

An aerial photograph of a city, likely Dubai, featuring a prominent white tower with a spherical observation deck and a tall spire. The city is densely packed with modern buildings and infrastructure. The sky is blue with scattered white clouds. A yellow horizontal band is overlaid on the image, containing the title text.

The State of
Arab Cities 2012

Challenges of
Urban Transition

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The State of Arab Cities 2012

Challenges of Urban Transition





In recent months, Arab cities have been the central meeting ground for courageous calls for better governance, more effective economic management, greater transparency and more freedom. Those legitimate aspirations for human rights and dignity have echoed around the world.

Through the centuries, Arab cities have generated many of humankind's most enduring achievements and legacies. Today, we must ensure that these cities are sustainable and inclusive – able to maintain their cultural and spiritual heritage while advancing well-being for generations to come.

The State of Arab Cities 2012 offers a timely account of the progress and the problems in these rapidly urbanizing centres of human civilization. It tells us, for example, that urban slums are decreasing in large parts of the region, and that urban innovations are being introduced with dazzling speed. But it also shows how many Arab societies continue to suffer under conflict, extreme poverty and under-development.

Far too often, highly centralized governance structures undermine local authorities' efficiency, perpetuate corruption, obstruct political participation and erode the relationships between the citizenry and the level of government closest to them. The Arab Awakening has delivered welcome change, but there is still much work ahead even in those places where democratic transitions are taking root.

This report also highlights the importance of young people. In most Arab countries, youth make up the majority of the population, and youth unemployment is very high. These trends often converge in the region's cities, where a lack of opportunities and dim prospects for personal and professional advancement can have destabilizing impacts.

Arab nations and cities are at a pivotal moment. As we look to the challenges of the future, *The State of Arab Cities 2012* offers insight and analysis to inform and enlighten. I commend it to a wide global audience.

A handwritten signature in black ink that reads "Ki-moon Ban". The signature is written in a cursive, flowing style.

Ban Ki-moon
Secretary-General
United Nations



It gives me great pleasure to introduce this first *The State of the Arab Cities* report, the latest addition to a rapidly expanding series of regional publications on the state of cities which already include the African, the Asia-Pacific, the East European and the Latin America-Caribbean regions.

The Arab States constitute perhaps the most diverse region so far covered by the state of the cities report series. National populations for 2010 varied from as little as 691,000 in the Comoros to well over 84 million in Egypt. IMF data for the same year showed that GDP per capita ranged from USD 862 in the Comoros to USD 74,901 in Qatar. The region's highest literacy rate of 94.5 per cent is found in Kuwait, while Mauritania scores only 55.8 per cent. Likewise, the national urbanization rate in Kuwait is 98.4 per cent versus 31.8 in Yemen.

Clearly, the region also has a significant number of shared characteristics beyond being Arab States. The overriding common feature is the shared Islamic religion and culture, but there are other common traits, including large demographic youth bulges, significant youth under- and unemployment rates. There are also highly centralized governance systems that are being questioned by the populations at large, acute stresses on fresh water supplies, and increasingly felt impacts of climate change, to mention a few.

The year 2011 has been a historic one for the Arab States region. I am referring to what became known as 'the Arab Spring'. As early as 2008, the first State of the African Cities report - which covered the Arab States on the Africa continent - issued succinct but accurate advice to the governments of northern Africa that only major political, social and economic reform could avert significant urban unrest.

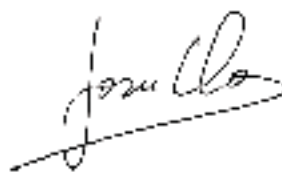
The report warned that the combination of large numbers of unemployed urban youth, a lack of affordable housing, and the resultant stress on the ability of societies to cater for urban new household formation rates constituted an explosive mixture. The events of 2011 showed the validity of this forecast.

The Arab States region is currently at a historic cross road in its political, social and economic evolution. And so I would like to repeat here the message carried in our 2008 Africa report, because of its significance for the Arab States region as a whole:

The challenge is to reshape social and urban policies towards sustainable economic growth and adequate living conditions for rapidly expanding numbers of young and poor urbanites. But the confrontation with urbanity and modernity can only be resolved by the region itself, while the outcomes of policies to better integrate [the Arab States] in the global economy ... and among themselves ... will determine its future.

UN-Habitat is promoting the economic role of cities both in the Arab world and beyond. We also want to ensure that urban planning is well equipped to deal with current urban challenges.

Finally, I would like to commend the excellent inter-agency cooperation in the true spirit of One-UN in the preparation of this publication. I thank all partners for their vision, contributions and cooperation.



Dr. Joan Clos
Under-Secretary General of the United Nations
Executive Director UN-Habitat

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In an effort to review in detail the conditions and trends across the Arab States region, this report has drawn on an initial background report on Arab cities prepared by the Kuwait office of UN-Habitat and the knowledge of a wide range of specialists. This included a first expert group meeting hosted by the Arab Fund For Social and Economic Development in Kuwait City, Kuwait, on 28 and 29 April 2010. A second expert group meeting, hosted by the League of Arab States was held on 1-3 November 2010 in Cairo, Egypt. A peer review of the consolidated draft was reviewed by an Editorial Board meeting of experts, held on 20 and 21 November 2011 in Amman, Jordan.

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- Between 1970 and 2010, the urban population of the Arab states region more than quadrupled and is set to more than double again over the next 40 years.
- The majority of this urban growth will be absorbed by secondary cities and the urban management capacities of these cities needs to be reinforced to prepare them for this growth.
- Current urbanization in the Arab States region is driven by economic development, migration to oil-rich countries, drought and conflict with the importance of these causes varying by sub-region.
- The Arab States, in 2010, had 7.4 million refugees, 9.8 million Internally Displaced Persons and 15 million international (economic) migrants.
- Several primary cities have become extended metropolitan regions and some are actual or emerging mega-urban regions. These new regional urbanization patterns tend to bring complex issues of region-wide urban governance, authority conflicts and governance voids. Addressing these governance matters should receive priority attention.
- The currently highly-centralized governance modalities tend to undermine Arab States' local authority efficiency, obstruct urban political participation and erode the relationships between the citizenry and the level of government closest to them.
- Arab countries will need to better coordinate the complementary roles of central and local governments and increase the participation of the private sector in urban development.
- Arab States are mostly on track to halving the number of people living below USD 1.25 a day but huge disparities remain between the countries of the GCC and those of the Southern Tier (Comoros, Djibouti, Somalia, South Sudan, Sudan and Yemen). This should be addressed as a matter of inter-Arab solidarity.
- Significant progress has been achieved in regularising urban informal settlements in some parts of the Arab States region. The lessons learned offer important models for other Arab countries.
- Remaining and significant affordable housing shortages are the result of speculatively-escalating land prices, cumbersome and expensive property registration and limited access to housing finance.
- Rising threats of urban water and food insecurity are among the region's key defining social problems of the very near future that have the capability of generating significant urban social unrest.
- The Arab region is one of the least integrated of the world in terms of internal trade because economic complementarity between countries is under-utilized while regional physical and policy infrastructures remain uncoordinated.
- There is an urgent need for greater intra-Arab cooperation to strategically position its countries and cities in this globalizing world.

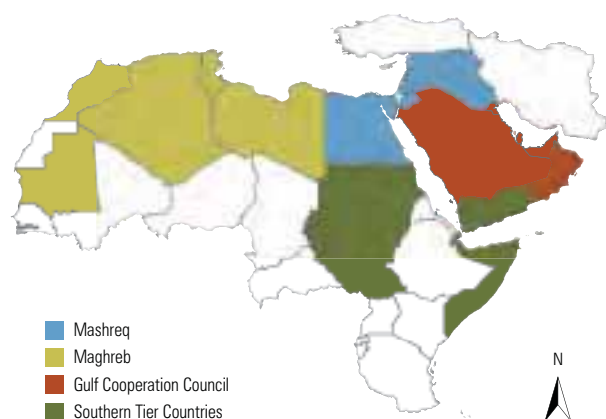
Why a State of Arab Cities Report

The *State of Arab Cities Report 2012* is the first report in the UN-Habitat series on the state of cities to focus on the Arab world. It presents a collective picture of urban conditions and trends in each of four Arab regions (Maghreb, Mashreq, Gulf Cooperative Council (GCC) and Southern Tier), and provides a discussion of the similarities, differences and linkages between these countries in the context of a larger Arab region.

This report complements the *State of the World Cities 2010/11* report, as well as the chapter on North Africa in the *State of African Cities 2008 and 2010* reports. It is particularly relevant and timely to review urbanization issues in the Arab region given the events of 2011.

Home to the oldest urban civilizations in the world, the Arab region is also one of the most urbanized. As of 2010, the Arab countries are home to 357 million residents, 56 per cent of whom live in cities; by 2050, these countries will be home to 646 million people, 68 per cent of whom will live in cities.

FIGURE 1: ARAB SUB-REGIONS AND COUNTRY CLASSIFICATIONS



Mashreq	Maghreb	Gulf Cooperation Council	Southern Tier Countries
Egypt	Algeria	Bahrain	The Comoros
Iraq	Libya	Kuwait	Djibouti
Jordan	Morocco	Oman	Somalia
Lebanon	Tunisia	Qatar	Sudan ¹
Palestine	Mauritania	Saudi Arabia	Yemen
Syrian Arab Republic		United Arab Emirates	

The urban population in Arab countries grew by more than four times from 1970 to 2010 and will more than double again from 2010 to 2050. Most of the growth to date has taken place on the peripheries of each country's primary cities although, today, secondary cities are experiencing the fastest rate of growth.

Across the region, around 18 per cent of residents live under each country's national poverty line², with significant variation between the Gulf countries, which have an average per capita income of USD 29,000, and the Southern Tier countries (not including Somalia), which have an average per capita income of USD 1,300.³ In the Gulf, oil revenues typically represent 40 to 50 per cent of government budgets and as much as 90 per cent in Sudan. Most oil-rich countries have invested significantly in infrastructure, housing improvements and subsidies for food, water and energy. In the oil-poor countries, governments have been constrained in their ability to dampen the shocks of rising food and energy prices while simultaneously supporting the production of affordable housing.

The Arab states have made significant strides towards reaching the MDGs, particularly in health and education, in spite of limited economic growth in the 1990s and 2000s, the recent global economic crisis, and continuing sporadic conflicts in the region. As an aggregate, the region is on track to halve the proportion of people living below USD 1.25 a day and has achieved remarkable gains in universal primary education, the reduction of child and infant mortality and of the gender gaps in school enrolment.

However, significant disparities continue to exist between rural and urban areas as well as between the high-income countries of the Gulf Cooperation Council, which are expected to meet most Millennium Development Goal targets, and the countries of the Southern Tier, Mauritania, Iraq and the Occupied Palestinian Territories, which are expected to miss most of the Goals' targets by 2015. The Mashreq and Maghreb countries face particular challenges in reducing youth unemployment, child mortality and, in a few countries, achieving universal primary education.⁴

Urbanization has been driven by the region's economic development, migration to the oil rich countries, drought and conflict driven displacement. As of 2010, there were 7.4 million registered refugees in Arab countries⁵, most of them Palestinians and Iraqis living in Jordan and Syria; 9.8 million internally displaced peoples (IDPs), mostly in Sudan, Iraq, Somalia, Lebanon, Syria and Yemen⁶ and 15 million international migrants in the GCC. Most live in cities and, together, represent one-third of the sub-region's population.

All Arab governments recognize the importance of the city as a laboratory for innovation, a magnet for investment and a



▲ Sana'a, Yemen, is one of the oldest continuously inhabited cities in the world. ©Oleg Znamenskiy/Shutterstock

source of job creation as cities have become the main engines of economic development. Given the relatively low income disparities in the region, cities are also the key to reducing the proportion of people living in poverty.

The industrial and service sectors, which are largely concentrated in cities, contribute over 92 per cent of the GDP in Arab countries. Agriculture, which employs 25 per cent of the workforce, has been declining as a share of GDP and was 8 per cent in 2008.⁷ Many countries, especially those that rely heavily on oil revenues, have been diversifying their economic bases in the manufacturing, service, tourism and knowledge industries with a particular aim of employing well-educated youth.

In general, access to services, infrastructure, health, education attainment is better in cities than in rural areas, although unemployment and continuing poverty is a growing urban phenomenon. While a few primary cities have become the centres of extended metropolitan regions or mega-urban regions, governments throughout the Arab world have developed policies to channel investments into secondary cities in an effort to improve rural-urban economic linkages and foster more equitable development across each country's sub-regions.

The high demand for housing, infrastructure and urban management systems in key cities has stressed the ability of governments to provide serviced land. In spite of significant progress in regularising the informal settlements that had proliferated in the closing decades of the 20th century, there is still a significant shortage of affordable housing in most countries.

While the private sector has taken an increasingly active role in providing housing for households in the upper-income tiers, there is still a shortage of affordable units for lower-income households due to the high rate of family formation.

A lack of housing finance mechanisms, except at the highest income levels, has hindered the production of formal housing for lower- and middle-income households. However, the global economic crisis of 2008 and the ensuing collapse of the luxury housing market is leading housing developers in the Mashreq and Maghreb to re-examine opportunities for the middle-income housing market.

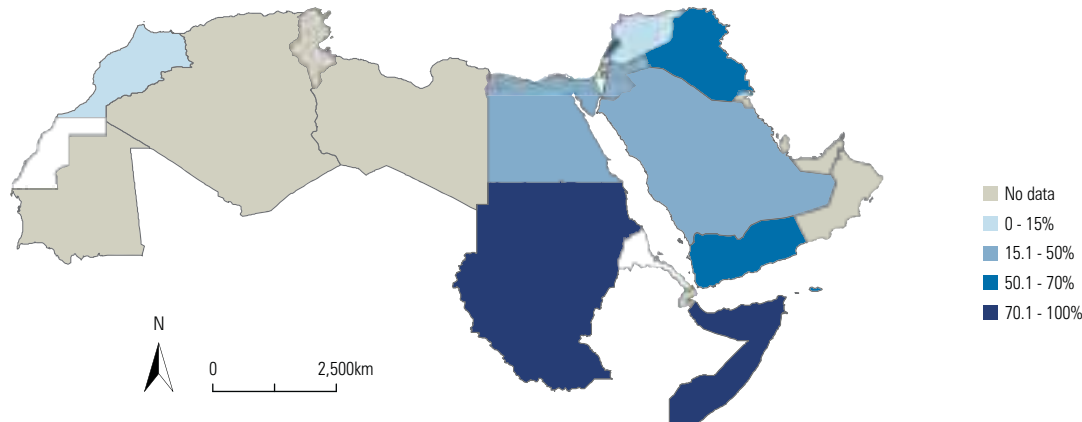
The proportion of sub-standard housing varies from country to country, with slum dwellings forming isolated, marginalized pockets in some countries, while in Mauritania and Southern Tier countries, especially Somalia and Sudan, 67 to 94 per cent of urban residents live in slums with one or more housing deprivations. In the Maghreb and Mashreq, middle-to-low-income groups tend to live in informal settlements that are of decent quality and infrastructure but lack land title.

Most countries in the Maghreb and the Mashreq have made significant progress in developing initiatives to increase the supply of affordable housing through targeted programmes while the Gulf Cooperation Council countries and Saudi Arabia have policies to provide their citizens with adequate housing. In the Gulf countries, the housing conditions of low-income expatriate workers present a challenge.

Morocco, Tunisia and Egypt have made the most notable national commitments to slum upgrading and the production of affordable housing. Although using different models, all three have developed dedicated national housing agencies that conduct planning, fund projects with private sector participation and coordinate implementation on behalf of local municipalities.

Tunisia was the first Arab country to eliminate slums, restore historic areas, regularize land tenure and ensure basic services to the urban poor. Morocco, which has the most developed

FIGURE II: SLUM PREVALENCE IN ARAB COUNTRIES, 2005-2007 DATA



Source: UN-Habitat Global Urban Observatory.

affordable housing programme among Arab countries, reduced the number of slums by 65 per cent between 1990 and 2010. Its national public holding company produces social housing, resettles slum dwellers and develops new towns, with market rate units cross-subsidizing the lower-income units. Through diverse incentives and subsidies to promote private sector investment, Egypt's National Housing Project aims to build 500,000 affordable housing units between 2005 and 2011, mostly in new towns. In 2011, Abu Dhabi's government mandated that all future housing projects dedicate 20 per cent of units to affordable housing. These initiatives and lessons learned from their implementation offer important models for consideration by other Arab countries as they embark on new affordable housing programmes.

Emerging trends

The major challenges facing the region are the need to provide gainful employment to its young people and anticipated climate change. With 60 per cent of the population below 25 years of age, Arab countries face the challenge of providing employment opportunities for their young people whose current unemployment rates range from 11 per cent in Kuwait to 35 per cent in Morocco. Disenchantment and poverty induced by a lack of mobility has been one of the fuelling mechanisms for the recent political polarization of the region.

