 22.8 |
| Mauritania | 0-14 | 46.0 | 45.3 | 44.7 | 43.1 | 41.2 | 40.3 | 39.3 | 36.5 | 33.9 | 31.7 |
| | 15-24 | 18.3 | 19.8 | 19.9 | 20.1 | 19.7 | 19.4 | 19.1 | 19.3 | 18.8 | 18.0 |
| | 25-59 | 31.4 | 30.1 | 30.4 | 31.9 | 34.3 | 35.4 | 36.3 | 38.0 | 39.8 | 41.5 |
| | 60+ | 4.3 | 4.8 | 5.0 | 4.9 | 4.8 | 4.9 | 5.3 | 6.2 | 7.5 | 8.8 |
| Morocco | 0-14 | 47.6 | 43.3 | 39.7 | 33.5 | 28.5 | 27.7 | 26.7 | 23.4 | 20.3 | 18.6 |
| | 15-24 | 16.7 | 21.8 | 20.6 | 20.9 | 19.2 | 17.4 | 15.8 | 15.6 | 14.4 | 12.6 |
| | 25-59 | 30.4 | 29.8 | 33.1 | 37.9 | 43.7 | 44.9 | 45.6 | 45.6 | 45.8 | 44.8 |
| | 60+ | 5.3 | 5.1 | 6.6 | 7.7 | 8.6 | 10.0 | 11.9 | 15.7 | 19.5 | 24.0 |
| Oman | 0-14 | 46.3 | 45.1 | 45.2 | 37.1 | 25.7 | 22.2 | 21.2 | 18.9 | 15.5 | 14.8 |
| | 15-24 | 18.6 | 17.6 | 15.9 | 21.4 | 21.1 | 14.7 | 12.3 | 13.8 | 13.4 | 10.4 |
| | 25-59 | 29.9 | 33.0 | 35.3 | 37.5 | 49.3 | 59.3 | 62.3 | 60.2 | 58.5 | 54.5 |
| | 60+ | 5.2 | 4.3 | 3.6 | 4.0 | 3.9 | 3.8 | 4.2 | 7.1 | 12.6 | 20.3 |
| Qatar | 0-14 | 36.1 | 33.7 | 28.3 | 25.7 | 13.1 | 13.8 | 14.0 | 13.2 | 11.9 | 11.4 |
| | 15-24 | 20.8 | 20.1 | 13.8 | 13.8 | 14.5 | 14.6 | 12.4 | 11.6 | 10.6 | 9.6 |
| | 25-59 | 39.9 | 43.6 | 55.6 | 57.5 | 70.6 | 69.2 | 70.0 | 66.6 | 63.9 | 60.8 |
| | 60+ | 3.2 | 2.6 | 2.3 | 3.0 | 1.8 | 2.4 | 3.6 | 8.6 | 13.6 | 18.2 |
| Saudi Arabia | 0-14 | 44.2 | 43.6 | 42.0 | 38.2 | 29.8 | 26.0 | 24.3 | 21.9 | 18.1 | 16.8 |
| | 15-24 | 18.4 | 17.8 | 18.4 | 18.2 | 18.5 | 15.5 | 13.2 | 13.9 | 14.0 | 11.7 |
| | 25-59 | 32.0 | 33.9 | 35.3 | 39.2 | 47.2 | 53.3 | 56.1 | 53.2 | 50.0 | 48.6 |
| | 60+ | 5.4 | 4.7 | 4.3 | 4.4 | 4.5 | 5.2 | 6.4 | 11.0 | 17.9 | 22.9 |
| Somalia | 0-14 | 43.3 | 43.8 | 44.1 | 47.1 | 47.6 | 46.7 | 46.0 | 44.2 | 41.2 | 38.1 |
| | 15-24 | 18.7 | 19.0 | 19.4 | 17.7 | 19.0 | 19.9 | 20.1 | 20.0 | 20.3 | 19.9 |
| | 25-59 | 32.7 | 32.1 | 31.8 | 30.9 | 29.1 | 29.1 | 29.5 | 31.3 | 33.8 | 36.7 |
| | 60+ | 5.3 | 5.1 | 4.7 | 4.3 | 4.3 | 4.3 | 4.4 | 4.5 | 4.7 | 5.3 |
| State of Palestine | 0-14 | 49.4 | 49.9 | 48.6 | 47.8 | 42.4 | 40.2 | 38.9 | 35.5 | 31.5 | 28.5 |
| | 15-24 | 18.5 | 19.1 | 20.0 | 19.5 | 21.6 | 21.7 | 20.2 | 19.1 | 18.7 | 17.3 |
| | 25-59 | 27.8 | 27.5 | 28.0 | 29.0 | 31.6 | 33.6 | 36.1 | 39.1 | 41.7 | 43.7 |
| | 60+ | 4.3 | 3.5 | 3.4 | 3.7 | 4.4 | 4.5 | 4.8 | 6.3 | 8.1 | 10.5 |

| Country | Age group | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sudan** | 0-14 | 46.3 | 47.1 | 45.5 | 43.8 | 43.0 | 41.5 | 39.7 | 36.7 | 34.2 | 31.5 |
| | 15-24 | 18.6 | 18.8 | 20.0 | 19.9 | 19.3 | 20.1 | 20.5 | 19.7 | 18.8 | 18.3 |
| | 25-59 | 30.3 | 29.5 | 29.9 | 31.5 | 32.6 | 33.0 | 34.1 | 37.1 | 39.7 | 41.9 |
| | 60+ | 4.8 | 4.6 | 4.6 | 4.8 | 5.1 | 5.4 | 5.7 | 6.5 | 7.3 | 8.3 |
| **Syrian Arab Republic** | 0-14 | 48.1 | 48.9 | 47.1 | 41.0 | 36.4 | 38.1 | 34.2 | 28.1 | 25.0 | 21.9 |
| | 15-24 | 18.8 | 19.8 | 20.5 | 22.3 | 20.9 | 19.8 | 22.6 | 19.2 | 16.1 | 14.9 |
| | 25-59 | 28.1 | 26.7 | 27.7 | 31.9 | 37.6 | 35.7 | 35.6 | 43.4 | 46.6 | 47.1 |
| | 60+ | 5.0 | 4.6 | 4.7 | 4.8 | 5.1 | 6.4 | 7.6 | 9.3 | 12.3 | 16.1 |
| **Tunisia** | 0-14 | 45.5 | 41.7 | 37.2 | 29.5 | 23.3 | 23.7 | 24.1 | 21.4 | 18.1 | 17.8 |
| | 15-24 | 17.6 | 20.9 | 19.7 | 20.3 | 18.7 | 15.5 | 13.5 | 14.5 | 14.1 | 11.6 |
| | 25-59 | 31.2 | 31.4 | 35.6 | 40.5 | 47.6 | 49.1 | 49.0 | 46.4 | 46.1 | 44.1 |
| | 60+ | 5.7 | 6.0 | 7.5 | 9.7 | 10.4 | 11.7 | 13.4 | 17.7 | 21.7 | 26.5 |
| **United Arab Emirates** | 0-14 | 35.1 | 28.0 | 30.9 | 26.0 | 13.4 | 13.8 | 13.9 | 12.1 | 12.1 | 12.0 |
| | 15-24 | 20.2 | 17.9 | 15.7 | 15.8 | 13.5 | 10.2 | 11.0 | 11.7 | 9.4 | 9.1 |
| | 25-59 | 42.4 | 52.1 | 51.4 | 56.4 | 71.6 | 74.0 | 71.9 | 68.1 | 64.1 | 60.2 |
| | 60+ | 2.3 | 2.0 | 1.9 | 1.7 | 1.5 | 2.0 | 3.2 | 8.1 | 14.4 | 18.7 |
| **Yemen** | 0-14 | 44.7 | 49.5 | 51.9 | 48.6 | 42.4 | 40.6 | 38.8 | 34.1 | 29.4 | 25.6 |
| | 15-24 | 19.4 | 18.1 | 18.5 | 20.2 | 22.9 | 22.0 | 20.5 | 20.1 | 19.0 | 17.2 |
| | 25-59 | 31.0 | 27.9 | 25.7 | 26.9 | 30.3 | 32.9 | 36.0 | 40.6 | 45.0 | 47.4 |
| | 60+ | 4.9 | 4.5 | 3.9 | 4.3 | 4.4 | 4.5 | 4.7 | 5.2 | 6.6 | 9.8 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex XIII