With the exception of Iraq, Arab countries have some of the scarcest water resources per capita in the world and groundwater reserves are being depleted at alarming rates. Although 85 per cent of the region's water is used for agriculture, most countries in the region import more than 50 per cent of their caloric intake. Climate change-induced temperature increases and precipitation declines are projected to increase water scarcity and the frequency of

severe droughts and also decrease agricultural productivity by 10 to 40 per cent, potentially leading to further poverty-induced rural to urban migration.

Desertification and the associated threats of future water and food insecurity for its growing urban populations are among the key defining problems of the region. In addition, most of the region's major cities, economic centres and transportation hubs activity are in low-lying, coastal areas. A rise in sea level could be disastrous for many of the region's densely populated coastal cities.

Faced with these pressures, most of the region's governments have embarked on spatial interventions to guide new urban developments. Many cities are drafting strategic plans, linking various development projects and renewal programmes under the umbrella of a broader vision. New cities are being created as centres of excellence, innovation, technology and research. Cities are also marketing themselves as international tourism destinations, putting more emphasis on marketing their historic and cultural assets than ever before. Whether through culture, education and research or financial niches, cities in the Arab world are putting their mark on the map.

To implement these plans successfully and manage increasingly large and complex urban systems, governments in Arab countries will need to better coordinate the complementary roles of central and local governments better and increase the participation of the private sector in urban development. Historically, these countries have been highly centralized and the devolution of responsibilities to local authorities has been uneven, with a tendency for central governments to devolve responsibilities without a commensurate redistribution of funding or giving local authorities the power to raise revenue at the local level. At the time of writing, the repercussions of the 2011 protests remain unclear, although the widespread debates demonstrate the need for a new participatory approach to governance.

Regional Subdivision and Sub-Regional Differences

As a result of the ongoing conflicts in Palestine and Iraq and past conflicts in Lebanon, the **Mashreq** countries are home to 50 per cent of the world's registered refugees. Their presence, as well as internal rural-urban migration, has placed immense pressure on cities. Informal settlements, which tend to lack improved sanitation but otherwise offer decent housing conditions, have proliferated in Mashreq cities, with as many as 62 per cent of households in Greater Cairo living in such settlements. Except for Iraq, the Mashreq countries are oil poor and have fiscal deficits that constrain their ability to subsidize costs to the poor significantly as food and energy prices rise.

The **Maghreb** countries are typically more than 50 per cent urbanized, and have slowed in their urban growth rates. Current urban policy focuses on diversifying their economies, linking major urban areas and planning to redirect growth to secondary cities in the interior. Agriculture remains a major employment base for Morocco and saw a 17 per cent growth in Algeria.

While young people under 25 years of age comprise 48 per cent of the total population, their unemployment rate reaches 70 per cent among men with only a primary education and this represents the bulk of total unemployment. The Maghreb countries have made the most significant gains in reducing the number of urban households living with shelter deprivations; their efforts demonstrate that slum upgrading and service provision for the poor can be achieved with a strong political commitment.

Given that 90 per cent of the Gulf Peninsula is desert, **Gulf Cooperation Council** countries are among the most urbanized in the world and several of the emirates function as city-states. These countries have achieved major milestones in infrastructure, health and education, and have reached their Millennium Development Goals.⁸ Faced with declining oil reserves and the rising cost of subsidies in energy, water and housing, the policy focus now addresses economic diversification, the absorption of nationals into the private sector labour force, affordable housing and environmental sustainability. Highly-ambitious projects in public transportation planning and urban environmental sustainability are underway, although urban planning is still often done as a piecemeal effort.

Following prolonged periods of conflict, governments in the **Southern Tier** have been unable to secure basic services for most of their citizens. With the exception of Djibouti, these countries are still predominantly rural but are now experiencing the highest urbanization rates in the region. The ability of these less-developed Arab countries to cope with rapid urbanization and move from rural to urban-based settlement patterns will be of critical importance in the coming decades.

Looking forward, climate change will worsen droughts in the Horn of Africa. The danger of new conflicts over water and oil rights may complicate the orderly split of Sudan into North and South.

With intra-regional exports accounting for only 8.5 per cent of total exports in 2007, the Arab region is one of the least integrated with regards to internal trade, due to a lack of economic complementarity between countries and uncoordinated physical and policy infrastructures.⁹ New efforts aiming to establish a network of roads, railways, ports and streamlined customs points throughout the Mashreq and Maghreb will help to incentivize trade and transport through the region.

Arab countries have signed a number of bilateral and multilateral trade agreements with each other, African countries, the European Union and the United States. They include the Pan-Arab Free Trade Area (PAFTA), the emerging EURO-MED free trade area and the Agadir Agreement for a Free Trade Zone between Morocco, Tunisia, Egypt and Jordan.

To strengthen regional integration, several countries are undertaking major projects to improve road networks, railways and electrical grids, as well as streamlined trade and customs procedures. These include a north-south corridor that would link the European Union and the Gulf Cooperation Council (GCC) countries through Turkey, Syria and Jordan; two east-west corridors that would link Syrian ports with Iraq and over USD100 billion in rail improvements in the GCC that connect Jeddah, Riyadh and Bahrain, as well as Kuwait, Muscat and the Mashreq and Maghreb. Various planned initiatives to build concentrated solar and wind power plants throughout the Maghreb, with a potential to expand into the Mashreq and GCC, could also transform regional economies.

Perhaps the single most transformative initiative underway is the planned network of concentrated solar and wind power plants throughout the Maghreb, with a potential to expand into the Mashreq and GCC. With the EU target to produce 20 per cent of its energy consumption from renewable sources by 2020, and visions for a Mediterranean Union, Europe-North African energy networks are being developed and expanded. This could bring significant investment and economic development opportunities to the region and create an economic base to balance the negative impacts of climate change and urbanization.

While many daunting challenges continue to face the region, considerable progress has been made toward the achievement of a more sustainable and inclusive urbanization. The benefits that many Arab countries have received from oil revenues in the past 50 years have led to significant progress in lifting living standards in the region and provide the means with which to complete the Millennium Development Goals, particularly in the fields of education, health and disposable income. Through this discussion of current conditions and trends, this report aims to promote the good management and improvements needed to help cities serve as engines of growth and innovation.



Overview

The Arab region, home to 357 million people in 2010, is one of the most urbanized in the world, with 56 per cent of its residents living in cities. Past and emerging conflicts and worsening droughts are major drivers of urbanization. Within the region, the Gulf Cooperation Council is experiencing the fastest rate of total population growth, while the Southern Tier is experiencing the fastest rate of urbanization. Although both rates are slowing, total population is still projected to double by 2050, by which time the region will be 68 per cent urbanized. This trend will place continued pressure on urban infrastructure, housing and social services.

With 53 per cent of the population under 25 years of age, the demands of maturing youth for jobs and housing will add to the pressures on urban systems. Affordable and decent housing is a major challenge throughout the region, including in the Gulf States. In countries that have experienced continued conflict, high rates of poverty and pervasive political instability - such as Sudan, Somalia, Comoros, Yemen, Lebanon and Iraq - these demographic trends have translated into pervasive slums, which comprise 50 to 95 per cent of total urbanization.

The proliferation of slums and peri-urban informal settlements is the result of a scarcity of serviced land and affordable housing options. Slums in the region include older, deteriorated buildings within the urban fabric and, particularly in the Southern Tier, newly-constructed housing that is not durable and lacks most services. In refugee camps, residents often also face social trauma.

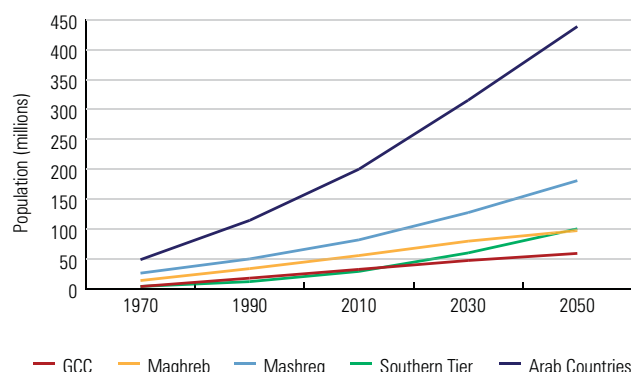
In contrast, informal settlements are mostly constructed of durable materials, often as multi-storey buildings on former

agricultural land, and their *informality* is generally the result of their unplanned nature and lack of registered titles. Their residents typically lack waterborne sewerage but, on the whole, have access to potable water, electricity and some form of sanitation. These settlements attract middle-class families, with wage earners in professional or managerial occupations in the public and private sectors.

Unemployment, particularly among the young, is one of the most notable challenges in the region. In the Maghreb and Mashreq, total unemployment ranges from 9 per cent to 26 per cent while rates in the Southern Tier range from 15 to 60 per cent. While the GCC has low rates of unemployment, ranging from 0.5 per cent in Qatar to 5.1 per cent in Saudi Arabia, because of a strong system of employing nationals in the public sector. All the same, young people make up a disproportionate component of the unemployed. They account for 37 to 82 per cent of total unemployment depending on the country. Unemployment rates of youth with secondary and tertiary degrees is particularly high in the Maghreb, and contributes to youth disenchantment and despair in the current political systems.

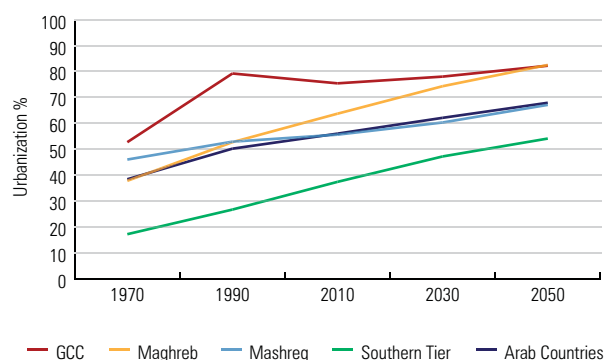
As a result of the events of 2011, countries are engaged in dialogue to adapt governance systems or in some cases build new institutions from scratch. These efforts to make government more transparent and inclusive are mirrored in economic systems. In order for cities and countries to reposition themselves as global economies, attract foreign investment and, particularly in the Maghreb, make the transition from agriculture-based to services and industry economies, they are gradually reforming land use management, banking and finance systems.

FIGURE 1: ARAB REGIONS' URBAN POPULATION TREND (1970-2050)



Source: WUP 2009.

FIGURE 2: ARAB REGIONS' URBANIZATION TREND (1970-2050)



Source: World Urbanization Prospects: The 2009 Revision, UNDESA, New York, 2010.

Mashreq Regional Summary

Population and Urbanization. The countries in the Mashreq region are moderately to highly urbanized with urban populations varying in total percentage terms from 43 (Egypt) to 87 (Lebanon). Urban and total growth rates have been relatively low (1 to 3 per cent) and will continue to decline.

With limited options for expansion in the larger cities, governments are placing an emphasis on secondary cities and satellite locations. Lebanon's draft National Master Plan proposed to shift the emphasis of investments from Beirut to Tripoli, Zahle-Chtaura, Saida, Nabatieh and Tyre. It also plans to re-establish the Beirut-Tripoli rail service. In Egypt, the government has created new towns to divert growth from Cairo to parallel satellite locations in the desert. In Jordan, the government has revitalized the urban cores of Salt, Ma'daba, Jerash and Karak in an effort to shift growth away from Amman.

Economic Role of Cities. Many of the Mashreq region's economic activities and employment opportunities are concentrated in its primary cities. Across the region, poverty has declined slightly and has been concentrated in particular parts of the region, especially in urban areas. Unemployment has been higher in rural areas; in urban areas, it disproportionately affects youth and women.

Educational attainment and literacy rates tend to be higher in urban areas as are health services. For instance, in Jordan, urban residents are much more likely to achieve a higher level of education. In Syria, most of the health facilities are concentrated in Damascus and Aleppo.

Urban Development and Housing. In spite of the Mashreq countries being on track to achieving the MDGs, housing costs are high relative to urban incomes and the growth of informal settlements continues to be a major challenge in the region as the formal housing and mortgage markets have focused on the upper-middle and upper-income classes. Mortgage markets are underdeveloped and provide financing mostly to upper- and middle-class residents.

Most residents purchase properties with cash, loans from family members and friends, remittances and informal loans. Access to housing finance has been complicated by the cumbersome property registration system, which often does not provide residents with the collateral they need to secure a mortgage.

The construction of affordable housing is limited by the lack of affordable serviced land and access to housing finance for both developers and homebuyers. In Syria, 38 per cent of the total population lives in informal settlements and, in Damascus, informal settlements are growing at 40 to 50 per cent per year. In Jordan, 16 per cent of urban residents live in informal settlements. In Egypt, it is estimated that in the Greater Cairo Region 62 per cent of households live in informal settlements.

Some countries have constructed affordable housing. Jordan is expected to develop 100,000 affordable housing

units between 2008 and 2013 and has also focused on the construction of infrastructure and the redevelopment of slum areas. As part of its policy to develop new towns in the desert to preserve agricultural land, Egypt has been producing 15,000 to 35,000 housing units per year and has the goal of creating 500,000 affordable units. In 2011, Iraq announced a USD 35 billion investment programme to address a housing backlog estimated at 1.5 million units. Both Syria and Lebanon have had limited and uncoordinated responses to informal development.

Environment and Transportation. The Mashreq countries have an estimated 80 million cubic metres of renewable water supply but use 88 million cubic metres annually, gradually depleting their aquifers. In addition, the systems suffer from significant water losses (35-50 per cent in urban areas), further contributing to the water scarcity.

Egypt, Jordan and Syria in particular, are using water at unsustainable levels. Water rationing and tariff structures are needed to reduce water use, but are difficult to implement. In an effort to reduce demand of fresh water, governments are reusing wastewater, particularly in agriculture.

Climate change will affect the Mashreq countries through higher temperatures, shorter wet seasons, more erratic rain and rising sea levels. The combined impact of meeting increased demand, protecting and developing new water resources, hydropower loss and ecosystem damage could represent a cost between 1 to 7 per cent of GDP depending on the country. Adapting to climate change will require better water conservation, a more optimal allocation of water use rights, a reduction in fossil fuel reliance, investments in renewable energy and an increase in international cooperation for resource sharing.

The reliance of the Mashreq region on rain-fed agriculture makes it vulnerable to the effects of climate change. Although governments have provided food subsidies and higher government wages, the benefits often do not always reach those most in need.

Car ownership rates are increasing in most countries in the region and there has been an underinvestment in public transportation. Only Cairo maintains an extensive public transport system, which carries 2 million passengers per day. Damascus plans to create a metro system and Amman is developing three new light rail lines and a new rapid bus transit system. Although still heavily dependent on fossil fuels, some countries are supporting wind and solar energy alternatives. With increased vehicle efficiency and better public transportation options, the airborne particulate matter has decreased in all countries.

Urban Governance Systems. Planning in the Mashreq region is highly centralized and most local governments do not have the power to set local taxes and fees and depend on central government transfers to finance their activities and services that are typically administered through local offices of line ministries.



▲ Amman, Jordan. In Jordan, 16 per cent of urban residents live in informal settlements. ©Andy Clarke/Shutterstock

In Egypt, 80 to 90 per cent of local budgets originate from the central government; only two governorates – Alexandria and Qina – collect user fees to finance their own development priorities. In Syria, governance is highly centralized but there has been an effort to decentralize decision making and strengthen local councils. Only the Occupied Palestinian Territories have a truly decentralized financial system where each city must raise its own revenues.

With local governments providing limited services, civil society organizations have played an important part in supplying services to the poor and this is mainly related to health, education, relief services and cultural fields.

Migration and Remittance. Mashreq countries have been both receivers and senders of migrant workers. Generally, well-educated younger professionals travel abroad in search of better employment opportunities while refugees and less skilled workers migrate within the region in search of a safe place to live and job opportunities.

For instance, highly-skilled Egyptians, Jordanians, Lebanese and Palestinians plus semi-skilled Egyptian workers are working in the oil-producing countries, while semi-skilled workers from Egypt, Syria and Asian countries work in the industrial and service sectors of oil-producing nations. In addition, Jordan and Syria have also received Palestinian, Lebanese and Iraqi refugees. Remittances represent a significant per cent of GDP: 16 per cent in Jordan and 22 per cent in Lebanon.

Maghreb Regional Summary

Population Growth and Urbanization. The Maghreb countries are highly urbanized with all countries in the region

but for Mauritania more than 50 per cent urbanized by 2010. Recent urban growth rates have been relatively low (1-3 per cent) and will continue to decline, although the need to accommodate urban expansion remains.

Most countries in the region are placing an emphasis on secondary cities and areas outside of the main agglomerations to alleviate the pressure on primary coastal locations. In Morocco, the publicly-owned holding company Al Omrane has created four new towns within 5 to 15 km of existing agglomerations to provide affordable, adequate housing to accommodate the growing population.

Economic Role of Cities. While Libya and Algeria are dependent on oil, Tunisia and Morocco are more focused on industry and services. Many of the countries have been diversifying their economies with Algeria, for instance, having placed a greater emphasis on fishing, tourism and renewable energy. The government recently launched a 15-year tourism development plan to attract investments and visitors in desert and coastal cities as well as cultural sites in Algiers, Annaba, Constantine and Oran. In Morocco, the government has undertaken a regional tourism development plan that includes investments in infrastructure and the rehabilitation of the historic medinas and other cultural sites.

In spite of the historical concentration of economic activities in coastal cities, there has been a recent trend to develop secondary cities. Tunisia is attempting to draw activities inward by creating competitive technopolis in secondary cities away from the coastal areas and Algeria's regional economic development plans will shift some economic activities from Algiers to secondary cities.

Unemployment tends to be greater in urban areas, while poverty rates tend to be lower than in rural areas. Despite relatively high rates of educational attainment, unemployment in the Maghreb region is still high for youth, women and for those with higher degrees, particularly in urban areas. Whereas inequality is relatively low in the region it is often higher in urban areas, especially in large cities.

Urban Development and Housing. The supply of affordable housing has been a serious challenge in the region. Lower-income residents are often priced out of the market by rapid increases in land prices and limited access to credit. The situation is complicated further by cumbersome and costly property registration processes that hamper acquiring the legal title necessary to obtain a loan.

As a result, lower-income residents are pushed to informal settlements on the urban periphery or in illegal and undesirable locations. In spite of the fact that Maghreb countries have made great strides to eliminate slums through upgrading and resettlement programs, often through partnerships between public agencies and the private sector, there has been a steady growth in informal settlements.

Environment and Transportation. Although most urban residents in the Maghreb have access to water and sanitation, especially in urban areas, water security is an important issue as all countries in the region are water stressed and have withdrawn a significant portion of their aquifer resources. To increase access to water and reduce pollution, countries have implemented such programs as wastewater reuse in Morocco and Tunisia and aquifer abstraction and desalination in Algeria.

The region is a net importer of food and food security is a major challenge as prices have been increasing due to such impacts of climate change as greater evaporation and severe flooding. With reduced levels of precipitation and higher temperatures, it is estimated that agricultural and pastoral productivity will decline by as much as 10 per cent in due course. In an effort to ensure food security, Maghreb countries are trying to increase agricultural productivity with better irrigation, wastewater reuse and desalination. They are also stockpiling food, reducing taxes on grains and providing food subsidies to ensure affordability.

Energy consumption is relatively low in Morocco and Tunisia, which are net importers, while Algeria is on par with the world average and Libya consumes more than twice the per capita world average. With the increasing demand for energy and associated higher carbon emissions, countries are looking for alternative sources such as solar and wind in Morocco and Tunisia.

The amount of urban solid waste produced has risen and is often deposited in open dumps rather than sanitary landfills. Algeria, Morocco and Tunisia all have national strategies for improving waste management and these include improved waste collection, constructing additional sanitary landfills and rehabilitating open dumps.

Many urban dwellers depend on public transit systems that are obsolete and overcrowded. In recent years Tunisia,

Algeria, Libya and Morocco have been investing in light rail and subway systems in urban areas. Even though the rate of private car ownership is still relatively low, it is on the rise due to subsidized low fuel costs, especially in Libya and Algeria, and the region's extensive road networks.

Urban Governance Systems. Maghreb countries have a two-tier local governance structure with provinces or governorates at the regional level and municipalities and communes at the local level. De-concentrated offices of central ministries at the governorate level provide the important public services including health, education and housing.¹⁰

Governors are appointed and, in some cases, provinces are further divided into districts where chiefs are appointed. Local councils are elected and municipal activities focus mainly on the management of services such as streets, paving, lighting, open space and solid waste collection.¹¹ Reform of intergovernmental fiscal relations to increase local revenue and enhancement of municipal financial capacity are vital to meaningful participation, the improvement of residents' living conditions and effective accountability in local governance.

Within the region women received the right to vote in the 1950s and 1960s, but their participation in politics has been fairly limited. In Algeria, Libya and Morocco, women comprise only 8 to 11 per cent of the lower parliamentary houses, as compared to a world average of 15 per cent. Some governments have been increasing opportunities and requirements for women's participation; in Morocco, for example, there are established parliamentary and local council quota systems.

Migration and Remittances. With high unemployment rates, with the exception of Libya and Mauritania, the Maghreb countries have been net exporters of workers whose major destinations are Belgium, France, Germany, Italy, the Netherlands, Spain and the USA.

The Maghreb has also been a transit area for sub-Saharan migrants. Recently, Europe has restricted the number of migrant worker quotas and, as a result, migrants from sub-Saharan countries have settled in Oran, Algiers, Tripoli and Benghazi.

The Maghreb region also receives labourers from Bangladesh, China, India and Pakistan as well as refugees from Western Sahara. Remittance inflows to Algeria, Morocco and Tunisia contribute significantly to family incomes. In Morocco, it is estimated that 600,000 households would fall below the poverty line without support from family members abroad.

GCC Regional Summary

Population and Urbanization. The Gulf Cooperation Council (GCC) countries have a population of over 39 million, of whom 67 per cent live in Saudi Arabia. With 80 per cent of the population living in urban areas, it is one of the most urbanized regions in the world.

Nearly 40 per cent of the region's population is foreign born, most of whom are migrant labourers from Asia. Total population growth in the GCC countries has been declining



▲ Qatar. Housing finance in Gulf countries is dictated by *Shari'a* law. ©Komar/Shutterstock

and is expected fall to an annual growth rate of 1 to 1.5 per cent by 2030.

GCC countries, with the exception of Qatar, have adopted growth management spatial development strategies. The plans share a focus on shifting growth to planned secondary cities located along transportation corridors served by public transit, developing affordable housing, and promoting environmental sustainability. Certain country strategies emphasize particular aspects, such as land reclamation in Bahrain.

Economic Role of Cities. The national income of GCC countries overwhelmingly relies on oil and gas revenues: Qatar (45 per cent), Oman (66 per cent), UAE (74 per cent), Bahrain (76 per cent), Saudi Arabia (82 per cent) and Kuwait (95 per cent). As a result of oil revenue, they have some of the highest GDPs per capita in the world. Oil revenues range from 10 and 13 per cent of GDP in the UAE and Bahrain, respectively, to 40 to 50 per cent in Kuwait, Oman, Qatar and Saudi Arabia.

Projected declines in oil supply will significantly limit governments' ability to maintain current subsidies in water, energy, food and housing. All GCC countries are therefore trying to diversify their economies and become more integrated into the world economy through the development of knowledge-based activities and tourism. To attract investment, countries have opened their economies, provided support for potential investors, increased infrastructure investments and improved e-government and e-commerce.

Expatriate males comprise a significant portion of the labour force employed in the private sector, reaching 94 to 96 per

cent in Qatar and the UAE, while the public sector is the main employer of their nationals, including 77 per cent in Kuwait.

Youth unemployment is a major challenge to governments as they try to address the mismatch between a high demand for low-paid foreign workers and an absence of well-paid jobs that can be filled by their own nationals. Many GCC countries are making visas more restrictive, setting caps on foreign labour participation, and creating institutions to help build the capacity of citizens. The distribution of wealth is unequal in all GCC countries, with concentrations of poverty among both expatriate migrants and urban migrants from internal desert locations.

Urban Development and Housing. The discovery of oil in the 1960s transformed the mud-walled towns in the Gulf into international cities with Western-style urban grids, extensive highway networks and peripheral suburbs with modern villas. Wealthy nationals and expatriates tend to live in the cosmopolitan city centres and suburban compounds, while low-paid expatriate workers, rural migrants and refugees live in the remains of historic settlements, in temporary housing on construction sites and in informal settlements. As part of its *Jeddah without Slums* programme, Jeddah plans to redevelop older areas in the city centre and reduce the total number of residents living in informal areas to 300,000.

The constitutions of GCC countries require governments to provide homes, land or zero-interest home construction loans to their citizens, a benefit limited in some countries to men or citizens earning less than set income levels. Rising

populations, escalating land costs due to speculation and a growing preference for villas instead of flats are making it harder for the government to provide loans to meet housing demand among low- and middle-income households. For instance, the wait list for government housing is 15 years in Kuwait and the Saudi government has recently frozen land grants in spite of a large backlog including as many as 200,000 applications in Jeddah.

The sharp market correction of real estate prices in 2008 demonstrated the degree to which property development had become speculative, particularly in Bahrain, Dubai and Qatar.

Housing finance in the Gulf countries is limited by the *Shari'a's* prescriptions on interest-charging banking services. Housing finance through Islamic banks remains limited and is accessible mainly by the wealthy. As housing developers typically raise their own financing, there is a chronic undersupply of affordable housing. Saudi Arabia, which has the least developed housing finance market in the region, enacted its first mortgage law in 2008. Affordable housing programmes tend to be poorly capitalized and, given the lack of fines and fees, many borrowers defer or default on their payments.

Environment and Transportation. Revenues from oil have allowed GCC governments to subsidize the cost of water, electricity, oil, gas and food for decades, resulting in some of the highest per capita rates of water and energy consumption and waste generation in the world. Electricity costs on average USD 0.12 per kWh to produce in the Gulf, but is sold for USD 0.04 per kWh.

With oil production peaking and predicted to become depleted in ten to 40 years, depending on the country, GCC governments are now investing heavily in alternative solutions, such as renewable and nuclear energy, wastewater reclamation, and waste recycling. Given the political difficulty of implementing tariff and management policy reforms, the focus has been on technological and efficiency improvements.

With its arid climate and rapidly-growing population, the Gulf is one of the world's most water-scarce regions. Despite the high cost of desalination, water tariffs in the GCC are among the lowest in the world, and it was free for many years in Doha. As governments re-evaluate water resource management, they are focusing on three main strategies: increasing the capacity of desalination plants; reforming tariffs and educating consumers and reducing domestic agriculture and promoting wastewater reuse.

The most prevalent method of waste disposal is in sanitary landfills, which have become overwhelmed by the increasing volumes of waste. Composting and recycling is limited by the lack of a domestic reuse market. The UAE is implementing multiple initiatives to reduce waste generation, including a phasing out of plastic shopping bags by 2012, the launch of a construction and demolition waste recycling plant in Abu Dhabi and the development of a waste-to-energy incineration plant in Dubai.

The Gulf has heavily invested in extensive road networks, with high-capacity highways and arterials encircling

neighbourhoods and cities. The low cost of fuel in the GCC has been an incentive to motorization, which is now on par with that of high-income countries and has led to severe congestion in city centres. Uniquely among Arab countries facing similar challenges, the GCC is implementing ambitious urban transportation master plans to reduce congestion and improve public transit and pedestrian networks and the general quality of urban life.

Urban Governance Systems. All aspects of government in the GCCs are highly centralized, including planning and urban administration. Ministries develop national, regional and local urban policies, while municipal authorities implement local plans. Despite efforts to delegate more powers to municipalities, the Saudi Arabian government retains significant control over local governance, including the right to dissolve government, remove members of local councils and set local tax rates.

Larger cities in the kingdom have greater autonomy; Medina's Urban Observatory has received wide recognition throughout the Arab world and was awarded the *Habitat Scroll of Honour* award in 2009. In the smaller emirates, the national planning agency prepares national, metropolitan and local level plans.

GCC cities rely on central government transfers to pay for both capital investments and operating costs. The lack of accountability for their development decisions often results in wasteful land consumption patterns and an increasing reliance on private cars for transport.

While attitudes towards women are more conservative in the GCC than in the Mashreq and Maghreb, and their labour force participation rates far behind that of men, the number of women with a higher education degree working as civil servants and gaining senior positions in government is quickly rising.

Migration and Remittances The GCC is the major recipient of migrants in the region. In 2010, the foreign-born percentage of the population was 87 in Qatar, 70 in the UAE, 69 in Kuwait, 39 in Bahrain and 28 in Oman. About one-quarter of the 15 million migrant workers in the GCC are Arabs, with the balance including a mix of well-paid expatriates from developed countries and low-paid sponsored workers from South and Southeast Asia. The Saudi border is a major transit point for refugees from the Horn of Africa.

The Gulf has become one of the top remitting regions in the world, with 2009 remittances equalling 7 per cent of GDP in Bahrain, Kuwait and Saudi Arabia and 11 per cent in Oman. Most low-paid migrant workers come to the GCC through the sponsorship (*kafala*) system, and immigration and sponsorship laws give sponsoring employers broad powers over workers. Poor living conditions, economic exploitation and the lack of public oversight has drawn international criticism and growing internal opposition within GCC governments. A common government response to criticism over worker living conditions has been to rehouse workers in new "labour towns" that meet and exceed international standards but still segregate them from the local population.

Southern Tier Regional Summary

Population and Urbanization. The Southern Tier is home to around 80 million people, 29 million of whom live in cities. Except for Djibouti, which is 76 per cent urbanized, most countries have low to moderate levels of urbanization (30-40 per cent) but are urbanizing rapidly as a result of conflict, environmental degradation, severe droughts and rural poverty.

The highest urban growth rates at present are 5 per cent in both Sudan and Yemen; in the past 15 years, major Somali towns grew by 300 to 500 per cent. Those under 25 years of age comprise from 35 to as much as 45 per cent of the total population.

Urbanization has typically taken the form of unplanned expansion on the periphery, making the provision of services difficult. Although most Southern Tier countries do not have comprehensive national or urban spatial strategies, they do have infrastructure improvement plans for roads, ports, and highways as well as poverty reduction strategies to promote economic growth and improve governance.

Urban plans are emerging at the local and regional level, particularly for major cities such as Khartoum, Sana'a,



▲ Displaced people on the streets of Mogadishu, Somalia. ©Mohamed Amin Jibril/IRIN

Mogadishu and Hargeisa. Djibouti City has developed an integrated five-year urban strategy to improve infrastructure and governance. Yemen has launched a project to extend and improve infrastructure in three port cities and is developing a programme to upgrade living conditions in Taiz, where the proportion of informal settlements is particularly high.

Economic Role of Cities. Given continued conflicts and natural disasters, the economies of the Southern Tiers are underdeveloped with high unemployment and poverty ratios. In the Comoros and Somalia, the economic base is agriculture and fisheries; in Djibouti, it is transportation, communications, trade and services. Oil accounts for over 90 per cent of government revenue in Sudan and is expected to run out in 20 to 30 years while in Yemen, oil accounts for 70 per cent of government revenue and is projected to run out in five to 14 years. Sudan's economy was centred on Greater Khartoum and the breakup of the country into Sudan, which has the oil refineries and ports, and South Sudan, which has oil and water, has the potential to significantly affect the economies and the major cities in both countries.

Unemployment rates are very high throughout the region, reaching 19 per cent in Yemen, 7 to 22 per cent on the different islands of Comoros, 40 to 50 per cent in Djibouti and 65 per cent in Somalia (80 per cent in some cities). Unemployment disproportionately affects the youth and female populations. In the Comoros, youth unemployment represents nearly 65 per cent of total unemployment while in Djibouti, 84 per cent of 15 to 19 year olds and 69 per cent of 20 to 24 year olds are unemployed.

Poverty rates are very high, although generally urban residents are better off economically, have better access to health services and higher school enrolment and attendance rates. In Djibouti City, 69 per cent of people are below the national poverty line; in Sudan, 65 to 75 per cent of the population live on less than a dollar a day in the North and 90 per cent below that level in South Sudan.

School enrolment rates range from 20 per cent in Somalia to 85 per cent in Yemen. To combat poverty, Djibouti has instituted the Urban Poverty Reduction programme to support improvements to social and economic services in the poorest neighbourhoods through technical assistance, community projects, infrastructure development, access to microfinance and targeted economic development.

Constraints that prevent greater economic development include cumbersome administrative processes, an unfair and uncompetitive business environment, a lack of transparency, corruption, the high cost of credit and the difficulty in acquiring securely titled, serviced land for development and investment, as well as degraded infrastructure and uncertain electricity and water supplies. Although many of the countries are trying to diversify their economies and promote the tourism sector, they are constrained by inadequate infrastructure, a lack of hotels and security concerns.

Urban Development and Housing. Many cities that are the recipients of migratory flows are composed almost entirely of informal settlements, slums and refugee camps. The percentage of the migratory population living in slums is 94 in Sudan, 74 in Somalia, 69 in the Comoros and 67 in Yemen and most dwellings have at least one housing deprivation. Electricity grids are restricted to major cities and the poor cannot afford power.

Speculation has driven up land prices and rising construction costs has made housing more expensive. In Khartoum, the rise of oil wealth has led to speculative luxury private developments that cater to expatriates and are financed by foreign investment from the GCC.

Banking in the Southern Tier is limited, as demonstrated by the presence of only one bank in Somalia, three banks in Comoros and the statistic that only four per cent of Yemenis hold bank accounts. Households incrementally invest in their homes through savings, loans from friends and family and remittances.

Djibouti's estimated housing gap was 140,000 units in 2008; Khartoum's annual housing construction need is 60,000 units and Yemen's is 80,000 units. Almost all housing is informal and built by the private sector. Inadequate land development legislation and property registration procedures complicate governments' ability to intervene in the housing market.

Environment and Transportation. With the exception of Yemen, Southern Tier countries face great challenges from economic water scarcity, meaning they lack the infrastructure to supply water, rather than experiencing physical water scarcity. Somalia, Yemen and Sudan are not expected to reach the Millennium Development Goals targets for water and sanitation due to ongoing conflicts and lack of investment. Yemen is projected to deplete its groundwater reserves by 2030 or 2040 and Sana'a and Yemen are consistently projected to be the first city and country in the world to run out of water.