Population size by age group (both sexes, in thousands)

| Country | 1970 | | | | 2015 | | | | 2030 | | | | 2050 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0-14 | 15-24 | 25-59 | 60+ | 0-14 | 15-24 | 25-59 | 60+ | 0-14 | 15-24 | 25-59 | 60+ | 0-14 | 15-24 | 25-59 | 60+ |
| Algeria | 6 818 | 2 688 | 4 215 | 829 | 11 424 | 6 615 | 18 268 | 3 564 | 12 049 | 8 423 | 21 872 | 6 478 | 11 444 | 7 195 | 25 576 | 13 222 |
| Bahrain | 95 | 38 | 71 | 9 | 286 | 181 | 849 | 57 | 336 | 245 | 1 247 | 185 | 313 | 247 | 1 362 | 405 |
| Comoros | 103 | 40 | 76 | 12 | 312 | 154 | 274 | 37 | 378 | 209 | 410 | 64 | 440 | 260 | 630 | 133 |
| Djibouti | 72 | 30 | 51 | 6 | 297 | 191 | 383 | 57 | 300 | 193 | 537 | 103 | 271 | 194 | 640 | 203 |
| Egypt | 14 717 | 6 569 | 11 449 | 2 311 | 31 075 | 16 343 | 39 134 | 7 226 | 35 282 | 21 817 | 50 817 | 11 831 | 39 047 | 23 637 | 67 061 | 23 689 |
| Iraq | 4 424 | 1 784 | 3 060 | 650 | 14 685 | 7 103 | 12 515 | 1 812 | 19 800 | 10 331 | 19 994 | 3 172 | 26 385 | 14 724 | 32 927 | 7 454 |
| Jordan | 791 | 310 | 533 | 85 | 3 300 | 1 758 | 3 596 | 506 | 3 317 | 2 064 | 4 771 | 970 | 3 387 | 2 197 | 6 426 | 2 178 |
| Kuwait | 329 | 136 | 260 | 22 | 822 | 447 | 2 506 | 160 | 929 | 651 | 2 707 | 588 | 964 | 646 | 2 876 | 1 158 |
| Lebanon | 963 | 422 | 739 | 173 | 1 404 | 1 140 | 2 637 | 671 | 1 013 | 603 | 2 731 | 1 022 | 746 | 622 | 2 356 | 1 688 |
| Libya | 987 | 354 | 690 | 103 | 1 783 | 1 080 | 2 969 | 402 | 1 651 | 1 212 | 3 673 | 806 | 1 475 | 999 | 3 801 | 1 848 |
| Mauritania | 529 | 210 | 361 | 50 | 1 683 | 811 | 1 482 | 206 | 2 221 | 1 170 | 2 308 | 377 | 2 843 | 1 615 | 3 718 | 789 |
| Morocco | 7 614 | 2 666 | 4 871 | 849 | 9 626 | 6 045 | 15 668 | 3 464 | 9 549 | 6 370 | 18 519 | 6 435 | 8 503 | 5 774 | 20 406 | 10 977 |
| Oman | 335 | 134 | 217 | 38 | 931 | 617 | 2 490 | 161 | 1 116 | 813 | 3 547 | 422 | 997 | 701 | 3 686 | 1 373 |
| Qatar | 40 | 23 | 44 | 3 | 343 | 363 | 1 718 | 58 | 427 | 376 | 2 151 | 278 | 428 | 360 | 2 296 | 689 |
| Saudi Arabia | 2 581 | 1 072 | 1 868 | 316 | 8 204 | 4 881 | 16 819 | 1 653 | 8 656 | 5 465 | 21 003 | 4 356 | 7 567 | 5 255 | 21 911 | 10 323 |
| Somalia | 1 491 | 645 | 1 127 | 181 | 6 490 | 2 767 | 4 049 | 602 | 9 513 | 4 313 | 6 747 | 962 | 13 666 | 7 138 | 13 166 | 1 883 |
| State of Palestine | 556 | 208 | 312 | 49 | 1 871 | 1 014 | 1 566 | 211 | 2 391 | 1 291 | 2 634 | 423 | 2 763 | 1 675 | 4 245 | 1 022 |
| Sudan | 4 760 | 1 916 | 3 116 | 490 | 16 034 | 7 772 | 12 764 | 2 078 | 20 122 | 10 834 | 20 343 | 3 544 | 25 287 | 14 713 | 33 685 | 6 700 |
| Syrian Arab Republic | 3 053 | 1 193 | 1 783 | 321 | 7 136 | 3 712 | 6 695 | 1 192 | 7 488 | 5 099 | 11 536 | 2 486 | 7 456 | 5 084 | 16 021 | 5 461 |
| Tunisia | 2 302 | 892 | 1 577 | 290 | 2 671 | 1 753 | 5 534 | 1 316 | 2 753 | 1 862 | 5 953 | 2 273 | 2 470 | 1 617 | 6 122 | 3 675 |
| United Arab Emirates | 83 | 48 | 100 | 5 | 1 262 | 934 | 6 779 | 179 | 1 336 | 1 290 | 7 532 | 896 | 1 583 | 1 200 | 7 920 | 2 461 |
| Yemen | 2 772 | 1 198 | 1 921 | 304 | 10 920 | 5 917 | 8 866 | 1 213 | 12 551 | 7 392 | 14 951 | 1 921 | 12 368 | 8 291 | 22 887 | 4 758 |
| Arab region | 55 413 | 22 575 | 38 440 | 7 095 | 132 562 | 71 598 | 167 560 | 26 826 | 153 179 | 92 023 | 225 980 | 49 594 | 170 404 | 104 144 | 299 715 | 102 087 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex XIV

## Population growth rate in the Arab region

**Table AXIV.1** Annual growth rate of population aged 60 years and above (percentage), 1970-2015

| Country | 1970-2015 | 1970-1980 | 1980-1990 | 1990-2000 | 2000-2010 | 2010-2015 |
|---|---|---|---|---|---|---|
| Algeria | 3.2 | 2.1 | 2.8 | 3.9 | 3.5 | 4.7 |
| Bahrain | 4.2 | 4.3 | 3.2 | 3.2 | 5.5 | 5.0 |
| Comoros | 2.5 | 3.1 | 2.3 | 2.3 | 1.9 | 3.3 |
| Djibouti | 4.9 | 7.7 | 5.7 | 3.2 | 3.6 | 3.0 |
| Egypt | 2.5 | 2.6 | 2.9 | 2.2 | 2.3 | 2.6 |
| Iraq | 2.3 | 2.6 | 1.4 | 2.3 | 1.8 | 4.3 |
| Jordan | 4.0 | 2.8 | 4.2 | 3.9 | 4.4 | 5.2 |
| Kuwait | 4.4 | 4.5 | 3.0 | 2.6 | 5.2 | 8.9 |
| Lebanon | 3.0 | 1.0 | 2.7 | 3.0 | 4.3 | 5.3 |
| Libya | 3.0 | 3.4 | 4.2 | 3.3 | 1.8 | 1.8 |
| Mauritania | 3.2 | 3.8 | 3.3 | 2.8 | 2.7 | 3.4 |
| Morocco | 3.1 | 1.9 | 4.6 | 3.1 | 2.3 | 4.3 |
| Oman | 3.2 | 2.6 | 2.7 | 3.4 | 2.7 | 6.2 |
| Qatar | 6.2 | 5.2 | 6.1 | 4.8 | 6.2 | 11.6 |
| Saudi Arabia | 3.7 | 3.7 | 4.3 | 2.7 | 2.9 | 5.9 |
| Somalia | 2.7 | 5.9 | 0.5 | 1.1 | 2.9 | 3.1 |
| State of Palestine | 3.3 | 0.8 | 3.0 | 5.2 | 3.8 | 3.6 |
| Sudan | 3.2 | 3.1 | 3.2 | 3.4 | 3.0 | 3.4 |
| Syrian Arab Republic | 2.9 | 2.4 | 3.6 | 2.9 | 3.1 | 2.1 |
| Tunisia | 3.4 | 2.8 | 4.7 | 4.2 | 1.7 | 3.5 |
| United Arab Emirates | 7.7 | 13.2 | 5.6 | 4.1 | 8.6 | 6.8 |
| Yemen | 3.1 | 1.8 | 2.5 | 5.0 | 2.9 | 3.2 |
| Arab region | 3.0 | 2.6 | 3.2 | 2.9 | 2.8 | 3.5 |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