In the Comoros, where all petroleum products are imported, energy prices are among the highest in Africa. Wood fuels meet 90 per cent of energy needs in Sudan, 87 per cent in Somalia and 78 per cent in the Comoros, with significant environmental implications. In the Southern Tier countries, only cities in Sudan have sanitary landfills; other cities dispose of solid waste in informal dumps or along *wadis*. Yemen has led the region in reforms in this area and its 2010 National Strategy for Solid Waste Management created a framework for implementation which has affected four million people so far.

Although roads provide access to major cities there is a lack of funds to maintain networks. None of the Southern Tier countries has established national public transportation policies or operate public transport services. Private transit services tend to be fragmented and limited in geographic scope and operating hours. Starting in 2002, Djibouti implemented

important reforms to professionalize the informal sector, establish fees, licenses and inspections.

Urban Governance Systems. The Southern Tier Arab countries share a recent history of civil unrest, violent conflict and political instability. Much of the unrest is associated with the efforts to impose centralized government systems on traditionally-dispersed clans and tribes.

To resolve these conflicts, many of these countries have tried to implement decentralization reforms. In 2000, Yemen launched one of the most ambitious decentralization programs in the Arab world that resulted in the country's first municipal elections. The ruling party's continued control of the governorate and national seats of power, however, led to mass protests in 2011 and at the time of writing the country was on the brink of civil war.

Elsewhere in the Southern Tier, traditional power elites similarly continue to control higher levels of government with a lack of adequate funding for local authorities. The development of local capacity and improved service delivery are key areas requiring international and donor support.

Constitutional laws in Southern Tier countries protect the rights of women to vote and hold elected offices. In reality, deeply ingrained traditions govern property transactions, business dealings and family relations, particularly in rural areas. Women routinely have fewer opportunities to gain education, employment and political office, particularly in Yemen and Somalia. Some countries, mostly notably Djibouti, are slowly trying to change old laws and establish ministries on women's affairs and quotas for female representation in elected bodies.

Migration and Remittances. Conflict, drought and poverty have led to a net outmigration from most Southern Tier countries, with an average annual outmigration of 50,000 people from Somalia.

The more stable countries in the region host significant numbers of refugees; in 2010, 28 per cent of migrants in Sudan and 21 per cent of migrants in Yemen were refugees. The majority lives in peri-urban areas where they often regroup by tribe or place of origin. Sudan is a net receiver of migrants as it is both a transit and destination country; Khartoum hosts approximately 30,000 registered refugees, mostly from Ethiopia and Eritrea, and 1.7 million internally displaced peoples (IDPs); 1.3 million IDPs live in informal squatter camps around the city and the remaining 400,000 reside in official camps.

The importance of remittances in housing construction varies by country. In the Comoros, recipients of remittances spend most of the funds on consumption. Somalia receives an estimated USD 1 billion in remittances each year from émigrés, who represent 8.7 per cent of the population. These remittances underpin the country's financial structures and are invested in basic services as well as housing and small enterprises.



▲ Jerash, Jordan. Roman colonnaded streets gave order to city layout. ©WitR/Shutterstock

Continuity of Urban Life: Urban Settlements on River Locations

Today, most large cities of the Middle East are located either on the region's great rivers such as the Euphrates, the Tigris and the Nile - the birthplaces of once great civilizations - or on the shores of the Mediterranean, the Red Sea or the Arabian Gulf. These Middle Eastern cities have one of the world's longest histories of continuous occupation, due primarily to the presence of an ample water supply in an arid region, the fertility of the sites and their location along major trade routes. The ability to manage the area's rivers through complex hydraulic works to serve both farmland and urban centres allowed the production of food surpluses that could be traded.

The Fertile Crescent, a plain defined by the Tigris and the Euphrates, made possible the emergence first of ancient Sumerian, Akkadian, Hellenistic, Roman, Parthian, Sassanian civilizations and then Christian and Arab-Islamic ones. An extensive net of irrigation canals allowed the development of agriculture and the emergence of urban centres. Likewise,

the early Nile Valley settlers discovered the benefits of the fertilizing silt left behind by the floods and gradually learned how to control the annual inundations and so reclaim agricultural land.

As agriculture prospered, towns and cities multiplied. In 970 AD the Fatimids founded *al-Qahira* (Cairo) south of the ancient city of Heliopolis and north of Memphis near the convergence point of the two branches of the Nile.

Jerusalem (Yara Shalem)¹² is situated on a ridge west of the Dead Sea and the Jordan River. The fertility of the soil is due to the Wadi Farah as well as to the numerous underground springs and wells inside and outside the Old City. Jerusalem has been inhabited since about 4000 BC (Bronze Age). Archaeological evidence has established that the Canaanites, Amorites and Jebusites successively occupied the site. Subsequently, Jerusalem was ruled by the Egyptians, before the coming of the Philistines, Israelites, Persians, Romans, Byzantines, Arabs, Crusaders, Mamluks and the Ottoman Turks.

Damascus (*Dimashqa*) lies at the foot of the Anti-Lebanon Range where the waters of the Barada (the Abana river of Antiquity) irrigate a vast oasis of about 30 km². The Barada's waters have been used for irrigation for thousands of years and, according to historical tablets from 2500 BC, Amorites settled in this area at the beginning of the second millennium BC. The water, the quality of the soil and its commanding location on the trans-desert routes attracted numerous civilizations, which include Arameans, Assyrians, neo-Babylonians, Persians, Greeks, Seleucids, Nabateans, Romans, Byzantines and Arabs.

The Classical Heritage

By the end of the 6th century BC, Hellenic commercial power had extended to the Asiatic hinterland and Egypt. The establishment of the Greek *polis* (city-state) in its Asian colonies was the most dramatic representation of the progress of Hellenic civilization. The conquest of the region by Alexander the Great of Macedon (356-323 BC) left behind it the chain of Greek city-states as economic and cultural outposts as well as garrisons all over Asia and Egypt. These cells of Hellenism maintained an enduring organizational influence on the Middle East as they followed the democratic Athenian urban structure and this ecumenical concept of government, combined with the local freedom of the *polis*, resulted in a powerful and lasting structure, "the roots of the free municipal system handed down by Alexander's successors to Rome and by Rome to Byzantium."¹³

In Egypt, Alexander the Great built the port of Alexandria, the region's first orthogonal city. The city became the most powerful Hellenistic centre of commerce in the ancient world. After the death of Alexander, the orthogonal grid-plan town became common in Hellenistic Middle East, setting the tone for an orderly urban prototype that was to be perfected by Imperial Rome.¹⁴ It became the dominant urban plan of the Mediterranean Basin for half a millennium and its remnants are still clearly visible in many historic districts.

Scholars generally agree that the grid pattern in Middle Eastern cities is of Greek origin, but similar layouts are also found in Achaemenid (Persian) towns and in other non-Middle Eastern cities.¹⁵ The Romans added distinctive features to the Hellenistic grid pattern such as the *cardo* and the *decumanus*, intercrossing main thoroughfares that connected the major temples in the Roman cities of the Middle East. Another common urban feature of the Roman East was the colonnaded street¹⁶. Its basic function was to provide shelter from the sun but it also gave a sense of order, direction and majesty.

By the 4th century Christianity had become a structured religion with the First Council of Nicaea (325 AD) and the Byzantine Emperor Constantine launched an ambitious building programme to commemorate the Christian holy sites in the Eastern part of the Empire. Greco-Roman cities were transformed and redesigned according to the Christian faith.

The Arab Conquest

By the second half of the 7th century the Arab Islamic conquest had expanded over all Byzantine territories. At the time Islam was born, the Arabian Peninsula had long been in contact with Hellenistic, Roman and Byzantine traditions and, except for those concepts that could undermine their religion, the Muslims valued this heritage, particularly in the highly-urbanized areas.

The institutions of the conquered cities underwent major changes. The principal institutions - the mosques and later the *madrassas* (colleges) - played an important part in developing the new administrative and legal codes. The city's organization consisted of a strictly hierarchical structure appointed by the Caliph or Sultan: *walis* (governors) assisted by *al-shurta* (police), the *qadi* (judge), the *al-muhtasib* (supervisor of markets who was in turn assisted by the controller of various professions), the heads of city quarters and the supervisors of the protected communities of Jews and Christians.

The Arab Islamic city excelled in the services provided to its inhabitants: *maristans* (hospitals), *hammams* (public baths), *sabils* (drinking fountains), *sabil-maktabs* (public fountain with an elementary school), *dar al-ilm* (public libraries), public kitchens for the poor, *suqs* (markets), *khans* (urban warehouses) and *wakalas* (urban caravanserais), all of which made the city liveable and life dynamic. The two most prestigious universities remain Cairo's al-Azhar (972 AD) and Fes' al-Qarawiyyin (859 AD), the oldest continuously used university in the world.¹⁷

Spatial Organization of the Traditional Arab City

Arab cities have been hierarchically organized around the Great Mosque while the *suqs* (markets) and *qaysariyyas* (covered markets), interconnected by streets, constituted the main urban public spaces. This pattern dates back to pre-Islamic times when pilgrimages to pagan shrines were an occasion for traders to organize periodic markets.

By the end of the 19th century, many areas in the Middle East were transformed from self-sufficiency to import-oriented economies tied to the industrializing Western countries,¹⁸ a trend that asserted itself during the 20th century colonial period. Yet, despite the pre-eminence of modern imported goods, new ways of distribution and Western style financial systems, Arab cities are still characterized by the historic concept of the market and the traditional *sug*¹⁹ has not disappeared from them. They have been preserved in cities' historic centres in spite of the intrusion of motor vehicles and modern industries.

Straight streets often linked the heart of the market district to the city gates. Baghdad's al-Rashid Street is still the city's main commercial artery and stretches from the northern to the southern gate. In 1914 the Ottoman administration transformed al-Rashid Street into a modern avenue, with its central part designed for carriages and the pedestrian sidewalks shaded by arcades.²⁰ Parallel to al-Rashid Street is the Caliph

BOX 1: THE SOUL AND IDENTITY OF THE ARAB CITY



▲ The Bab Bou Jeloud gate leads into the old medina in Fes, Morocco. It is also known as The Blue Gate to Fes. ©Bjørn Christian Torrissen. Licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license.

If one were to look at Arab cities by aerial view, starting from Titwan in Morocco all the way to Baghdad in Iraq, it should become clear that they share similar structural form, functions and urban planning that enables social, cultural, economic and recreational activities to thrive. Urban planning follows a distinct internal hierarchy of social and spatial order. The layout allows for long horizontal views, reflecting the nomadic origins of the residents in these cities and their desire to view a far horizon without obstructions or restrictions. The mosque and its minarets is the sole purely vertical structure in the traditional Arab city, it is the main landmark; the most important visual focal point for visitors and residents alike and a guide to the city centre.

The Arab city developed along traditional planning visions sets the mosque of the state in the geographical centre and heart of the often circular city. From there starts a hierarchically-arranged fabric of buildings accommodating social strata of residents.

The first concentric ring surrounding the mosque is reserved for the Emirate House - the accommodation of the Emir, his entourage and their guards. A second concentric circle is for socially high-ranking or otherwise important city residents, such as those belonging to the major tribes and the clans closest to the Emir. People from lesser tribal importance reside in the following concentric circles or districts, successively further away from the Emir's residence. The city core (*medina*) is surrounded by an outer wall with gates that connect it with the extra-mural urban areas where trade and other economic activities take place during in the day.

Arab cities initially had their commercial quarter (*sug*) within the walls of the city core, often in close proximity to the gates for ease of interaction with the extra-mural urban areas. The *sug* consists of an urban quarter with narrow to medium-sized alleys, depending on the type of trade or craft, spatially arranged by activity or product produced. Therefore, there are separate alleys for copper wares, fabrics,

gold and silver, and others for medicinal herbs, perfumes, spices and so on. Over time, the expansion of trade typically forced the *sug* beyond the city walls and there is little doubt that the *sug* with its composition and shape is the forerunner of what is known today as the shopping center or mall.

The soul of the Arab city is embodied by the complementarity of the mosque of the state and the *sug*. The aromatic smell of different spices, perfumes, wild flowers, plants and various herbs extend from the *sug*'s alleys all the way to the mosque. There is a clear and direct route between the mosque and the *sug* that accentuates their inter-connectedness as places of exchange. At the market people trade merchandise, but also views on current matters.

Likewise, the functions of the mosque are not confined to religious rituals but also serve as a space for public discussion and debate on the conditions and well-being of the city and its citizenry. In this manner, the mosque serves as a parliament and place where the citizenry can articulate its voice to the Prince of the Emirate.

The notion of 'place' has a special and distinctive sense in the Arab city. The Islamic scholar Abdalqahir Al Girjani (d. 471 AH), described it as 'the inner lining of the form'. That is why arts and decoration do not appear on the exterior of buildings. In general terms these are limited to internal spaces only. The exception is the Mosque, where both the interior and exterior typically display multiple flavors of decoration that match architectural beauty with that of the decorative arts.

The distinct elements of the Arab city reveal the city's functions and its practical spatial organization. Nevertheless, for centuries the interpretation of the Arab city's distinct spatial organization and the inter-relatedness of urban elements and functions have remained for many people a conundrum hard to fully grasp. That explains why the image of the traditional Arab city has for centuries, as it does today, been surrounded by a sense of imagination, magic and mystery. This aspect reveals why it became a prime illustration of the Oriental city where the *Thousand and One Nights* have flowed, lived and *still* survive.

Street, with important religious institutions (mosques and churches) as well as government agencies.

Monumental pious institutions along the main arteries of the city became a manifestation of power, wealth and the expression of the patron's self-glorification. Great stone mosques with minarets and portals projecting onto the street served as landmarks to passersby and attracted the faithful. They were patronized by sultans and emirs, who provided pious endowments (*waqf*). The mosques, *maristans* (hospitals), *khanaqahs* (hospices) and *madrasas* (religious schools) sustained a large number of people who were attached to them as lifelong or temporary personnel. The sultan sometimes controlled the pious institutions but not always as the relationship between the state and clergy (*ulama*) was marked by mutual dependence.

The most striking feature of Jerusalem is its Roman-Byzantine street pattern consisting of two north-south roads and two east-west streets, an adaptation of the Roman *cardo* and *decumanus*. This street pattern has been preserved. Just as in any Roman city, Jerusalem's *cardo* was flanked by a colonnade. Lined with shops and vendors, it was the focal point of the city's economic life.

From the 18th century to the last quarter of the 19th century Arab cities experienced a long period of relative stagnation compared to their Western equivalents. Traditional urban patterns, dwellings and monuments remained in use. The height of buildings and their decorated façades on the main streets still indicated their social and religious importance.

The crucial urban transformations of Arab cities started to take place before the turn of the 20th century when European planning principles were introduced creating a dichotomy between the historic city and its modern counterpart. In Cairo, for example, the medieval Fatimid city remained a vibrant place despite the obvious decay of monuments, the lack of modern amenities, increased traffic congestion and the density of population in its traditional quarters.

Today in the historic centre of Cairo and, to a lesser extent Baghdad, there are structures dating back to the Ottoman period as well as recent ones that have been built adjacent to or attached to older buildings. Regardless of its modern look, the area maintains its integrity due to the survival of the hierarchical organization of the streets, alleys and cul-de-sacs, all of which create a social spatial order. In spite of the efforts of the Egyptian Department of Antiquities, this order is now threatened by new building regulations requiring parking and the widening of streets to facilitate the flow of vehicular traffic. In some cases, buildings have been pulled down to widen streets or their façade visually obstructed by overpasses, disfiguring the neighbourhood.

In Baghdad the first set of urban changes occurred during the first half of the 20th century,²¹ when the narrow and winding street network of the old city fabric was considered unsuitable for carriages. Despite the modernization trend during the late Ottoman period, some quarters of the traditional city had survived into the 20th century, their buildings exhibiting a mixture of styles dating back to the

19th century. The integrity of many quarters was entirely altered after the Second World War, when a new street system was introduced with wide avenues and squares in European style.²² The consequences of this process were the destruction of old good buildings, the disruption of the relationship between private and public spaces and the creation of a new environment in the streets.

The Destruction of Historical Sites

Historic sites and traditional urban centres are a priceless legacy for the local population and humanity, besides attracting tourists and contributing to the economy. Because of its historical assets and its proximity to Western countries, Cairo is the city that has attracted the most tourists in the Middle East. Its wealth of Pharaonic and Islamic monuments are unique in the world. They were first documented during Napoleon's Egyptian Campaign (1798–1801) when the Rosetta Stone was discovered (1799) and when antiquities gathered by French archaeologists were seized by the British and are today part of British Museums' collections. The French saved only a small part of the collection, which was taken to the Louvre.

More importantly, the scientific expedition that accompanied the army produced the celebrated *Description de L'Egypte*, which was published between 1809 and 1821. Its text and engravings illustrated both Egyptian antiquities and the Islamic medieval city and stirred the imagination of archaeologists, historians, artists and collectors. By the end of the 19th century, the market for Egyptian artefacts was well developed and another in Islamic art had started in Europe and the United States.

Concurrently, Mesopotamian antiquities became of interest to British and French businessmen and diplomats, who began to explore Iraq's Biblical and ancient sites looking for valuable artefacts. The systematic removal of antiquities began in 1842. Despite the antiquities law promulgated by the Ottoman government in the 1870s, archaeologists from the US and Europe continued digging and collecting antiquities²³. From the 19th century to the present day the cultural heritage of Mesopotamia has suffered from indiscriminate illegal digging, which has effaced most of the layout of ancient cities²⁴ only their bare walls and foundations are still standing.

The Need for Preservation

The Arab World's wealth of historic urban sites and the influence of history in modern cities is very much part of the "collective memory" of people who have occupied the land for lengthy periods of time. It is a distinctive factor that continues to be reflected in the daily life of people, in the use of traditional motifs in architecture, in the clustering of competing stores selling similar wares, in the continued use of traditional industries and markets, of religious buildings and of the monumental buildings of centralized governments.

Their location often still reflects the urban structures that emerged from both the Roman-Byzantine grid plan and the traditional urban fabric, influenced by the *Shari'a* law that developed after the Arab conquest. They are not only part of the daily life of the population but also represent an economic asset, attracting the tourism that is today a significant part of the region's economy.

The preservation of the cultural heritage of ancient sites

and traditional medieval cities threatened by the high rate of growth of the urban population and the sprawl is imperative. The principal reason for safeguarding these physical manifestations of the past – historic sites, cities, quarters, monuments, streets, markets, temples and palaces – lies not only in their harmony and splendour but also because they form part of the identity of the people of the Arab World.

BOX 2: PRESERVING THE ARAB URBAN HERITAGE



▲ The Medina of Sousse in Tunisia, a UNESCO World Heritage Site. ©Gelia/Shutterstock

Arab countries have a diversified urban heritage demonstrated in city centres from different ages. Ancient cities such as Sana'a (Yemen), Fes and Marrakech (Morocco), Tunis (Tunisia), Bethlehem (Occupied Palestinian Territories), Damascus and Aleppo (Syria) are still inhabited today and are important regional centers for tourism. UNESCO and other international organizations have assisted some of these cities to maintain and preserve their architectural heritage and monuments through adaptive reuse to generate economic opportunities for its citizens and revive its character.

The Bethlehem preservation project by UNESCO was very important as, in addition to its spiritual values for Christians, it has

a wealth of urban heritage demonstrated in its ancient neighbourhoods, old houses, shops and traditional artifacts. Most of those important historic places appear in the World List of Heritage Sites (The Medina in Fes in Morocco, Carthage in Tunisia, Sana'a Shebam and Zabeed in Yemen, Damascus and Aleppo in Syria, etc.). As a result of preservation efforts in Yemen, its cities have gained international reputation for their historical characteristics. The famous tower dwelling areas of Sana'a have been preserved, including the carefully planned architecture, many gardens inside and outside the ramparts and the water supply from wells. But the urban explosion has affected these areas; its inhabitants are deserting it and it is facing continuous deterioration.

Cities in Syria present a different and fascinating urban form, varying from towns dating back to the second and third millennia BC (Ebla, Mari, and Ugarit) or the Hellenistic and Roman periods (Apamee, Palmyra) to cities of the golden age of Arab civilization (Damascus with its Omayyad mosque, its gates and ramparts, palaces, citadel and old Arabian houses) and its urban heritage from the Byzantine era (the sanctuary of Saint Simeon), the Crusades (Tartus cathedral) and the Ottoman era (Tekiyeh and Souleymanieh). Tunisia has an exceptional urban heritage represented in the recently-renovated medina at Tunis, and much of its architectural heritage is now utilized as museums, restaurants, guest houses and art and crafts shops.

As of 1950, the Arab region contained only two cities with populations greater than one million. By 2010 there were 23 cities of this size, with a total population of approximately 65 million. By 2025, 31 cities in the region are expected to have a population greater than one million. Cumulatively, these cities will then be home to nearly 97 million residents.

In 1950, many of the largest cities in each country were relatively small such as Sana'a, Dubai, Mogadishu and Amman with only 46,000; 20,000; 69,000 and 90,000 residents respectively. The largest cities were Cairo, Alexandria, Casablanca, Baghdad, Algiers, Damascus, Beirut and Aleppo, each with a population greater than 250,000 residents.

In the early- to mid-1950s, many of the Arab cities prepared development plans. Although there was some rural to urban migration, most migrants settled in villages surrounding the cities. It was not until the mid-1960s that informal settlements started to develop. They became more common in the 1970s and 1980s, with the lifting of the oil embargo and the increase in the price of oil in 1974. Economic liberalization also helped to facilitate the movement of migrants to other countries and regions, where they often settled in urban locations.

Table 1: Largest Agglomerations 2010-2025 and Half-Decade Growth Rates, shows that, in the foreseeable future, Cairo will remain the sole Arab megacity. Until 2025, the current hierarchy of the five largest urban agglomerations in the Arab states will remain unchanged. Baghdad with some 8 million inhabitants in 2025 will stay in second place after Cairo. Khartoum's 7.9 million in 2025 assures they remain in third place, Riyadh will still be fourth and Alexandria fifth in the foreseeable future.

Some changes are projected for the lower-ranked cities, starting in 2015, when Jeddah will become the region's sixth-largest urban agglomeration with 3.5 million inhabitants

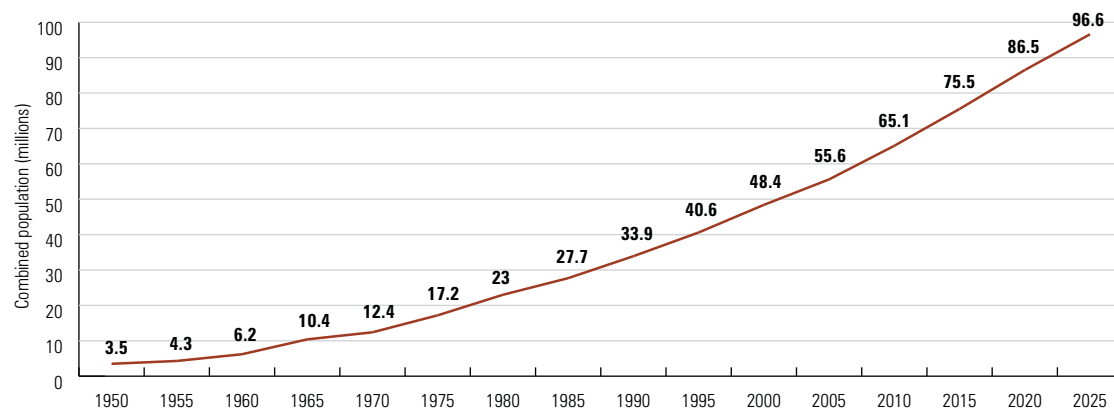


▲ Sana'a, Yemen. The region's fastest growing city. ©Robert Bremec/iStockphoto

and push Casablanca to seventh place. By 2020, Aleppo and Jeddah will both also be larger than Casablanca while Sana'a will rise from the region's 11th-largest agglomeration of 2.3 million people in 2010 to seventh position with 4.2 million inhabitants by 2025.

There are messages embedded in the statistics of these cities' relative and absolute growth. On average, the region's largest agglomerations will grow by 35 per cent between 2010 and 2025, adding an accumulated 15 million people to these large urban centres. The region's fastest growing city is Sana'a, which is projected to experience an 83.4 per cent growth from its 2010 population. This is a worrying prospect as the city is already in serious trouble in terms of its fresh water supplies.

FIGURE 3: ARAB CITIES WITH 1+ MILLION PEOPLE



Given the rapidly-increasing gap between water demand and supply, it is unlikely that Sana'a will see the projected population growth materialize as eco-migration is expected to set in well before the city actually runs dry.

The sub-region's second-fastest growing city is Mogadishu, projected to rise from 1.5 million in 2010 to 2.58 million in 2025, a growth of 72.5 per cent. Here too, external factors will largely determine whether this will indeed happen. That is not the case with Khartoum, which is projected to grow from 5.1 million in 2010 to 7.9 million in 2025 - or a 53.7 per cent increase. The growth of Khartoum may actually exceed these already high forecasts, depending on how the hydrocarbon-driven economy of Sudan will develop and whether a negotiated agreement with South Sudan over border delineation and division of the hydrocarbon endowment can be reached on relatively short notice.

Other Arab cities whose populations are predicted to grow well above the regional average during the 2010-2025 period are: Sulaimaniya (49.39 per cent); Hama (45.66 per cent); Mecca (44.58 per cent); (Erbil (43.39 per cent) and Homs (41.63 per cent), while both Beirut and Tunis are projected to experience mere negligible urban growth.

The urban agglomerations of Beirut and Dubai represented the largest share of a country's total population at 45.5 and 33.3 per cent in 2010. Other cities represent a much smaller segment of the total population, varying from 4.6 per cent in Mosul to 18.7 per cent in Baghdad. Greater Beirut accounts for 52.2 per cent of Lebanon's total urban population while Mogadishu and Dubai represent 42.8 per cent and 39.9 per cent of their respective countries. Unlike other countries in the region that have several important secondary cities, in Lebanon, the United Arab Emirates and Somalia there is a primary city that contains most of both the total and urban populations.

Average annual growth rates in the largest cities have been low to moderate at 1 to 3 per cent. Hama, Sana'a, Sharjah, Dubai and Homs have been expanding most rapidly at between 4 and 6 per cent. These cities have the ability to absorb more residents and accommodate additional growth. Cairo, Tunis, Tripoli, Oran and Casablanca have been growing most slowly at a rate of less than 1 per cent each year, demonstrating the limited opportunities for further expansion. By 2025, most of the cities will be growing relatively slowly at 1 to 2 per cent.

TABLE 1: LARGEST AGGLOMERATIONS 2010-2025 AND HALF-DECADE GROWTH RATES

Urban Agglomeration	2010(000)	2015(000)	2010-15(%)	2020 (000)	2015-20(%)	2025(000)	2020-25(%)	2010-25(%)
Cairo (Al-Qahirah)	11,001	11,663	6.01	12,540	7.52	13,531	7.90	23.00
Baghdad	5,891	6,614	12.28	7,321	10.69	8,043	9.85	36.53
Khartoum (Al-Khartum)	5,172	6,046	16.89	7,005	15.87	7,953	13.53	53.76
Riyadh (Al-Riyadh)	4,848	5,373	10.83	5,809	8.12	6,196	6.65	27.81
Alexandria (Al-Iskandariyah)	4,387	4,791	9.20	5,201	8.55	5,648	8.60	28.73
Casablanca (Dar-el-Beida)	3,284	3,537	7.73	3,816	7.88	4,065	6.52	23.80
Jeddah	3,234	3,569	10.36	3,868	8.38	4,138	6.97	27.95
Aleppo (Halab)	3,087	3,510	13.72	3,864	10.08	4,244	9.83	37.49
Algiers (El Djazaïr)	2,800	3,099	10.71	3,371	8.77	3,595	6.66	28.43
Damascus (Dimashq)	2,597	2,918	12.36	3,213	10.11	3,534	9.98	36.06
Sana'a	2,342	2,934	25.29	3,585	22.19	4,296	19.83	83.44
Kuwait City (Al Kuwait)	2,305	2,592	12.45	2,790	7.63	2,956	5.95	28.22
Beirut (Bayrut)	1,937	2,033	4.98	2,090	2.78	2,135	2.14	10.21
Rabat	1,802	1,973	9.45	2,139	8.43	2,288	6.96	26.94
Dubai (Dubayy)	1,567	1,772	13.07	1,934	9.18	2,076	7.36	32.52
Mogadishu (Muqdisho)	1,500	1,795	19.64	2,156	20.12	2,588	20.06	72.54
Mecca (Makkah)	1,484	1,642	10.64	1,789	8.96	1,924	7.56	29.67
Mosul (Al-Mawsil)	1,447	1,676	15.84	1,885	12.46	2,092	10.98	44.58
Homs (Hims)	1,328	1,536	15.67	1,702	10.82	1,881	10.48	41.63
Tripoli (Tarabulus)	1,108	1,192	7.67	1,286	7.86	1,364	6.01	23.12
Medina (Al-Madinah)	1,104	1,236	12.02	1,351	9.27	1,456	7.78	31.93
Amman	1,088	1,186	9.00	1,272	9.04	1,364	7.20	25.37
Fes	1,065	1,173	10.09	1,277	8.85	1,371	7.36	28.65
Erbil (Irbil)	1,009	1,158	14.71	1,301	12.37	1,447	11.25	43.39
Marrakech	928	1,023	10.21	1,114	8.96	1,198	7.47	29.06
Basra (Al-Basrah)	923	1,023	10.81	1,139	11.34	1,267	11.27	37.29
Dammam	902	1,013	12.36	1,109	9.44	1,197	7.93	32.72
Hama	897	1,060	18.17	1,180	11.27	1,307	10.78	45.66
Sulaimaniya	836	988	18.20	1,121	13.42	1,249	11.44	49.39
Sharjah	809	926	14.40	1,016	9.77	1,096	7.85	35.43
Oran (Wahran)	770	827	7.43	902	9.05	970	7.64	26.11
Tunis	767	814	6.21	864	6.14	911	5.34	18.76



▲ Dubai, UAE. The oil-rich Arab countries attract large numbers of migrant workers.
©Philip Lange/Shutterstock

Migration is a key feature affecting all Arab countries since they are either labour-exporting or labour-receiving countries. Where new entrants in the labour force exceed the capacity of the economy to absorb them, governments have little choice but to encourage working age populations to seek employment elsewhere.

The first oil price spike in 1974 and the subsequent ambitious development programmes, characterized by large scale infrastructure and urban projects adopted by the oil-exporting countries, siphoned off surveyors, engineers and construction labour from the region. Wages and the prices of building materials escalated.

The attraction of the oil countries lay in the fact that an employment contract in Saudi Arabia, Libya or the Gulf states allowed an expatriate to save the amount needed to acquire a

dwelling unit in five to seven years, half the time required if they found a job in their home country. The resultant massive infusion of capital into home construction fuelled an unprecedented increase in the price of land, which doubled in value every four years in smaller settlements and two years in the larger cities.

The urbanized area of many cities grew by 50 to 100 per cent during the decade from 1975 to 1985, as municipal authorities were unable to manage urban growth and informal settlements proliferated. In Egypt, Morocco, Tunisia and Syria thousands of hectares of valuable agricultural land were lost to urbanization. In the labour-receiving countries, the proportion of expatriate workers has increased as the countries developed and diversified their economy and multiplied ambitious urban projects which now include impressive infrastructure and tall buildings.

Since the 1990s, the Gulf countries and Saudi Arabia have increasingly relied on Westerners for skilled labour and Asians for domestic and unskilled labour. Their numbers now exceed the number of nationals in all countries, except in Saudi Arabia, and projections based on the continuation of current trends indicate serious social and cultural challenges to the host countries. The oil-rich Arab countries will have to review their labour policies, the status of their migrant workers and their living conditions as the European countries are doing today.

The continued unrest in Iraq, the financial crisis of 2007 to 2008 and, more recently, the war in Libya have demonstrated the extent to which labour-sending countries are vulnerable to the return of their migrant labour in times of civil strife and the curtailment or retrenchment of public and private expenditures in the oil-rich countries.

Over two million Egyptian workers returned due to the 1991 and 2003 wars in Iraq and Kuwait and more than 1.5 million recently returned from Libya. Syrians, Jordanians, Palestinians, Sudanese and even Moroccans were also affected. Since the local economies are unable to absorb them and each migrant supports five or more family members, the economic and social impacts of disruptions in international migration patterns can be severe. Decline in remittances is compounded by the need to provide some assistance to the returnees.

Transnational migration interlinks the different countries economically, socially, culturally and, to some extent, ideologically. It binds the Arab world as much as trade if not more so. Migrant workers who spend years in a rich host country bring back images of wealth and development and get imbued by aspects of the culture of that country. Often the images are superficial observations and the understanding of the culture is skewed by ill-founded interpretations. Nevertheless, the experience changes their outlook and affects their lifestyles in their home countries.

Most of the countries in the region have been affected by the migration of refugees or internally displaced persons (IDPs). Many countries in the Arab world have suffered from civil strife and environmental disasters, which have prompted internal and external population movements. These shifts have a significant impact on urban areas as many of the refugees and IDPs settle in cities or on the urban periphery, generating additional demand on city services and infrastructure. Integrating them into the urban fabric and providing them with adequate support poses significant challenges.

Refugees

Conflict in Iraq, Lebanon, the Occupied Palestinian Territories, Somalia and Sudan has prompted residents to emigrate to safer locations. Since the 1980s, over 2 million Iraqis have emigrated to escape the insecurity and instability created by the war with Iran, the First and Second Gulf Wars and sectarian violence.

Most refugees settle in urban areas or in settlement camps, initially built on the urban periphery. Jordan hosts refugees from the Occupied Palestinian Territories, Lebanon and Iraq; an estimated 25 per cent of Amman's residents are refugees. Lebanon is the destination for many Iraqi, Kurdish and Palestinian refugees and Syria has a large Iraqi population as well as Palestinian refugees.