**Table AXIV.2** Prospective annual growth rate of population aged 60 years and above (percentage), 2015-2050

| Country | 2015-2050 | 2015-2020 | 2020-2030 | 2030-2040 | 2040-2050 |
|---|---|---|---|---|---|
| Algeria | 3.7 | 2.5 | 3.9 | 3.8 | 3.4 |
| Bahrain | 5.6 | 9.0 | 7.1 | 5.3 | 2.5 |
| Comoros | 3.7 | 2.9 | 3.7 | 3.5 | 3.7 |
| Djibouti | 3.6 | 2.7 | 3.9 | 3.5 | 3.3 |
| Egypt | 3.4 | 2.1 | 3.3 | 3.5 | 3.5 |
| Iraq | 4.0 | 1.4 | 4.3 | 4.8 | 3.8 |
| Jordan | 4.2 | 2.5 | 4.5 | 4.6 | 3.5 |
| Kuwait | 5.7 | 9.8 | 8.0 | 5.0 | 1.8 |
| Lebanon | 2.6 | 1.3 | 2.6 | 2.2 | 2.8 |
| Libya | 4.4 | 1.7 | 5.4 | 5.4 | 2.9 |
| Mauritania | 3.8 | 3.0 | 4.1 | 3.9 | 3.4 |
| Morocco | 3.3 | 3.4 | 3.8 | 2.8 | 2.5 |
| Oman | 6.1 | 4.9 | 6.6 | 6.4 | 5.4 |
| Qatar | 7.1 | 10.7 | 10.1 | 5.5 | 3.6 |
| Saudi Arabia | 5.2 | 5.0 | 6.8 | 5.6 | 3.0 |
| Somalia | 3.3 | 2.2 | 3.1 | 3.1 | 3.6 |
| State of Palestine | 4.5 | 2.7 | 5.0 | 4.5 | 4.3 |
| Sudan | 3.3 | 2.4 | 3.6 | 3.3 | 3.1 |
| Syrian Arab Republic | 4.3 | 2.4 | 5.5 | 4.2 | 3.7 |
| Tunisia | 2.9 | 2.3 | 3.6 | 2.5 | 2.3 |
| United Arab Emirates | 7.5 | 11.2 | 10.5 | 6.7 | 3.4 |
| Yemen | 3.9 | 2.2 | 3.0 | 4.0 | 5.1 |
| Arab region | 3.8 | 2.7 | 4.2 | 4.0 | 3.3 |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex XV

Sex ratio at age 60 and above (males per 100 females), 1970-2050

| Country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|
| Algeria | 90 | 85 | 88 | 94 | 94 | 98 | 99 | 96 | 95 | 95 |
| Bahrain | 118 | 128 | 116 | 103 | 124 | 128 | 136 | 134 | 151 | 140 |
| Comoros | 82 | 81 | 81 | 83 | 86 | 87 | 87 | 88 | 87 | 87 |
| Djibouti | 84 | 83 | 85 | 88 | 89 | 88 | 90 | 93 | 91 | 90 |
| Egypt | 77 | 78 | 79 | 80 | 81 | 84 | 85 | 85 | 86 | 86 |
| Iraq | 90 | 92 | 90 | 88 | 86 | 84 | 81 | 79 | 82 | 83 |
| Jordan | 99 | 101 | 100 | 103 | 94 | 93 | 90 | 94 | 96 | 94 |
| Kuwait | 108 | 119 | 145 | 137 | 140 | 170 | 174 | 141 | 122 | 104 |
| Lebanon | 92 | 90 | 98 | 93 | 105 | 98 | 99 | 115 | 109 | 96 |
| Libya | 107 | 101 | 102 | 100 | 92 | 89 | 86 | 86 | 87 | 83 |
| Mauritania | 90 | 84 | 82 | 79 | 76 | 80 | 84 | 88 | 90 | 91 |
| Morocco | 86 | 86 | 86 | 81 | 87 | 90 | 92 | 91 | 85 | 86 |
| Oman | 92 | 84 | 73 | 99 | 122 | 107 | 121 | 168 | 178 | 170 |
| Qatar | 106 | 139 | 193 | 200 | 216 | 278 | 317 | 340 | 321 | 214 |
| Saudi Arabia | 90 | 92 | 100 | 105 | 114 | 131 | 148 | 166 | 144 | 124 |
| Somalia | 83 | 95 | 90 | 90 | 95 | 97 | 97 | 91 | 86 | 83 |
| State of Palestine | 100 | 89 | 82 | 89 | 95 | 92 | 90 | 88 | 88 | 89 |
| Sudan | 88 | 89 | 89 | 89 | 89 | 89 | 89 | 88 | 85 | 84 |
| Syrian Arab Republic | 103 | 94 | 95 | 89 | 95 | 87 | 83 | 83 | 83 | 84 |
| Tunisia | 99 | 106 | 97 | 100 | 88 | 87 | 87 | 85 | 82 | 83 |
| United Arab Emirates | 118 | 144 | 141 | 163 | 257 | 236 | 254 | 249 | 193 | 145 |
| Yemen | 81 | 77 | 74 | 94 | 91 | 90 | 88 | 82 | 87 | 87 |
| Arab region | 86 | 86 | 87 | 88 | 90 | 92 | 94 | 97 | 96 | 93 |

**Source:** ESCWA calculations based on DESA, Population Division, *World Population Prospects: The 2017 Revision* (Medium Variant).

# Annex XVI

## Total dependency ratio (percentage)

| Country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|
| Algeria | 101.5 | 98.9 | 87.7 | 62.9 | 48.5 | 52.7 | 57.6 | 51.4 | 49.1 | 58.5 |
| Bahrain | 89.8 | 57.8 | 53.5 | 48.4 | 28.9 | 30.2 | 26.4 | 28.8 | 33.2 | 36.1 |
| Comoros | 90.9 | 92.3 | 96.4 | 88.7 | 78.6 | 75.5 | 72.8 | 65.2 | 59.0 | 55.9 |
| Djibouti | 91.6 | 95.4 | 90.8 | 78.5 | 62.6 | 56.5 | 51.8 | 47.9 | 44.9 | 44.5 |
| Egypt | 86.0 | 82.9 | 83.5 | 70.8 | 58.4 | 61.8 | 62.6 | 56.3 | 53.8 | 56.3 |
| Iraq | 94.6 | 103.8 | 98.7 | 86.6 | 81.8 | 77.7 | 76.2 | 68.7 | 65.3 | 62.7 |
| Jordan | 97.1 | 109.1 | 95.9 | 74.0 | 68.5 | 66.1 | 62.2 | 54.4 | 52.9 | 53.5 |
| Kuwait | 84.9 | 72.3 | 56.8 | 42.8 | 33.7 | 29.8 | 32.1 | 34.6 | 42.3 | 48.7 |
| Lebanon | 88.5 | 80.0 | 66.8 | 55.6 | 47.3 | 47.3 | 44.7 | 48.7 | 52.3 | 59.0 |
| Libya | 97.1 | 102.6 | 81.4 | 60.2 | 48.4 | 49.1 | 46.8 | 40.8 | 44.1 | 53.3 |
| Mauritania | 94.2 | 93.1 | 91.8 | 86.2 | 79.5 | 76.5 | 73.9 | 67.8 | 62.9 | 59.8 |
| Morocco | 104.2 | 87.2 | 77.3 | 63.4 | 53.0 | 51.6 | 52.3 | 52.9 | 52.8 | 57.9 |
| Oman | 97.9 | 91.6 | 90.6 | 65.4 | 39.6 | 32.4 | 31.1 | 30.5 | 30.9 | 39.9 |
| Qatar | 61.5 | 54.4 | 42.0 | 37.8 | 16.5 | 17.5 | 18.7 | 21.7 | 27.1 | 31.6 |
| Saudi Arabia | 91.1 | 87.2 | 81.2 | 70.1 | 48.7 | 40.9 | 39.0 | 39.9 | 42.3 | 50.3 |
| Somalia | 86.8 | 88.5 | 89.0 | 99.2 | 101.2 | 97.4 | 95.3 | 88.7 | 79.4 | 70.7 |
| State of Palestine | 109.5 | 108.8 | 102.8 | 100.4 | 82.2 | 75.8 | 72.5 | 65.2 | 58.3 | 55.1 |
| Sudan | 97.2 | 100.1 | 93.9 | 88.2 | 86.2 | 81.6 | 76.8 | 69.1 | 64.0 | 58.8 |
| Syrian Arab Republic | 105.8 | 108.0 | 100.4 | 79.7 | 66.2 | 72.8 | 64.2 | 52.6 | 49.9 | 50.4 |
| Tunisia | 96.0 | 83.9 | 72.6 | 56.9 | 44.5 | 45.6 | 49.2 | 51.2 | 51.5 | 60.2 |
| United Arab Emirates | 57.4 | 41.7 | 47.3 | 37.1 | 16.5 | 17.4 | 18.0 | 19.8 | 27.7 | 34.7 |
| Yemen | 91.6 | 109.8 | 119.1 | 105.9 | 82.4 | 76.8 | 71.9 | 60.0 | 50.1 | 46.1 |
| Arab region | 94.5 | 92.3 | 87.5 | 74.7 | 62.7 | 62.0 | 61.3 | 56.6 | 54.5 | 56.2 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision.*