In the Southern Tier, refugees comprise a significant portion of the immigrant population in Sudan, Yemen and Djibouti, with most coming from Somalia and Ethiopia. In the Maghreb region, Algeria receives Saharawi refugees from the conflict in the Western Sahara. In the Gulf countries, Saudi Arabia and Kuwait have the largest refugee populations.

Internally Displaced Persons

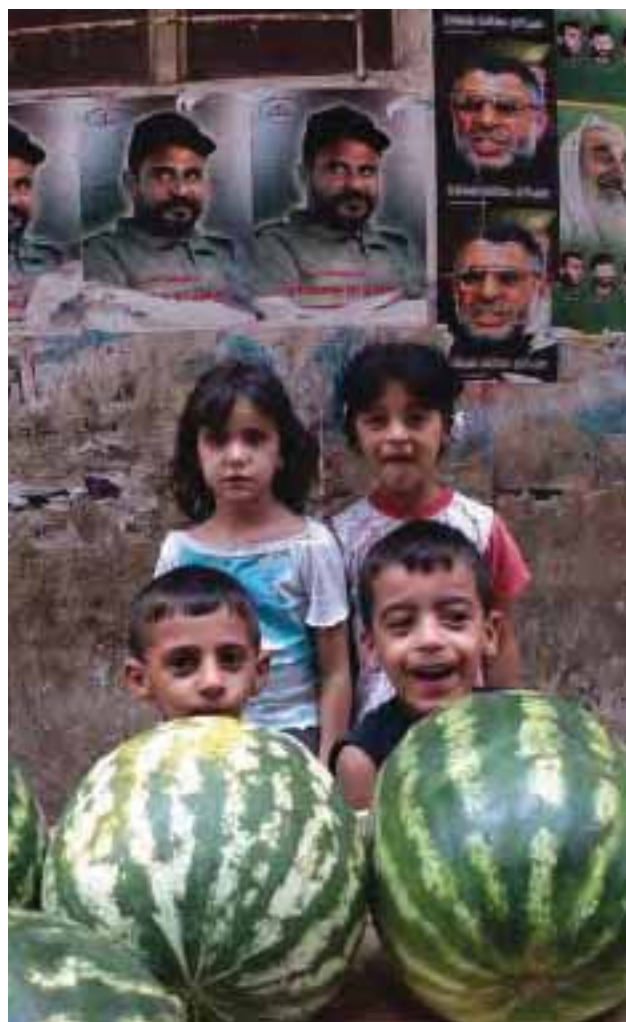
Many countries, particularly in the Mashreq and the Southern Tier, have had to deal with internally displaced populations as a result of conflict, natural disasters or environmental degradation.

In Iraq, approximately 1.9 million residents have been displaced internally since the end of the Second Gulf War. Lebanon's civil war was accompanied by significant internal migration, principally centred on Beirut, fuelling the informal urbanization of its periphery. In the Southern Tier, Sudanese and Somali residents have experienced significant internal migration. In Somalia, fighting in the south, especially in Mogadishu has pushed residents to Somaliland, Puntland and the Afgoye Corridor northwest of Mogadishu. Many of the urban settlers tend to stay in the

destination cities rather than return home, which generates additional pressure on social infrastructure.

In Sudan, with the signing of the Comprehensive Peace Agreement, approximately 2 million people returned to South Sudan. With the partition of the country, it is anticipated that 3.5 million migrants and refugees have started to return to their villages in the south and an estimated 800,000 persons are moving from the south to the north, many settling in urban areas, particularly Khartoum. Persons that move within Darfur tend to settle in urban areas as well due to land occupation and agricultural crop destruction in the rural localities.

In Syria, rural to urban migration has been spurred by drought and environmental degradation. In the northeast, approximately 200,000 to 300,000 residents have migrated to the cities. In Yemen and Comoros, internally displaced people have migrated due to natural disasters such as flooding.



▲ Palestinian children at Shatila refugee camp in Beirut, Lebanon.
©Sadık Güleç/iStockphoto

Impact of Climate Change on Water

According to the IPCC's 4th Assessment Report, the Middle East and North Africa will become hotter and drier by the end of the century. Overall, the region is projected to warm by 2°C by 2050 and 4°C by 2100. Total water runoff will decline by 20 to 30 per cent by 2050.²⁵

Within the region, models predict that the Mashreq will be 2.5 to 3.7°C hotter in the summer and 2.0 to 3.1°C hotter in the winter by 2050. In the Maghreb, climate change will shift the Westerly winds, resulting in as much as a 12 per cent reduction in median annual precipitation by 2030.

Together, these two trends will increase the frequency and severity of extreme weather, particularly severe drought. Models also predict a rise of 0.1 to 0.3 metres in sea level by 2050, which will increase salt water intrusion into important coastal aquifers, including in Gaza.

These changes will have significant and largely negative impacts on cities in the Arab world by displacing farmers and increasing urbanization pressures, increasing food imports, decreasing the availability of water in a region that is already water stressed, increasing the likelihood of flooding in coastal

areas where most of the Arab world lives and increasing energy demands for cooling and desalination.

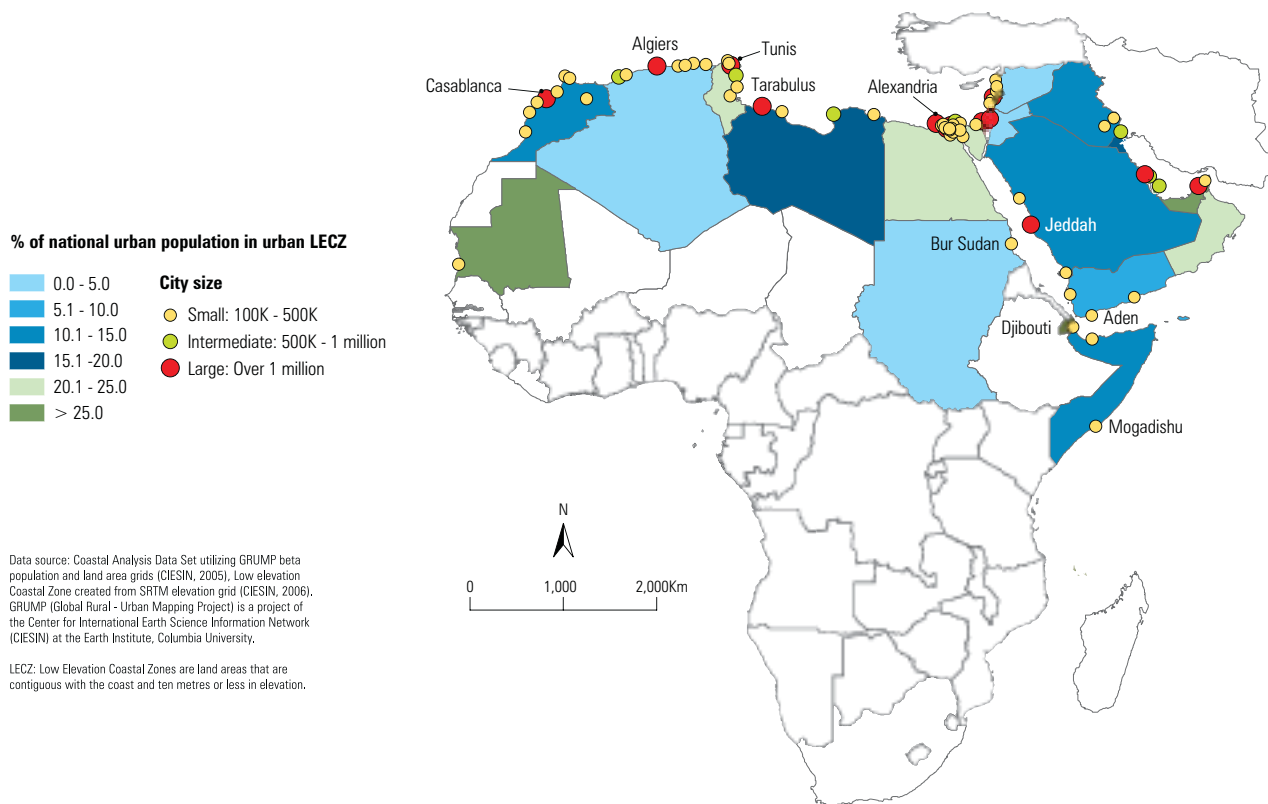
For the Mashreq, a study predicted that climate change would cost countries 1 to 7 per cent of GDP. These pressures will raise the cost of living in cities and eventually surpass the ability of governments in the region to subsidize costs. Climate change therefore has the potential to destabilize the region.

Water and Food Security

The Arab world is one of the most water scarce regions in the world, with an average of 2,000 cubic metres of renewable freshwater water per capita. Around 8 to 10 per cent of water is used for domestic consumption, 5 to 7 per cent for industrial uses, and 85 per cent for agriculture, making it the most vulnerable sector under climate change.²⁶

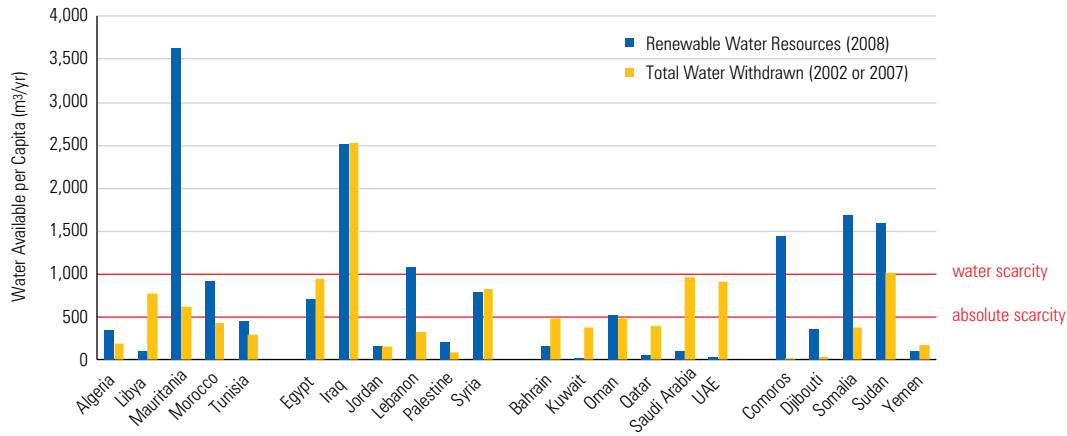
Models project that domestic food production will decline by 10 to 20 per cent in the region due to climate change and by as much as 40 per cent in countries like Morocco.²⁷ It will have a tremendous impact on countries for which agriculture is a major employment base such as Algeria, Egypt, Morocco, Syria and Yemen.

FIGURE 4: PERCENTAGE OF NATIONAL URBAN POPULATION LIVING IN LOW-ELEVATION COASTAL ZONES (LECZ)



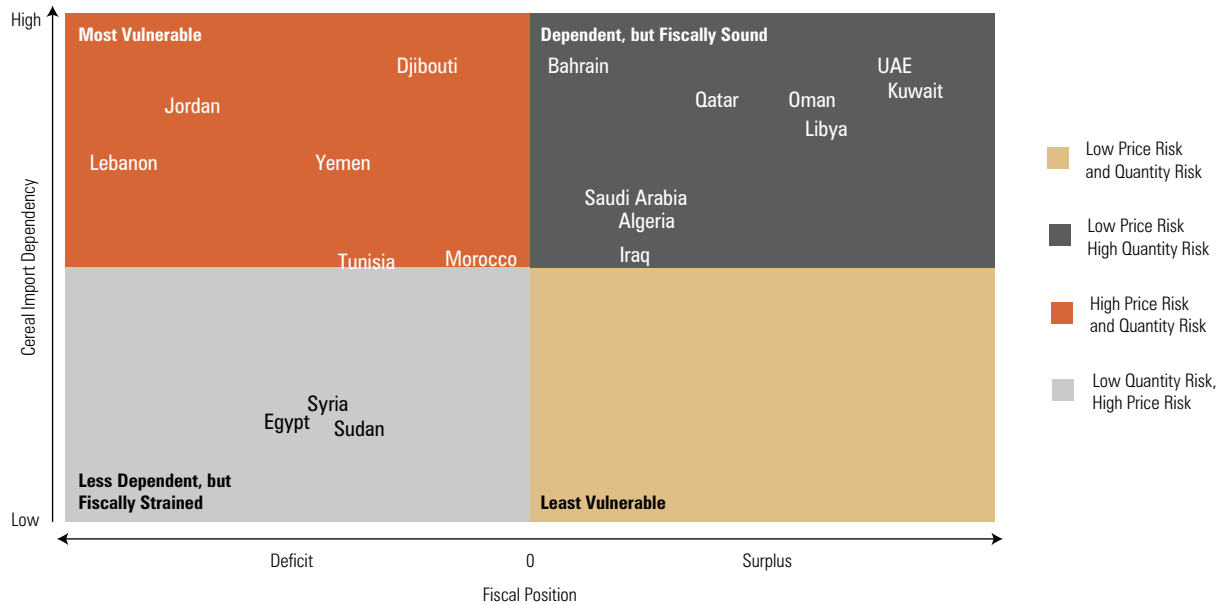
Source: UN-Habitat Global Urban Observatory 2008.

FIGURE 5: RENEWABLE WATER AVAILABLE AND TOTAL WATER WITHDRAWN PER CAPITA



Source: FAO Aquastat.

FIGURE 6: VULNERABILITY OF ARAB COUNTRIES BASED ON THEIR CEREAL IMPORT DEPENDENCY AND FISCAL POSITION



Source: Authors. Adapted from FAO, 2008b; IMF, 2008; World Bank, 2008b.
 Note: Cereal import dependency is measured by net cereal imports/total cereal consumption.
 *2007 fiscal balances were drawn from the IMF. The most recent FAOSTAT data on cereal balances is for 2005.
 Source: World Bank. "Improving Food Security in Arab Countries." Washington, DC.: World Bank, 2009.

Already, most Arab countries import over 50 per cent of the calories they consume, making the region very vulnerable to shocks in world food prices. The FAO Food Price Index hit peaks in 2008 at 185 and again in 2011 at 209, up from 100 points in 2002-2004.²⁸

The Horn of Africa and Yemen currently suffer from droughts that frequently lead to humanitarian crises. The urban poor, rural landless and smallholder farmers in other Arab countries are also at high risk. While these shocks were due to a convergence of unfortunate events, increasingly severe weather events worldwide and the growing cost of petroleum

– a major input in fertilizers and transportation – will make these shocks more commonplace as the region’s demand for food is growing as it urbanizes and develops economically.

Common government responses to rising food prices have been to increase public sector wages and food subsidies, which now account for as much as 1.8 per cent of GDP in some countries. These tend to be imprecise and inflationary measures that often fail to target the poor and are difficult to retract when food prices drop. The oil-rich countries with fiscal surpluses may be able to continue to sustain this support mechanism, while countries with fiscal deficits and



▲ In Yemen, smallholder farmers are at high risk due to climate change. ©Robert Paul van Beets/Shutterstock

high dependency on cereal imports will need to respond with more targeted safety nets.

The Gulf countries are heavily investing in agriculture in countries that have untapped water supplies, are logistically proximate and have cultural and political ties to the Gulf, such as Sudan and Turkey. Significant international and national efforts are also targeting increased agricultural efficiency to mitigate the impacts of climate change.

Energy Mitigation and Adaptation

North Africa and the Middle East have some of the highest potential for renewable energy in the world. Two major initiatives are underway to build solar and wind facilities that transmit energy to Europe to allow it to meet its commitment to reduce its carbon footprint.

The ongoing USD 750 million World Bank Concentrated Solar Scale-up Programme aims to build 20GW of concentrated solar power around the Mediterranean by 2020, most of it in Maghreb and Mashreq countries. The proposed multi-billion dollar DESERTEC initiative, implemented by a consortium of European and Algerian companies led by MÜNICH Re, aims to build a network of solar and wind facilities throughout the Middle East and North Africa (MENA) region, with large-scale plans to be established by 2012 and pilots beginning in Morocco.

These projects depend on the political cooperation between countries, some of which have closed their borders to each other. If successful, they will contribute to the

employment base and economies of their host countries. The Gulf countries are also beginning to invest in nuclear power and renewable energy in preparation for declining oil production.

In addition, one of the region's most interesting innovations is Masdar City, located 17 km from Abu Dhabi City. The USD 15-30 billion project aims to create a zero-waste, zero-imported energy city that will accommodate 40,000 residents and 70,000 employees and feature futuristic designs such as subterranean pod-cars. The technologies and urban design of the city could be transformative for the region.

Adaptation to Climate Change

International support to Arab countries has focused on agricultural productivity and fisheries as well as coastal sustainability. Significant investments are also underway throughout the region to increase wastewater reclamation and reuse, and reduce water loss in distribution networks.

In the Gulf, the UAE is a leader in efforts to prepare for climate change given that 85 per cent of the population and over 90 per cent of the infrastructure are within a few metres of sea level. According to a 2010 ranking of countries' vulnerability to climate change based on their ability to adapt to risks, Comoros, Somalia and Yemen are among the top five most vulnerable countries in the world. These countries in particular will need international support on technical issues as well as institutional capacity building in regards to climate resilience.