# Annex XVII

## Child dependency ratio (percentage)

| Country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|---|
| Algeria | 94.4 | 92.0 | 81.3 | 55.8 | 40.4 | 43.8 | 46.8 | 37.4 | 30.5 | 31.6 |
| Bahrain | 85.0 | 54.6 | 50.2 | 44.7 | 26.2 | 27.1 | 23.1 | 21.5 | 20.5 | 18.3 |
| Comoros | 85.2 | 86.1 | 90.3 | 83.0 | 73.3 | 70.5 | 67.4 | 58.8 | 51.8 | 47.0 |
| Djibouti | 87.0 | 90.8 | 85.9 | 73.1 | 56.6 | 50.1 | 45.1 | 39.2 | 33.8 | 29.9 |
| Egypt | 78.1 | 74.8 | 75.3 | 62.4 | 50.8 | 53.6 | 53.9 | 46.1 | 41.4 | 39.8 |
| Iraq | 86.8 | 95.5 | 91.1 | 80.2 | 75.8 | 72.3 | 70.3 | 62.7 | 57.2 | 52.7 |
| Jordan | 90.7 | 102.4 | 89.7 | 68.6 | 62.4 | 59.8 | 55.9 | 46.1 | 40.3 | 36.6 |
| Kuwait | 81.4 | 69.5 | 54.7 | 40.5 | 31.0 | 27.1 | 28.2 | 25.7 | 24.4 | 25.4 |
| Lebanon | 79.0 | 70.3 | 56.9 | 44.6 | 34.9 | 35.3 | 31.3 | 28.0 | 25.1 | 21.9 |
| Libya | 91.2 | 97.0 | 75.7 | 54.2 | 42.2 | 42.6 | 40.0 | 31.7 | 27.6 | 27.8 |
| Mauritania | 89.4 | 87.6 | 85.8 | 80.3 | 73.9 | 71.0 | 68.3 | 61.3 | 55.3 | 50.7 |
| Morocco | 97.2 | 81.0 | 70.4 | 54.8 | 43.6 | 41.9 | 40.7 | 35.7 | 31.0 | 29.4 |
| Oman | 91.6 | 86.4 | 86.2 | 61.4 | 35.9 | 29.4 | 27.9 | 24.7 | 20.3 | 20.6 |
| Qatar | 58.3 | 52.0 | 40.2 | 35.4 | 15.2 | 16.3 | 16.6 | 16.1 | 15.1 | 14.9 |
| Saudi Arabia | 84.5 | 81.5 | 76.1 | 65.0 | 44.3 | 36.6 | 33.7 | 30.7 | 25.7 | 25.2 |
| Somalia | 80.9 | 82.5 | 83.4 | 93.9 | 95.9 | 92.1 | 89.9 | 83.4 | 74.0 | 65.1 |
| State of Palestine | 103.6 | 104.1 | 98.5 | 95.8 | 77.3 | 70.5 | 67.0 | 58.6 | 49.8 | 44.2 |
| Sudan | 91.3 | 94.2 | 88.3 | 82.5 | 80.1 | 75.4 | 70.3 | 62.1 | 56.1 | 49.9 |
| Syrian Arab Republic | 98.9 | 101.8 | 94.3 | 73.7 | 60.4 | 65.8 | 56.2 | 42.9 | 37.4 | 33.0 |
| Tunisia | 89.2 | 76.8 | 64.2 | 46.3 | 33.7 | 34.5 | 36.0 | 32.4 | 27.4 | 28.5 |
| United Arab Emirates | 55.2 | 39.7 | 45.6 | 35.6 | 15.6 | 16.2 | 16.4 | 14.5 | 15.5 | 16.2 |
| Yemen | 85.7 | 103.9 | 113.7 | 100.1 | 77.4 | 71.7 | 66.7 | 54.5 | 44.1 | 37.4 |
| Arab region | 87.4 | 85.5 | 80.8 | 67.8 | 56.0 | 55.1 | 53.6 | 46.9 | 42.0 | 39.6 |

**Source:** DESA, Population Division, *World Population Prospects: The 2017 Revision.*

# Annex XVIII

Projected education level of older persons in the Arab region (percentage)

| Country | Year | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | No education | Primary | Secondary | Post-secondary | No education | Primary | Secondary | Post-secondary |
| Algeria | 2015 | 43.6 | 24.4 | 25.9 | 6.1 | 75.2 | 13.7 | 9.9 | 1.2 |
| | 2030 | 16.7 | 24.6 | 50.6 | 8.1 | 46.0 | 18.8 | 31.2 | 4.1 |
| | 2050 | 3.4 | 10.4 | 72.1 | 14.2 | 13.6 | 12.5 | 57.6 | 16.4 |
| Bahrain | 2015 | 15.8 | 24.2 | 36.2 | 23.8 | 39.2 | 23.8 | 22.7 | 14.4 |
| | 2030 | 11.1 | 23.5 | 45.9 | 19.4 | 14.1 | 22.4 | 41.6 | 21.9 |
| | 2050 | 3.7 | 15.6 | 61.0 | 19.7 | 3.1 | 10.3 | 53.4 | 33.1 |
| Comoros | 2015 | 73.6 | 17.0 | 6.1 | 3.3 | 93.1 | 4.9 | 1.7 | 0.4 |
| | 2030 | 36.3 | 38.2 | 16.2 | 9.3 | 62.3 | 26.2 | 9.1 | 2.4 |
| | 2050 | 10.7 | 48.4 | 24.1 | 16.8 | 20.0 | 49.4 | 23.6 | 7.0 |
| Djibouti | 2015 | 46.5 | 39.5 | 11.6 | 2.4 | 72.0 | 23.6 | 3.7 | 0.7 |
| | 2030 | 30.7 | 45.7 | 19.2 | 4.3 | 54.6 | 34.3 | 9.6 | 1.5 |
| | 2050 | 18.3 | 46.8 | 29.2 | 5.7 | 31.4 | 43.5 | 22.2 | 2.9 |
| Egypt | 2015 | 45.3 | 17.8 | 22.0 | 15.0 | 74.8 | 9.3 | 10.2 | 5.7 |
| | 2030 | 30.1 | 13.4 | 38.5 | 18.1 | 58.0 | 9.2 | 23.3 | 9.5 |
| | 2050 | 14.7 | 8.1 | 54.9 | 22.2 | 26.8 | 7.3 | 47.6 | 18.3 |
| Iraq | 2015 | 31.9 | 33.3 | 18.8 | 16.0 | 66.3 | 21.1 | 6.7 | 5.9 |
| | 2030 | 13.4 | 34.6 | 27.8 | 24.2 | 36.0 | 35.9 | 16.2 | 12.0 |
| | 2050 | 4.3 | 29.5 | 33.3 | 32.9 | 11.6 | 36.9 | 27.6 | 23.9 |
| Jordan | 2015 | 24.8 | 27.6 | 22.0 | 25.6 | 57.2 | 20.3 | 13.5 | 9.0 |
| | 2030 | 9.9 | 23.3 | 33.7 | 33.0 | 22.3 | 24.6 | 29.0 | 24.1 |
| | 2050 | 4.2 | 13.5 | 48.3 | 34.0 | 4.5 | 12.6 | 42.7 | 40.2 |
| Kuwait | 2015 | 13.1 | 30.4 | 31.8 | 24.7 | 32.1 | 28.4 | 24.9 | 14.5 |
| | 2030 | 13.9 | 32.6 | 32.9 | 20.6 | 16.2 | 28.7 | 33.2 | 21.9 |
| | 2050 | 8.9 | 24.4 | 48.6 | 18.1 | 8.1 | 20.5 | 43.1 | 28.3 |
| Lebanon | 2015 | 14.9 | 42.4 | 32.4 | 10.4 | 33.0 | 34.0 | 28.9 | 4.2 |
| | 2030 | 5.9 | 30.9 | 45.4 | 17.8 | 12.5 | 28.5 | 47.3 | 11.7 |
| | 2050 | 1.6 | 19.1 | 51.2 | 28.1 | 2.6 | 16.8 | 53.8 | 26.8 |
| Libya | 2015 | 53.3 | 19.4 | 18.2 | 9.1 | 80.5 | 9.2 | 7.3 | 3.0 |
| | 2030 | 34.6 | 19.6 | 33.6 | 12.2 | 61.5 | 13.0 | 19.6 | 5.9 |
| | 2050 | 20.9 | 16.4 | 47.1 | 15.5 | 37.0 | 14.1 | 36.3 | 12.6 |
| Mauritania | 2015 | 58.5 | 22.6 | 11.9 | 6.9 | 78.9 | 14.8 | 4.2 | 2.1 |
| | 2030 | 41.1 | 23.8 | 22.9 | 12.2 | 63.9 | 19.8 | 11.3 | 5.0 |
| | 2050 | 28.4 | 20.9 | 36.3 | 14.4 | 45.2 | 21.6 | 24.1 | 9.1 |