Development corridors are an important feature of Arab countries, particularly in the Mashreq and Maghreb, where urban settlements have historically grown and flourished along riverbanks and trade routes. Modern transportation networks extending across national boundaries have overlaid highways linking key cities across more barren lands. There are two general models of urbanization: extended metropolitan regions (EMRs) centred on a single city and mega urban regions (MURs) based on a group of cities physically connected by multi-modal transportation networks.

The Greater Cairo Region, with almost 20 million residents, is the largest EMR in the Arab world. Situated at the southern edge of the Nile Delta, it anchors several strategic corridors with Port Said, the Suez Canal cities and Alexandria. The Alexandria-Cairo corridor is 225 kilometres long and the largest and most important MUR in the Arab region.

Other important but smaller-scale corridors in the Mashreq include the Damascus-Homs MUR in Syria and the Amman-

Zarqa MUR in Jordan. In the Maghreb, the Southern Mediterranean coast serves as the major east-west corridor and the Kenitra-El Jadida MUR serves as the major north-south corridor. At their nexus, Tangier and its free trade zone is emerging as a new major EMR.

A number of projects are underway to improve regional integration through better road networks, railways and electrical grids, as well as streamlined trade and customs procedures. Although these efforts face a number of difficulties that include border closures and competition for resources, planned infrastructure networks could lead to the creation of new MURs in the region.

In the Mashreq, the World Bank has proposed major transportation investments along three corridors: a north-south corridor that would link the European Union and the Gulf Cooperation Council through Turkey, Syria and Jordan and two east-west corridors that would link Syrian ports with Iraq. The GCC is planning over USD 100 billion in rail improvements, including one project to create a regional rail system that would stretch from Muscat to Kuwait and connect with railways in the Mashreq and Maghreb, as well as another to connect Jeddah, Riyadh and Bahrain.

Managing these regional agglomerations requires complex planning and greater government coordination, both horizontally and vertically. Following rapid urban growth, the emergence of urban corridors and serious environmental challenges, countries have renewed their focus on national and regional strategic plans and spatial frameworks. Jordan launched its first national land use master plan in 2006, along with comprehensive master plans for eight major municipalities. Lebanon published its first national physical plan in 2005, followed by Libya in 2006 and Morocco in 2008.

Though plans vary, they typically stress diverting growth to secondary cities to alleviate pressures on the primary cities, improving urban mass transit and promoting economic diversification. The concept of technopoles or hi-tech industrial parks is popular in the Maghreb and Egypt, which have planned a series of differentiated parks in secondary cities that build on existing educational and industrial resources.

In parallel with regional planning efforts, several countries are also strengthening national-local collaboration on planning and development, creating sub-national/governorate-level planning agencies and empowering local administrations to draft and implement their own plans. Syria has published a National Law on Regional Planning and launched a new Higher Commission for Regional Planning in 2010 to formulate a national framework on integrated development. As urban corridors expand beyond national boundaries, however, there will be an increasing need for coordination at the international level.



▲ Cairo's ring road links the city to the country's major urban corridors.

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▲ Thousands of Egyptians gather at a demonstration in Tahrir Square, Cairo, Egypt. ©MOHPhoto/Shutterstock

The impacts of civil unrest made 2011 a landmark year in the history of the Arab world. The combined effects of unbalanced economic liberalization and partial integration in the global system created opportunities for a select group who had the capacity and the contacts to accumulate wealth. An upward spiral in the prices of basic staples over the past decade was exacerbated by a sharp rise in commodity prices in the past two years. The necessity to import wheat at double the price of the previous year strained government budgets and resulted in higher food prices.

Despite significant and unsustainable public subsidies, the poor suffered serious hardships. Widening income disparities, very high unemployment rates among the labour force in the 15 to 25 years age bracket aggravated the perception of social inequity, ineptitude and corruption in the system of governance.

The youth rose to protest the prevailing situation and demand reforms to bring about social justice and political transparency. Other groups demonstrated to demand lower food prices, jobs and affordable housing. Social equity requires the generation of opportunities to earn living wages, the creation of avenues for advancement and the empowerment of vulnerable and marginalized groups. Political transparency requires representative government, legal guarantees of individual rights and accountability in governance.

Apart from the oil-exporting countries, demographic and economic realities hamper the achievement of lofty social objectives elsewhere in the Arab world. However, it is now clear that employment generation rather than investment in urban real estate and land development is the strategic objective that should be given priority by governments. This requires supporting local entrepreneurship and attracting domestic and foreign investment.

Governments that managed to deal with the protests and the new interim governments that replaced discredited regimes have pledged to undertake reforms to respond to popular demands including:

- Curbing the excessive power of the executive branch;
- Setting limits to terms of office;
- Instituting an effective multi-party political system capable of expressing divergent views without fear of retribution;
- Guaranteeing equal access to elected representation and public office, irrespective of political affiliation;
- Guaranteeing independence to the judiciary;
- Upholding human rights; and
- Fostering a dialogue among all the political forces to arrive at a consensus rather than the imposition of a platform by the more vocal and politically potent.

The local level is the one that most affects urban governance. The demands expressed by demonstrators translate into requests for decentralization of authority and resources not just administrative deconcentration of centralized services. This implies greater local control over local affairs by elected governors and mayors and local councils.

While protests everywhere were not devoid of ethnic and religious overtones, the demand for greater local administrative autonomy is genuine and widespread. With few exceptions, local councils in Arab countries are elected while governors and mayors are appointed. Yet where the one-party political system endured or the ruling elite party concentrated political and economic power, elected local councils lost their legitimacy as true representative of the people. In Egypt, demonstrators demanded that existing local councils be disbanded as they were widely viewed as corrupt extensions of the power structure.

City council members are elected in both Egypt and Syria but the city mayors are appointed in Egypt while in Syria, they are elected by the members of the city council from among themselves. In Morocco, the role is divided between two officials: an appointed “prefect” who holds the police powers and an elected president of the city council, who manages the municipal services, interacts with residents and controls the budget.

Interestingly, the recent events have underscored the inherent inefficiency of a lack of unified government in metropolitan urban regions. The coordination required among several local entities in a metropolitan region broke down in a situation of crisis management. Such lifelines as transport systems, utility networks, public services and emergency assistance were unable to respond to competing demands in the face of unpredictable disruptions and obstructions.

Greater Cairo, which grew to spread over three governorates, was divided into five governorates in April 2010. It has now been re-aggregated into the three former governorates. There are proposals calling for the establishment of one jurisdictional entity covering the mega-city under a new appointed governor.

At this time, the final systems of governance that will emerge in the different countries after the upheaval are unclear. The outcome will undoubtedly be shaped by political realities. Different views of efficiency and effectiveness in urban planning and management are being discussed. Divergent positions on how to provide safety and security to all citizens while curbing arbitrariness and corruption in decision making and the exercise of police powers have been advanced.

Ongoing debates in the media reflect a mix of idealism and pragmatism with a dose of opportunistic posturing. They do, however, herald a welcome healthy effort at initiating a participatory approach leading to a better understanding of the challenges and complexity of urban governance before embarking on shaping its future structure.

From a social viewpoint, their concern with providing services to the poor is laudable and the model they offer is efficient although its sustainability at the city scale is in question. It is doubtful whether such groups, with their hierarchical structures, can be adapted to perform in the secular and inclusive organization of a modern day city. From the economic viewpoint, retrograde convictions have little to

contribute to fostering the productivity and competitiveness of cities as engines of growth in the 21st century in countries where industrial diversification, tourism and services are drivers of economic development.

The 2011 events in the Mashreq and Maghreb regions were urban manifestations. In Tunisia and Egypt, the protesters who demanded political reforms and change were concentrated in the large cities. The presence of the best and largest universities and other educational, research and cultural institutions in these cities accounted for the bulk of the educated, ICT and computer-literate young people who coordinated and led protests. The significant participation of women in these protests was a striking new development for many countries.

While ministries and other administrative functions clustered in the capital, businesses and industries were spread among the larger cities, which also housed the vast majority of dwellers in underserviced informal settlements. This combination generated the crowds of frustrated blue and white-collar workers whose wages were now insufficient to provide decent living conditions for their families in the face of rising food prices and the escalating land prices and construction costs that progressively squeezed them out of both the formal and informal housing markets.

In Egypt, they clamoured for higher wages, food subsidies, affordable housing and stable employment for themselves and their children. Those among them who echoed the calls for political reforms reflected their conviction that acquisitive and corrupt individuals among those who held power abused the system to amass wealth and caused the hardships that the poorer segments of the population were enduring.

In the secondary cities and some rapidly urbanizing settlements around the larger cities, demonstrations were sparked by local incidents and sustained by long-standing divisive issues, deeply-engrained ethnic and religious cleavages and a general feeling of social inequity and exclusion as happened in Syria and Bahrain, or tribal rivalries as in Libya and Yemen.

In the sprawling 20 million inhabitant mega urban region centering around Cairo, the breakdown of law and order in the last days of January allowed criminals and thugs to loot stores and threaten and rob peaceful citizens. Alarmed employees fearing the loss of their jobs banded together with citizens seeking to protect their families and their properties to defend their businesses and their houses and drive away thugs and demonstrators.

In countries where ethnic and religious cleavages or tribal rivalries are deeply entrenched, they are reflected in the physical pattern of the urban agglomeration. Incidents triggered clashes among city neighbourhoods and between city districts and the security forces as happened in Lebanon, Syria and Yemen.

While the military and security forces were dealing with civil unrest, unscrupulous persons took this opportunity to grab publicly-owned land and to construct or expand buildings without a permit in violation of existing regulations. Literally hundreds of thousands of informally-built structures were started and thousands of hectares of agricultural land lost to urbanization in Egypt, Syria and Tunisia, a phenomenon that had already been experienced in Lebanon during the civil war and its aftermath.

The vast expansion of informal areas is a challenge that national and local authorities will have to deal with as law and order are restored. In Libya, the civil war has caused massive damage in the urban centres.

Within three to four months of the uprisings, people in Tunisia and Egypt started to understand that regime change alone would not solve their problems. The sharp economic downturn created by the civil unrest needed to be reversed. In the cities, the number of unemployed swelled because of layoffs, particularly in the tourism industry, and migrant workers returning from war zones and unstable areas in Libya. Day labourers were suffering severe hardships through the lack of gainful jobs.

In Tunisia and Egypt, popular opposition to the continued demonstrations by hard-core protesters and groups with particular agendas is mounting and the leadership that is running the countries and the new cabinets that took office in the aftermath of the upheaval are facing unprecedented economic and social challenges that must be addressed.

As stability is restored throughout the Arab world, new pragmatic development strategies, bold urban programmes and local initiatives are needed for the region to achieve its economic, social and cultural potential. Urban planning and management at the national and local levels will be resumed in order to address the multi-sectoral impediments that constrain the functional efficiency of large- and middle-sized cities.

These nodes drive the creation of jobs that can meet the expectations of the labour force and the aspirations of youth. Economic development must be reflected in a reduction of the divergence in the rate of income growth among the different segments of the population.

The sustainability and liveability of cities in the different Arab countries will require a substantive improvement in the living conditions of the urban poor. Communities must be engaged in a meaningful discussion of sustainability and residents must fully participate in defining the future of their neighbourhoods.

The public and private sectors and civil society must partner in shaping the Arab cities of the 21st century. In this context, a thorough review of the state of the Arab cities today is relevant and timely.

TABLE 2: ARAB REGIONS' URBANIZATION RATES, URBAN AND TOTAL POPULATION AND GROWTH RATES

	Percentage Urban (2010)	Annual Urban Growth Rate (2005-2010)	Population (thousands)		Average Annual Total Population Growth Rate (2005-2010)
			Urban (2010)	Total (2010)	
Mashreq	55.6%	2.5%	82,095	147,657	2.2%
Maghreb	63.7%	2.4%	55,886	87,715	1.4%
GCC	75.4%	3.0%	32,781	43,500	5.4%
Southern Tier	37.4%	4.6%	29,406	78,559	2.8%
Arab Countries	56.0%	2.8%	200,168	357,431	2.5%

Source: United Nations, Department of Economic and Social Affairs, Population Division (2010). *World Urbanization Prospects: The 2009 Revision. CD-ROM Edition - Data in digital form (POP/DB/WUP/Rev.2009)*.

Note: because WUP urban population data is quinquennial, the rates of average annual urbanization and total population growth rate are presented here as $(2010 \text{ data} - 2005 \text{ data}) / (2005 \text{ data}) / 5$; this is less accurate than an average of year on year rates of change.

TABLE 3: ARAB REGIONS' URBAN POPULATION TREND (1970-2050) IN THOUSANDS

	1970	1990	2010	2030	2050
Mashreq	26,467	50,235	82,095	127,631	181,075
Maghreb	14,095	34,027	55,886	79,907	97,553
GCC	4,112	18,112	32,781	47,613	59,468
Southern Tier	4,297	12,291	29,406	60,273	100,511
Arab Countries	48,971	114,665	200,168	315,424	438,607

Source: WUP 2009.

TABLE 4: ARAB REGIONS' URBANIZATION TREND 1970-2050

	1970	1990	2010	2030	2050
Mashreq	46.0%	52.9%	55.6%	60.3%	67.1%
Maghreb	37.8%	52.7%	63.7%	74.3%	82.5%
GCC	52.7%	79.2%	75.4%	78.0%	82.2%
Southern Tier	17.2%	26.7%	37.4%	47.2%	54.1%
Arab Countries	38.4%	50.2%	56.0%	62.1%	67.9%

Source: WUP 2009.

SIZE OF ARAB CITIES

	>10 million	5-10m	1-5m	0.5-1m	<0.5 million
Number	1	2	22	35	Unknown
Population (2010 and 2005) (thousands)	12,503	11,076	52,819	24,179	101,491
% of Urban Population	6.2%	5.5%	26.4%	12.1%	50.7%

Source: UN-Habitat Global Urban Observatory.

TABLE 6: SLUM PREVALENCE IN ARAB COUNTRIES FOR WHICH DATA IS AVAILABLE

Country	Urban Population 2010 (in thousands)	Slum Proportion 2005	Slum Population 2007 (in thousands)
1 Sudan	18,646	22.0	4,102
2 Somalia	3,553	73.5	2,120
3 Comoros	254	68.9	162
4 Yemen	7,784	67.2	4,102 (2005)
5 Lebanon	3,600	53.0	1,908 (2005)
6 Iraq	20,375	52.8	10,199
7 Saudi Arabia	21,681	18.0	3,442
8 Egypt	34,041	17.1	5,505
9 Jordan	5,067	15.0	686 (2005)
10 Morocco	18,374	13.1	2,276
11 Syria	11,754	10.5	1,055 (2005)

Source: UN-Habitat, Global Urban Observatory and Country Programme Document 2008-2009: Lebanon, Note: Data on slum proportion was not available for Algeria, Bahrain, Djibouti, Kuwait, Libya, Mauritania, Oman, OPT, Qatar, Tunisia and the UAE.

TABLE 7: UNEMPLOYMENT RATES IN ARAB COUNTRIES

Region	Country	Total Unemployment Rate	Data Source and Year
Mashreq	Egypt	8.7	Labour force survey 2008
	Iraq	15.3	Labour force survey 2008
	Lebanon	9.0	Household survey 2007
	Syrian Arab Republic	10.9	Labour force survey 2008
	West Bank and Gaza	25.7	Labour force survey 2008
Maghreb	Algeria	11.3	Labour force survey 2008
	Morocco	9.4	Labour force survey 2008
	Tunisia	12.4	Labour force survey 2008
GCC	Kuwait	1.3	Administrative report 2006
	Qatar	0.3	Labour force survey 2008
	Saudi Arabia	5.1	Labour force survey 2008
Southern Tier	UAE	4.0	Labour force survey 2008
	Djibouti	59.5	Official estimate 2002
	Yemen	15.0	Official estimates 2008

Source: ILO LABORSTA Database.

TABLE 8: YOUTH UNEMPLOYMENT AS A PERCENTAGE OF TOTAL UNEMPLOYMENT

Region	Country	Youth Unemployment as a Percentage of Total Unemployment	Data Source and Year
Mashreq	Egypt	63%	2007 Labour Force Survey
	Lebanon	45%	2007 HH survey
	Syria	57%	2007 Labour Force Survey
	West Bank and Gaza	37%	2008 Labour Force Survey
Maghreb	Algeria	45%	2008 Labour Force Survey
	Morocco	82%	2008 Labour Force Survey
	Tunisia	42%	2005 Labour Force Survey
GCC	Bahrain	22%	2007 Employment Office Records
	Kuwait	31%	2008 Administrative reports
	Qatar	52%	2008 Labour Force Survey
	Saudi Arabia	52%	2008 Labour Force Survey
	UAE	33%	2005 Population Census

Source: ILO LABORSTA Database.