| Country | Year | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | No education | Primary | Secondary | Post-secondary | No education | Primary | Secondary | Post-secondary |
| Morocco | 2015 | 63.6 | 20.1 | 12.4 | 3.9 | 87.8 | 7.8 | 3.7 | 0.8 |
| | 2030 | 43.8 | 27.4 | 20.1 | 8.7 | 71.2 | 14.1 | 11.0 | 3.7 |
| | 2050 | 19.7 | 32.4 | 35.1 | 12.9 | 39.8 | 23.8 | 27.4 | 9.1 |
| Oman | 2015 | 13.7 | 43.3 | 25.5 | 17.5 | 38.9 | 34.2 | 17.3 | 9.6 |
| | 2030 | 5.8 | 35.8 | 38.1 | 20.2 | 20.4 | 38.7 | 27.1 | 13.7 |
| | 2050 | 3.1 | 27.8 | 45.5 | 23.6 | 7.3 | 34.4 | 36.6 | 21.7 |
| Qatar | 2015 | 10.7 | 43.3 | 20.0 | 26.0 | 30.5 | 38.9 | 14.9 | 15.7 |
| | 2030 | 3.7 | 46.4 | 29.2 | 20.6 | 8.5 | 34.5 | 23.0 | 33.9 |
| | 2050 | 2.8 | 43.8 | 37.2 | 16.2 | 2.6 | 24.8 | 35.0 | 37.6 |
| Saudi Arabia | 2015 | 32.0 | 34.2 | 18.4 | 15.5 | 75.5 | 16.9 | 4.9 | 2.7 |
| | 2030 | 9.9 | 27.4 | 36.2 | 26.5 | 42.1 | 25.6 | 18.6 | 13.7 |
| | 2050 | 1.9 | 12.5 | 45.3 | 40.3 | 9.6 | 14.1 | 36.0 | 40.3 |
| Somalia | 2015 | 61.8 | 12.0 | 21.9 | 4.3 | 91.8 | 4.2 | 3.0 | 1.0 |
| | 2030 | 42.6 | 14.1 | 34.7 | 8.6 | 77.8 | 9.9 | 11.3 | 1.0 |
| | 2050 | 29.8 | 29.1 | 34.6 | 6.5 | 56.3 | 26.2 | 15.6 | 1.9 |
| State of Palestine | 2015 | 20.3 | 43.1 | 22.3 | 14.2 | 71.0 | 18.8 | 7.3 | 3.0 |
| | 2030 | 6.1 | 34.2 | 34.2 | 25.5 | 27.1 | 34.3 | 28.4 | 10.2 |
| | 2050 | 1.7 | 18.8 | 47.1 | 32.4 | 4.6 | 23.9 | 47.8 | 23.7 |
| Sudan | 2015 | 75.7 | 12.3 | 7.6 | 4.3 | 91.1 | 5.6 | 2.4 | 1.0 |
| | 2030 | 62.1 | 12.9 | 17.7 | 7.4 | 79.7 | 8.8 | 8.6 | 2.9 |
| | 2050 | 44.3 | 23.0 | 21.6 | 11.1 | 57.0 | 18.0 | 16.5 | 8.5 |
| Syrian Arab Republic | 2015 | 26.0 | 47.7 | 14.3 | 12.0 | 60.6 | 30.3 | 5.4 | 3.7 |
| | 2030 | 13.6 | 47.9 | 21.6 | 16.9 | 39.0 | 39.5 | 12.5 | 9.0 |
| | 2050 | 7.0 | 51.2 | 25.2 | 16.5 | 15.1 | 48.2 | 21.4 | 15.2 |
| United Arab Emirates | 2015 | 14.5 | 22.5 | 36.0 | 26.9 | 32.5 | 18.5 | 30.9 | 18.1 |
| | 2030 | 10.6 | 26.3 | 43.4 | 19.7 | 11.3 | 18.8 | 44.5 | 25.4 |
| | 2050 | 6.4 | 23.5 | 53.9 | 16.2 | 3.4 | 12.5 | 51.2 | 32.9 |
| Tunisia | 2015 | 41.7 | 33.9 | 18.9 | 5.5 | 79.5 | 13.1 | 6.2 | 1.2 |
| | 2030 | 15.0 | 42.6 | 32.5 | 9.9 | 48.1 | 31.9 | 16.4 | 3.6 |
| | 2050 | 3.8 | 19.4 | 57.0 | 19.7 | 16.3 | 21.8 | 42.7 | 19.2 |
| Yemen | 2015 | 14.0 | 43.5 | 25.2 | 17.3 | 38.4 | 34.5 | 17.4 | 9.7 |
| | 2030 | 6.1 | 35.9 | 37.6 | 20.4 | 19.9 | 38.6 | 27.6 | 13.9 |
| | 2050 | 2.8 | 26.5 | 46.2 | 24.5 | 6.0 | 32.7 | 38.0 | 23.2 |
| Arab region | 2015 | 44.5 | 25.1 | 19.2 | 11.2 | 74.1 | 13.9 | 8.2 | 3.8 |
| | 2030 | 24.9 | 25.0 | 33.9 | 16.2 | 51.7 | 19.6 | 20.4 | 8.4 |
| | 2050 | 11.3 | 20.4 | 46.6 | 21.6 | 22.8 | 19.3 | 38.2 | 19.7 |

**Source:** Lutz, Butz and K.C., 2014.

# Annex XIX

Projected education level of older persons in the Arab region (thousands)

| Country | Year | Male | | | | | Female | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | No education | Primary | Secondary | Post-secondary | Total | No education | Primary | Secondary | Post-secondary |
| Algeria | 2 015 | 1 388 | 606 | 338 | 360 | 85 | 1 622 | 1 221 | 222 | 160 | 20 |
| | 2030 | 2 859 | 477 | 703 | 1 447 | 232 | 3 175 | 1 460 | 597 | 989 | 129 |
| | 2050 | 6 098 | 205 | 632 | 4 394 | 866 | 6 757 | 922 | 841 | 3 889 | 1 105 |
| Bahrain | 2015 | 44 | 7 | 11 | 16 | 10 | 29 | 11 | 7 | 7 | 4 |
| | 2030 | 194 | 22 | 46 | 89 | 38 | 101 | 14 | 23 | 42 | 22 |
| | 2050 | 579 | 22 | 90 | 353 | 114 | 282 | 9 | 29 | 151 | 93 |
| Comoros | 2015 | 17 | 13 | 3 | 1 | 1 | 20 | 19 | 1 | 0 | 0 |
| | 2030 | 31 | 11 | 12 | 5 | 3 | 36 | 22 | 9 | 3 | 1 |
| | 2050 | 63 | 7 | 31 | 15 | 11 | 71 | 14 | 35 | 17 | 5 |
| Djibouti | 2015 | 26 | 12 | 10 | 3 | 1 | 31 | 22 | 7 | 1 | 0 |
| | 2030 | 43 | 13 | 20 | 8 | 2 | 51 | 28 | 17 | 5 | 1 |
| | 2050 | 87 | 16 | 41 | 25 | 5 | 99 | 31 | 43 | 22 | 3 |
| Egypt | 2015 | 3 596 | 1 628 | 640 | 791 | 538 | 4 240 | 3 172 | 393 | 434 | 241 |
| | 2030 | 6 006 | 1 808 | 803 | 2 311 | 1 084 | 7 124 | 4 134 | 654 | 1 662 | 674 |
| | 2050 | 11 304 | 1 662 | 919 | 6 211 | 2 512 | 13 449 | 3 604 | 986 | 6 395 | 2 463 |
| Iraq | 2015 | 780 | 249 | 260 | 146 | 125 | 1 087 | 721 | 229 | 72 | 64 |
| | 2030 | 1 444 | 193 | 500 | 402 | 349 | 2 013 | 725 | 722 | 325 | 241 |
| | 2050 | 4 042 | 172 | 1 193 | 1 346 | 1 331 | 4 692 | 545 | 1 731 | 1 297 | 1 119 |
| Jordan | 2015 | 211 | 52 | 58 | 46 | 54 | 210 | 120 | 43 | 28 | 19 |
| | 2030 | 367 | 36 | 85 | 124 | 121 | 390 | 87 | 96 | 113 | 94 |
| | 2050 | 1 080 | 45 | 146 | 522 | 367 | 1 132 | 51 | 143 | 483 | 455 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Kuwait** | **2015** | 86 | 11 | 26 | 27 | 21 | 53 | 17 | 15 | 13 | 8 |
| | **2030** | 316 | 44 | 103 | 104 | 65 | 178 | 29 | 51 | 59 | 39 |
| | **2050** | 854 | 76 | 209 | 415 | 154 | 531 | 43 | 109 | 229 | 151 |
| **Lebanon** | **2015** | 228 | 34 | 97 | 74 | 24 | 282 | 93 | 96 | 81 | 12 |
| | **2030** | 354 | 21 | 109 | 161 | 63 | 483 | 60 | 137 | 229 | 57 |
| | **2050** | 633 | 10 | 121 | 324 | 178 | 790 | 21 | 133 | 425 | 212 |
| **Libya** | **2015** | 248 | 132 | 48 | 45 | 23 | 260 | 209 | 24 | 19 | 8 |
| | **2030** | 484 | 167 | 95 | 163 | 59 | 553 | 340 | 72 | 108 | 32 |
| | **2050** | 1 109 | 232 | 182 | 523 | 172 | 1 317 | 488 | 186 | 477 | 166 |
| **Mauritania** | **2015** | 78 | 46 | 18 | 9 | 5 | 101 | 79 | 15 | 4 | 2 |
| | **2030** | 150 | 61 | 36 | 34 | 18 | 176 | 112 | 35 | 20 | 9 |
| | **2050** | 318 | 90 | 66 | 115 | 46 | 362 | 164 | 78 | 87 | 33 |
| **Morocco** | **2015** | 1 480 | 941 | 297 | 184 | 57 | 1 683 | 1 477 | 131 | 62 | 13 |
| | **2030** | 2 485 | 1 087 | 681 | 500 | 215 | 3 098 | 2 206 | 438 | 339 | 115 |
| | **2050** | 4 091 | 806 | 1 324 | 1 434 | 526 | 5 601 | 2 228 | 1 331 | 1 533 | 509 |
| **Oman** | **2015** | 74 | 10 | 32 | 19 | 13 | 60 | 23 | 21 | 10 | 6 |
| | **2030** | 248 | 14 | 89 | 94 | 50 | 134 | 27 | 52 | 36 | 18 |
| | **2050** | 944 | 29 | 262 | 430 | 223 | 372 | 27 | 128 | 136 | 80 |
| **Qatar** | **2015** | 55 | 6 | 24 | 11 | 14 | 18 | 5 | 7 | 3 | 3 |
| | **2030** | 363 | 13 | 169 | 106 | 75 | 77 | 7 | 27 | 18 | 26 |
| | **2050** | 1 250 | 35 | 548 | 465 | 203 | 260 | 7 | 64 | 91 | 98 |
| **Saudi Arabia** | **2015** | 936 | 299 | 320 | 172 | 145 | 771 | 582 | 130 | 38 | 21 |
| | **2030** | 2 756 | 274 | 756 | 997 | 729 | 1 890 | 796 | 484 | 352 | 259 |
| | **2050** | 6 334 | 120 | 791 | 2 868 | 2 555 | 5 228 | 504 | 735 | 1 883 | 2 105 |
| **Somalia** | **2015** | 221 | 137 | 27 | 48 | 10 | 261 | 240 | 11 | 8 | 3 |
| | **2030** | 364 | 155 | 51 | 126 | 31 | 422 | 329 | 42 | 48 | 4 |
| | **2050** | 603 | 180 | 175 | 209 | 39 | 689 | 388 | 180 | 108 | 13 |
| **State of Palestine** | **2015** | 101 | 21 | 44 | 23 | 14 | 110 | 78 | 21 | 8 | 3 |
| | **2030** | 202 | 12 | 69 | 69 | 52 | 226 | 61 | 77 | 64 | 23 |
| | **2050** | 482 | 8 | 90 | 227 | 156 | 526 | 24 | 126 | 252 | 125 |

| Country | Year | Male | | | | | Female | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | No education | Primary | Secondary | Post-secondary | Total | No education | Primary | Secondary | Post-secondary |
| Sudan | 2015 | 1 347 | 1 020 | 166 | 102 | 58 | 1 517 | 1 382 | 85 | 36 | 15 |
| | 2030 | 2 251 | 1 397 | 289 | 398 | 166 | 2 477 | 1 973 | 218 | 213 | 73 |
| | 2050 | 4 468 | 1 979 | 1 026 | 967 | 496 | 4 959 | 2 826 | 895 | 818 | 420 |
| Syrian Arab Republic | 2015 | 762 | 198 | 363 | 109 | 91 | 824 | 499 | 249 | 44 | 31 |
| | 2030 | 1 478 | 201 | 708 | 319 | 249 | 1 650 | 643 | 652 | 206 | 149 |
| | 2050 | 3 028 | 213 | 1 550 | 764 | 501 | 3 503 | 530 | 1 690 | 750 | 533 |
| United Arab Emirates | 2015 | 165 | 24 | 37 | 59 | 44 | 53 | 17 | 10 | 16 | 10 |
| | 2030 | 1 191 | 127 | 313 | 516 | 235 | 358 | 41 | 67 | 159 | 91 |
| | 2050 | 4 241 | 270 | 998 | 2 288 | 685 | 1 579 | 53 | 198 | 809 | 519 |
| Tunisia | 2015 | 591 | 247 | 201 | 111 | 32 | 645 | 513 | 84 | 40 | 8 |
| | 2030 | 953 | 143 | 406 | 309 | 94 | 1 156 | 556 | 368 | 189 | 42 |
| | 2050 | 1 747 | 66 | 340 | 996 | 345 | 2 070 | 338 | 452 | 884 | 397 |
| Yemen | 2015 | 525 | 73 | 228 | 133 | 91 | 630 | 242 | 217 | 109 | 61 |
| | 2030 | 851 | 52 | 306 | 320 | 173 | 1 050 | 209 | 405 | 290 | 146 |
| | 2050 | 2 258 | 64 | 598 | 1 044 | 553 | 2 600 | 156 | 851 | 988 | 604 |
| Arab region | 2015 | 12 956 | 5 765 | 3 246 | 2 490 | 1 456 | 14 505 | 10 742 | 2 017 | 1 195 | 550 |
| | 2030 | 25 389 | 6 331 | 6 349 | 8 604 | 4 105 | 26 817 | 13 857 | 5 246 | 5 470 | 2 244 |
| | 2050 | 55 612 | 6 308 | 11 331 | 25 935 | 12 038 | 56 869 | 12 973 | 10 965 | 21 723 | 11 207 |

**Source:** Lutz, Butz and Samir K.C., 2014.

# Endnotes

## Chapter 1

1. Algeria, Bahrain, the Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, the State of Palestine, Qatar, Saudi Arabia, Somalia, the Sudan, the Syrian Arab Republic, Tunisia, the United Arab Emirates and Yemen.
2. United Nations Department of Economic and Social Affairs (DESA), 2017b.
3. Wan Ahmad, Astina and Budijanto, 2015; Mirkin and Weinberger, 2001; World Bank, 2016a; WHO, 2014a.
4. DESA, 2017c.
5. DESA, 2015b; DESA, 2017e.
6. Detailed information on the uncertainty bounds for different components of the demographic trends at the country level is available at www.unpopulation.org.
7. For example, the Wittgenstein Centre for Demography and Human Capital has developed projections to demonstrate different possible population realities for the future. The results show little difference in the share of the older population aged 60 and above in Arab countries by 2030 compared with the projections of the World Population Prospects, 2017 report. However, by 2050, the Wittgenstein Centre predictions on the proportion of this age group differ quite significantly from those of the World Population Prospects report (Lutz, Butz and Samir K.C., 2014).
8. The GCC countries are: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.
9. The United Nations Population Division states that the "less developed regions" comprise all countries in Africa, Asia (excluding Japan), Latin America and the Caribbean, in addition to Melanesia, Micronesia and Polynesia. Available at https://esa.un.org/poppolicy/ExplanatoryNotes.aspx.
10. Growth rates are computed by the author using data from "Data query", World Population Prospects: The 2017 Revision. Available at https://esa.un.org/unpd/wpp/DataQuery (accessed on 15 May 2018).
11. Saxena, 2009.
12. UNdata, Glossary, "Total fertility rate". Available at http://data.un.org/Glossary.aspx?q=total+fertility+rate (accessed on 16 February 2018).
13. Roudi-Fahimi and Kent, 2008; Rashad, 2015.
14. Roudi-Fahimi and others, 2012.
15. Replacement level fertility is the level of fertility at which a population exactly replaces itself from one generation to the next. It is achieved when the fertility rate totals an average of 2.1 children per woman.
16. Natural fertility refers to fertility rates of a population not practising any form of birth control. It has been estimated that a woman who is continuously in a sexual union between the ages of 15 and 50 years, not breastfeeding her children and not practising any form of birth control, bears 15 children on average. Quasi-natural fertility rate is estimated at women bearing 6 or more children, on average. This usually results from practices of almost no birth control, but delayed age at marriage.
17. United Nations Commission on Population and Development, 2017.
18. Egypt, Ministry of Health and Population, El-Zanaty and Associates and ICF International, 2015.
19. Algeria, National Office of Statistics, 2015.
20. Tunisia, National Institute of Statistics, 2016.
21. Iqbal and Kiendrebeogo, 2014.
22. HelpAge International, 2015.
23. The migrant stock is the number of international migrants residing in a country.
24. United Nations Economic and Social Commission for Western Asia (ESCWA), 2018.
25. The Mashreq subregion comprises Egypt, Iraq, Jordan, Lebanon, the State of Palestine and the Syrian Arab Republic.
26. United Nations High Commissioner for Refugees, 2017a.
27. The Maghreb subregion comprises Algeria, Libya, Morocco and Tunisia.
28. Le Portail de Statistiques (Statista), "Pourcentage de la population âgée de plus de 65 ans dans les pays de l'OCDE en 2015 et 2050". Available at https://fr.statista.com/statistiques/562594/part-de-la-population-agee-de-plus-de-65-ans-ocde/ (accessed on 3 September 2017).
29. Le Portail de Statistiques (Statista), "Pourcentage de la population âgée de plus de 65 ans dans les pays de l'OCDE en 2015 et 2050". Available at https://fr.statista.com/statistiques/562594/part-de-la-population-agee-de-plus-de-65-ans-ocde/ (accessed on 3 September 2017).
30. DESA data does not extend beyond 2100.
31. Dividing the old-age dependency ratio by the child dependency ratio can be used as an indicator for population ageing.

## Chapter 2

1. International Labour Organization (ILO), 2017.
2. ILO, 2016b.
3. ILO, 2016a.
4. Economic Research Forum (ERF), 2010; 2012; 2014.
5. Prasad and Gerecke, 2010. This article analyses and identifies patterns of fluctuation of social security spending by Governments during times of past financial crises. The Arab countries and respective years of financial crises included in the analysis were: Egypt, 1990; Kuwait, 1982; Morocco, 1983; the Syrian Arab Republic, 1988; and Tunisia, 1991.
6. Number of beneficiaries in relation to number of contributors.
7. Price and others, 2017.
8. ILO, 2014b.
9. World Bank, 2012.
10. Al Hazzouri and others, 2011; Abdulrahim and others, 2012.
11. Non-communicable diseases, also known as chronic diseases, do not

result from an (acute) infectious process and hence are not communicable. The main types of NCDs are cardiovascular diseases (including heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes. Available at www.who.int/mediacentre/factsheets/fs355/en/ (accessed on 15 March 2018).

12. Grivna, Eid and Abu-Zidan, 2014.
13. Kronfol, 2013.
14. WHO, 2014b.
15. Khan, Hussein and Deane, 2017.
16. Dementia is characterized by a combination of symptoms that affect thinking, orientation, comprehension, calculation, learning capacity, language and judgment. It is often accompanied by a decline in emotional control or motivation, or a change in social behaviour. There are over 100 forms of dementia but the most common is Alzheimer's disease, which accounts for 60-70 per cent of all cases. Other types of dementia include vascular dementia, fronto-temporal dementia and Lewy body disease. Dementia remains one of the toughest challenges in health and social-care provision across the world.
17. Yount and Sibai, 2009.
18. Prince and others, 2013.
19. Rizzi, Rosset and Roriz-Cruz, 2014.
20. ESCWA defines persons with disabilities as those who are at greater risk than the general population of experiencing restrictions in performing specific tasks or participating in role activities due to limitations in basic activity functioning, such as walking, seeing, hearing or remembering, even if such limitations are ameliorated by assistive devices, a supportive environment or plentiful resources. Such persons might not experience limitations in specifically measured tasks such as bathing or dressing, or in participation activities such as working or going to church or shopping, because the necessary adaptations have been made at the individual or environmental levels. These persons are still, however, considered to be at greater risk of restrictions in activities and/or participation than the general population because of the presence of limitations in basic activity functioning, and because the absence of necessary accommodations jeopardizes their current levels of participation. For purposes of reporting and generating internationally comparable data, the Washington Group has recommended four response categories for activities: (1) No, no difficulty, (2) Yes, some difficulty, (3) Yes, a lot of difficulty, and (4) Cannot do it at all. The Washington Group has recommended the following cut-off be used to define the population of persons with disabilities: the subgroup of persons with disability includes everyone who falls into the categories 'a lot of difficulty' or 'cannot do it at all'.
21. United Nations Economic and Social Commission for Western Asia and League of Arab States, 2014.
22. Kronfol, 2013.
23. Loewe, 2013.
24. Schröder-Butterfill and Marianti, 2006.
25. Madrid International Plan of Action on Ageing, 2017, based on the results of a survey carried out by ESCWA for the Third Regional Review of MIPAA, 2002.
26. Yount and Sibai, 2009.
27. Sinunu, Yount and El Afify, 2009.
28. Sibai, Rizk and Kronfol, 2014.
29. Jacobzone, Cambois and Robine, 2000.
30. Organisation for Economic Co-operation and Development, 2014.
31. Morocco, Observatoire National du Développement Humain, 2017.
32. ESCWA, 2015.
33. Ibid.
34. Abdulrahim, Ajrouchand and Antonucci, 2015; Tohme and others, 2011.
35. Eurostat, 2017.
36. Abu-Ismail and others, 2011.
37. HelpAge International, 2016.
38. Arab NGO Network for Development, 2014.
39. Hobfoll, 2002.
40. Syrian Center for Policy Research, 2016a.
41. Al Rifai and Haddad, 2015.
42. Syrian Center for Policy Research, 2016a.
43. Ibid.
44. Verme and others, 2016.
45. Syrian Center for Policy Research, 2016b.
46. Moss, Lesher and Moss, 1987.
47. HelpAge International and Handicap International, 2014.
48. Chemali and others, 2017.
49. HelpAge International and Handicap International, 2014.
50. WHO, 2015a.
51. Syrian Center for Policy Research, 2016a.
52. HelpAge International and Handicap International, 2014.
53. European Civil Protection and Humanitarian Aid Operations, 2017.
54. Kuwert and others, 2009.
55. Muckenhuber, Strongger and Freidl, 2012; Nilsson, Rana and Kabir, 2006.
56. Syrian Center for Policy Research, 2017.
57. Kimhi and others, 2012.
58. Hutton, 2008.

### Chapter 3

1. Kagitcibasi, Ataca and Diri, 2010; Abdulrahim and others, 2012; Kronfol, Rizk and Sibai, 2015.
2. Allen, Blieszner and Roberto, 2000.
3. Kagitcibasi, Ataca and Diri, 2010.
4. Khan, 2014; Kronfol, Rizk and Sibai, 2015.
5. Sinunu, Yount and El Afify, 2009.
6. Shah and others, 2002; Sibai, Beydoun and Tohme, 2009; Tohme and others, 2011; Kronfol, Rizk and Sibai, 2015.
7. Lowenstein, 1999; Aykan and Wolf, 2000; Shah and others, 2002; Yount, 2009; Sibai, Beydoun and Tohme, 2009; Tohme and others, 2011; Kronfol, Rizk and Sibai, 2015.
8. Sibai, Beydoun and Tohme, 2009; Tohme and others, 2011.
9. Sibai and Yamout, 2012.
10. Choi, 2003; Yount, 2005.
11. Shah and others, 2002; Sibai and Yamout, 2012.
12. Choi, 2003; Yount, 2005; Sibai and Yamout, 2012.
13. Nawar, Lloyd and Ibrahim, 1994; Khadr, 1997; El-Zanaty and Way, 2001.
14. Khadr, 1997; Shah and others, 2002.
15. Tohme and others, 2011; Sibai, Rizk and Kronfol, 2014.
16. Shah and others, 2002; Yount and others, 2012; Cunningham and others, 2013.
17. Yount and others, 2012; Sibai, Rizk and Kronfol, 2014.
18. Kronfol, Rizk and Sibai, 2015.
19. Shah and others, 2002.
20. Kronfol, Rizk and Sibai, 2015.
21. Cunningham and others, 2013.
22. Sibai, Rizk and Kronfol, 2014.
23. Ibid.

24. Cunningham and others, 2013.
25. Sibai, Rizk and Kronfol, 2014.
26. Yount and others, 2012.
27. Ibid.
28. Yount and others, 2012; Sibai, Rizk and Kronfol, 2014.
29. Sibai, Rizk and Kronfol, 2014.
30. Cunningham and others, 2013; Kronfol, Rizk and Sibai, 2015.
31. Shah and others, 2002; Yount and others, 2012.
32. Choi, 2003; Sibai, Rizk and Kronfol, 2014.
33. Shah and others, 2002; Cunningham and others, 2013; Sibai, Rizk and Kronfol, 2014.
34. Abyad, 2001; Walker, Pratt and Eddy, 1995; Abdelmoneium and Alharahsheh, 2016.
35. Cunningham and others, 2013; Sibai and Yamout, 2012; Sibai, Rizk and Kronfol, 2014.
36. Cunningham and others, 2013.
37. Yount and others, 2012.
38. Sibai and Yamout, 2012; Cunningham and others, 2013; Abdelmoneium and Alharahsheh, 2016; Hussein and Ismail, 2017.
39. Boggatz and Dassen 2005; Sinunu, Yount and El Afify, 2009.
40. Interviews with the participants were carried out in either colloquial Arabic or English, depending on their preference. Interviews with the older persons and adult children lasted around 45-60 minutes. Interviews with representatives from retirement homes lasted around 20-30 minutes.
41. Aarssen, 2005.
42. Robnett and Walter, 2013.
43. Kronfol, Rizk and Sibai, 2015.

**Chapter 4**

1. DESA, Population Division, 2017.
2. ILO, 2014a. These data are weighted by the share of the population aged 65 and above.
3. See www.who.int/healthinfo/global_burden_disease/projections/en/.
4. Khatib, 2004.
5. Motlagh, O'Donnell and Yusf, 2009.
6. Omran, 1971.
7. For more details, see WHO, 2015c.
8. Abyad, 2004, pp. 9-12.
9. Yousufzai, 2007 as Cited in Sibai, Rizk and Kronfol, 2014, p. 41.
10. Sibai, Rizk and Kronfol, 2014.
11. ESCWA calculations based on the medium variant of the World Population Prospects: The 2017 Revision and on Morocco, Haut-Commissariat au Plan, 2013.
12. Maziak and others, 2007; Ben Taleb and others, 2015; Coutts and others, 2015 as cited in Blanchet, Fouad and Pherali, 2016.
13. Hakim and Jaganjac, 2005.
14. Murray and Lopez, 1997.
15. DFLE indicates the expected length of life lived without a given impairment or disability from age 60.
16. WHO, 2011.
17. Friebe and Schmidt-Hertha, 2013.
18. Lutz, Butz and Samir K.C., 2014. These projections were done for 195 countries with a time horizon of 2060.
19. Lutz and Scherbov, 2004.
20. This is the medium scenario, which is considered the most likely projection for each country. It combines for all countries: medium fertility with medium mortality, medium migration, and the Global Education Trend scenario which projects that current education trends will persist in the future.
21. DESA, Population Division, 2001.
22. Rogers, Stronge and Fisk, 2005.

**Chapter 5**

1. ILO, 2014a.
2. ILO, 2012.
3. HelpAge International, 2012.
4. Begg, Mushövel and Niblett, 2015.
5. AGE Platform Europe, 2017.
6. www.blidensol.no/hjem.
7. www.adopt-a-grandma.co.uk/index.html.
8. Smith and Eltanani, 2015.
9. WHO, 2002.
10. Hussein and Oglak, 2014a.
11. Baltruks, Hussein and Montero, 2017.
12. See the Active and Assisted Living Programme. Available at www.aal-europe.eu.
13. Alzheimer's Society, 2015.
14. Buntin and others, 2011.
15. United Nations International Children's Fund, 2014.
16. https://data.worldbank.org/products/wdi.
17. DESA, Population Division, 2001.
18. www.who.int/kobe_centre/ageing/en/.
19. www.oecdbetterlifeindex.org.
20. www.helpage.org/global-agewatch/.
21. https://statswiki.unece.org/display/AAI.
22. Goda, 2010.
23. Nadash and Shih, 2013.
24. Costa-font, Courbage and Swartz, 2015.
25. Sibai, Rizk and Kronfol, 2014.

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The number and share of older persons in the Arab region are steadily growing and will increase substantially in the following decades. The advent of this ageing transition, which most Arab countries will start experiencing before 2030, has important economic and social implications, especially given that weak and non-inclusive social protection systems leave many older persons vulnerable to poverty, ill health and isolation.

This report provides a demographic overview of Arab countries and describes the process of population ageing in the region. It further analyses the socioeconomic conditions of the current generation of older persons and assesses projected circumstances of future generations, including healthcare and pension coverage. It also highlights the two-way intergenerational support between older persons and their families, and warns of the potential impact of changing social dynamics. To help Arab Governments start to plan now for today's and tomorrow's elderly population, this report also provides actionable, concrete and comprehensive recommendations. People deserve to age with dignity. As Governments engage in development planning and policymaking under the overarching 2030 Agenda for Sustainable Development, it is vital to ensure that current and future older persons are not left behind.

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