TABLE 9: POPULATION RESIDING IN AGGLOMERATION AS PERCENTAGE OF TOTAL POPULATION

Urban Agglomeration	2005	2010	2015	2020	2025
Beirut	43.5%	45.5%	45.9%	45.6%	45.1%
Dubai	30.9%	33.3%	34.1%	34.2%	34.0%
Baghdad	18.9%	18.7%	18.4%	18.2%	18.0%
Riyadh	17.8%	18.5%	18.6%	18.4%	18.1%
Amman	18.7%	17.1%	17.1%	16.9%	16.9%
Tripoli	17.9%	16.9%	16.7%	16.7%	16.7%
Mogadishu	16.9%	16.0%	16.7%	17.6%	18.6%
Aleppo	13.6%	13.7%	14.3%	14.6%	14.8%
Cairo	13.7%	13.0%	12.7%	12.7%	12.9%
Jeddah	12.1%	12.3%	12.3%	12.2%	12.1%
Khartoum	11.7%	12.0%	12.7%	13.4%	14.0%
Damascus	12.0%	11.5%	11.9%	12.1%	12.4%
Casablanca	10.3%	10.1%	10.3%	10.5%	10.7%
Sana'a	8.6%	9.7%	10.5%	11.3%	12.1%
Algiers	7.6%	7.9%	8.1%	8.3%	8.4%
Homs	5.6%	5.9%	6.3%	6.4%	6.6%
Mecca	5.6%	5.7%	5.7%	5.7%	5.6%
Rabat	5.4%	5.6%	5.7%	5.9%	6.0%
Alexandria	5.2%	5.2%	5.2%	5.3%	5.4%
Mosul	4.4%	4.6%	4.7%	4.7%	4.7%

Source: Population Division of UN DESA, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision.

TABLE 10: GROWTH OF LARGEST CITIES

Urban Area	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
Cairo	2,494	3,029	3,680	4,738	5,585	6,450	7,349	8,328	9,061	9,707	10,170	10,565	11,001	11,663	12,540	13,531
Baghdad	579	719	1,019	1,614	2,070	2,620	3,145	3,607	4,092	4,598	5,200	5,327	5,891	6,614	7,321	8,043
Khartoum	183	252	347	477	657	886	1,164	1,611	2,360	3,242	3,949	4,518	5,172	6,046	7,005	7,953
Riyadh	111	131	156	227	408	710	1,055	1,566	2,325	3,035	3,567	4,193	4,848	5,373	5,809	6,196
Alexandria	1,037	1,249	1,504	1,752	1,987	2,241	2,519	2,826	3,063	3,277	3,592	3,973	4,387	4,791	5,201	5,648
Casablanca	625	778	967	1,206	1,505	1,793	2,109	2,406	2,682	2,951	3,043	3,138	3,284	3,537	3,816	4,065
Jeddah	119	129	141	197	348	594	851	1,217	1,742	2,200	2,509	2,860	3,234	3,569	3,868	4,138
Aleppo	319	392	480	588	721	879	1,070	1,292	1,554	1,864	2,204	2,605	3,087	3,510	3,864	4,244
Algiers	516	623	872	1,081	1,281	1,507	1,621	1,672	1,815	2,023	2,254	2,512	2,800	3,099	3,371	3,595
Damascus	367	461	579	727	914	1,122	1,376	1,546	1,691	1,854	2,063	2,294	2,597	2,918	3,213	3,534
Sana'a	46	58	72	89	111	141	238	402	653	1,034	1,365	1,801	2,342	2,934	3,585	4,296
Beirut	322	425	561	733	923	1,500	1,623	1,585	1,293	1,268	1,487	1,777	1,937	2,033	2,090	2,135
Rabat	145	184	233	339	494	641	808	986	1,174	1,379	1,507	1,647	1,802	1,973	2,139	2,288
Dubai	20	28	39	50	80	167	254	345	473	650	906	1,264	1,567	1,772	1,934	2,076
Mogadishu	69	73	94	146	272	445	551	747	1,035	1,147	1,201	1,415	1,500	1,795	2,156	2,588
Mecca	148	152	157	190	272	383	501	655	856	1,033	1,168	1,319	1,484	1,642	1,789	1,924
Mosul	145	168	205	261	322	397	489	603	736	889	1,056	1,236	1,447	1,676	1,885	2,092
Horns	101	126	159	200	251	312	387	470	565	684	856	1,072	1,328	1,536	1,702	1,881
Tripoli	106	136	174	235	398	580	662	756	862	984	1,022	1,059	1,108	1,192	1,286	1,364
Amman	90	140	218	299	388	500	636	736	851	973	1,007	1,042	1,105	1,186	1,272	1,364

Source: United Nations, Department of Economic and Social Affairs, Population Division (2010). World Urbanization Prospects: The 2009 Revision. CD-ROM Edition - Data in digital form (POPDB/WUP/Rev.2009).

TABLE 11: AVERAGE ANNUAL GROWTH RATES FOR THE LARGEST ARAB CITIES

	1950 -1955	1955 -1960	1960 -1965	1965 -1970	1970 -1975	1975 -1980	1980 -1985	1985 -1990	1990 -1995	1995 -2000	2000 -2005	2005 -2010	2010 -2015	2015 -2020	2020 -2025
Sana'a	4.5	4.5	4.3	4.3	4.8	10.5	10.5	9.7	9.2	5.6	5.5	5.3	4.5	4.0	3.6
Mogadishu	1.1	5.1	8.8	12.5	9.8	4.3	6.1	6.5	2.0	0.9	3.3	1.2	3.6	3.7	3.7
Sulaimaniya	3.7	5.6	7.3	6.6	6.5	6.5	6.5	5.0	3.7	3.7	3.7	3.7	3.3	2.5	2.2
Hama	2.2	2.2	2.2	2.2	2.3	2.3	2.5	2.5	3.1	6.3	6.3	5.7	3.3	2.1	2.1
Khartoum	6.4	6.4	6.4	6.4	6.0	5.5	6.5	7.6	6.4	4.0	2.7	2.7	3.1	3.0	2.5
Mosul	3.0	4.0	4.8	4.2	4.2	4.2	4.2	4.0	3.8	3.4	3.2	3.2	2.9	2.4	2.1
Homs	4.6	4.6	4.6	4.6	4.4	4.4	3.9	3.7	3.8	4.5	4.5	4.3	2.9	2.1	2.0
Erbil	3.9	7.4	10.3	7.8	7.6	7.6	7.6	5.5	3.7	3.2	2.9	2.9	2.7	2.3	2.1
Sharjah	0.5	0.5	0.5	6.4	13.3	15.3	7.4	6.2	6.1	7.1	7.2	4.8	2.7	1.9	1.5
Aleppo	4.1	4.1	4.1	4.1	4.0	4.0	3.8	3.7	3.6	3.4	3.4	3.4	2.6	1.9	1.9
Dubai	6.7	6.7	5.0	9.4	14.6	8.4	6.1	6.3	6.4	6.6	6.7	4.3	2.5	1.8	1.4
Dammam	5.5	5.6	7.7	9.9	9.5	7.4	7.4	7.4	5.3	3.6	3.6	3.3	2.3	1.8	1.5
Damascus	4.6	4.6	4.6	4.6	4.1	4.1	2.3	1.8	1.9	2.1	2.1	2.5	2.3	1.9	1.9
Baghdad	4.3	7.0	9.2	5.0	4.7	3.7	2.7	2.5	2.3	2.5	0.5	2.0	2.3	2.0	1.9
Medina	1.3	1.3	5.8	10.2	9.6	6.2	6.2	6.2	4.7	3.5	3.5	3.1	2.3	1.8	1.5
Tanger	4.0	3.1	2.5	2.5	4.1	4.6	4.2	3.9	3.7	3.0	3.0	2.8	2.2	1.8	1.5
Agadir	4.5	4.5	11.7	11.7	12.3	12.5	9.0	6.3	5.7	2.6	2.6	2.4	2.1	1.8	1.5
Riyadh	3.4	3.4	7.5	11.7	11.1	7.9	7.9	7.9	5.3	3.2	3.2	2.9	2.1	1.6	1.3
Basra	4.8	6.5	7.9	1.6	1.2	1.2	1.2	3.7	5.7	3.7	2.0	2.0	2.1	2.2	2.1
Algiers	3.8	6.7	4.3	3.4	3.2	1.5	0.6	1.6	2.2	2.2	2.2	2.2	2.0	1.7	1.3
Mecca	0.6	0.6	3.9	7.2	6.9	5.4	5.4	5.4	3.8	2.5	2.5	2.4	2.0	1.7	1.5
Jeddah	1.8	1.8	6.6	11.4	10.7	7.2	7.2	7.2	4.7	2.6	2.6	2.5	2.0	1.6	1.4
Marrakech	1.5	1.5	2.8	2.8	2.6	2.5	3.1	3.5	3.3	2.1	2.1	2.1	2.0	1.7	1.4
Fes	5.3	5.3	2.8	2.8	3.2	3.3	3.1	2.9	2.7	2.0	2.0	2.0	1.9	1.7	1.4
Rabat	4.7	4.7	7.5	7.5	5.2	4.6	4.0	3.5	3.2	1.8	1.8	1.8	1.8	1.6	1.4
Alexandria	3.7	3.7	3.1	2.5	2.4	2.3	2.3	1.6	1.4	1.8	2.0	2.0	1.8	1.6	1.7
Casablanca	4.4	4.4	4.4	4.4	3.5	3.3	2.6	2.2	1.9	0.6	0.6	0.9	1.5	1.5	1.3
Tripoli	5.0	5.0	6.0	10.6	7.5	2.6	2.6	2.6	2.6	0.8	0.7	0.9	1.5	1.5	1.2
Oran	1.3	1.3	1.3	3.4	3.8	2.8	2.4	1.4	0.9	0.9	0.9	0.9	1.4	1.7	1.5
Amman	8.8	8.9	6.3	5.2	5.1	4.8	2.9	2.9	2.7	0.7	0.7	1.2	1.4	1.4	1.4
Tunis	1.2	1.3	1.3	1.7	1.8	0.9	1.0	1.2	1.2	0.8	0.6	0.9	1.2	1.2	1.0
Cairo	3.9	3.9	5.1	3.3	2.9	2.6	2.5	1.7	1.4	0.9	0.8	0.8	1.2	1.5	1.5
Beirut	5.5	5.5	5.4	4.6	9.7	1.6	-0.5	-4.1	-0.4	3.2	3.6	1.7	1.0	0.6	0.4

Source: Population Division of UN DESA, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision and World Urbanization Prospects

TABLE 12: 2008 ACCESS TO IMPROVED WATER AND SANITATION (% OF HOUSEHOLDS)

	Improved Water		Improved Sanitation	
	Urban Access	Total Access	Urban Access	Total Access
Mashreq	96	82	91	87
Maghreb	91	82	91	81
GCC	97	..	100	..
Southern Tier	67	56	64	38
Arab Countries	91	75	88	68

Source: WHO UNICEF Joint Monitoring Programme.

TABLE 13: POPULATION RESIDING IN AGGLOMERATION AS PERCENTAGE OF URBAN POPULATION

Urban Agglomeration	2005	2010	2015	2020	2025
Beirut	50.3%	52.2%	52.3%	51.4%	50.5%
Mogadishu	48.1%	42.8%	41.7%	40.9%	40.1%
Dubai	37.6%	39.6%	39.9%	39.4%	38.7%
Sana'a	29.6%	30.4%	30.2%	29.7%	29.0%
Cairo	31.8%	30.0%	28.6%	27.7%	26.8%
Khartoum	32.0%	29.9%	28.9%	28.2%	27.5%
Baghdad	28.2%	28.3%	27.9%	27.3%	26.6%
Aleppo	25.3%	24.6%	24.8%	24.2%	23.7%
Riyadh	21.9%	22.5%	22.3%	21.8%	21.3%
Tripoli	23.2%	21.7%	21.1%	20.8%	20.5%
Amman	23.9%	21.7%	21.6%	21.2%	20.9%
Damascus	22.3%	20.7%	20.6%	20.1%	19.7%
Casablanca	18.6%	17.4%	16.8%	16.5%	16.1%
Jeddah	15.0%	15.0%	14.8%	14.5%	14.2%
Alexandria	12.0%	12.0%	11.8%	11.5%	11.2%
Algiers	12.1%	11.9%	11.7%	12.0%	11.3%
Homs	10.4%	10.6%	10.8%	10.7%	10.5%
Rabat	9.8%	9.6%	9.4%	9.2%	9.1%
Mecca	6.9%	6.9%	6.8%	6.7%	6.6%
Mosul	6.5%	6.9%	7.1%	7.0%	6.9%

Source: Population Division of UN DESA, World Population Prospects: The 2008 Revision and World Urbanization Prospects: The 2009 Revision

ENDNOTES

- ¹ Unless otherwise noted, Sudan refers to the formerly united country throughout this report due to the lack of data at the time of writing on a distinct Sudan and South Sudan.
- ² United Nations Development Programme, Arab States, Poverty Reduction.
- ³ World Bank Development Indicators.
- ⁴ UNDP. "The Third Arab Report on the Millennium Development Goals 2010 and the Impact of the Global Economic Crises." New York: United Nations 2009. Human Development Report 2009 Statistics on Conflict-Induced Movement.
- ⁵ Arab Human Development Report, p. 9.
- ⁶ World Bank Development Indicators Database, Arab Fund for Economic and Social Development, the Arab Monetary Fund, the Organization of Arab Petroleum Exporting Countries and the Secretariat of the Arab League. "Unified Arab Economic Report." 2009.
- ⁷ United Nations Development Programme. Regional Bureau for Arab States United Arab Emirates. Mohammed Bin Rashid Al Maktoum Foundation, "Arab Knowledge Report 2009: Towards Productive Intercommunication for Knowledge", Abu Dhabi, 2009, 312 pp. (p. 10)
- ⁸ UN COMTRADE Database 2009, as cited in Younes, H. "The Contribution of Trade to Growth of the Arab Countries." Paper presented at the Conference on Empirical Investigation in Trade and Investment in Tokyo, Japan on March 11-13, 2010.
- ⁹ Tosun, M.S. and S. Yilmaz. "Centralization, Decentralization, and Conflict in the Middle East and North Africa." Washington, D.C.: World Bank, 2008.
- ¹⁰ Tosun, 2008.
- ¹¹ Yara Shalem (god of twilight) was the name given by the Canaanites after their god.
- ¹² Michalopoulos Andre, "Influence of Hellenism in the Middle East" in *Background of the Middle East* (editor: Ernest Jackh), N.Y., Cornell University Press, (1952), p. 47
- ¹³ Butzer Karl W., "Other Perspectives on Urbanism: Beyond the Disciplinary Boundaries" in (J.Marcus and J.A. Sabloff, editors), *The Ancient City, New Perspectives on Urbanism in the Old and New World*, New Mexico, School for Advanced Research Press, (2008), p. 82
- ¹⁴ Yat Tin Lee Reuben, *Romanization in Palestine*, Oxford, BAR International Series 1180, (2003), p. 36-37
- ¹⁵ Dan Bahat believes that there was a colonnaded street near the west wall of the Temple Mount in Jerusalem. "The Western Wall Tunnels." In H. Geva (ed.) *Ancient Jerusalem Revealed*, Jerusalem, (1994), p. 188. Also quoted by Reuben Yat Tin Lee in *Op.cit.* p. 36
- ¹⁶ Famous intellectuals like Taha Hussein (1889-1973), an influential writer and leader of the modernist movement in the Arab world, studied at al-Azhar University.
- ¹⁷ Costello V.F., *Urbanization in the Middle East*, London, Cambridge University Press, 1977, p.22-23
- ¹⁸ The traditional *suq* – covered or uncovered – concentrates small shops along one or several streets which specialize in the same product but each shop offers the shopper different qualities and prizes. Often in *suqs* located in the historic centres, the retail salesman is also a craftsman. The principle of specialization is expressed in a division of labour and creates a hierarchy of professions and products from the most luxurious (jewelry) to the most basic (food).
- ¹⁹ Noorddin Hoshiar, "Globalization and the Search for Modern Local Architecture: Learning from Baghdad" in *Planning Middle Eastern Cities* (Yasser Elsheshtawy, editor), London, New York, Routledge, 2004), p. 65
- ²⁰ Most urban transformations took place after 1927 when oil was discovered in Kirkuk. The increase in oil revenues allowed the government to replace the old buildings with new ones and to develop plans for Baghdad.
- ²¹ Nooraddin Hoshiar, "Globalization and the Search for Modern Local Architecture: Learning from Baghdad" *Op.cit.*, p. 64
- ²² Gibson McGuire, "Legal and Illegal Acquisition of Antiquities in Iraq, 19th century to 2003" in *Cultural Heritage Issues: The Legacy of conquest, Colonization and Commerce* (edited by J.A.R. Nafziger and Ann M. Nicgorski), Martinus Nijhoff Publishers (2009), p. 185
- ²³ Looting on a scale that involves virtual destruction of whole cities is still occurring in Southern Iraq. See: *Cultural Heritage Issues: The Legacy of Conquest, Colonization and Commerce, Op.cit.*, p. 197
- ²⁴ World Bank and the Agence Française de Développement. "Managing the Social Dimensions of Climate Change in MENA: Climate Change and Human Mobility Concept Note" developed for the "First Workshop on Climate Induced Migration and Displacement in MENA" on June 15-16, 2010 at Marseille, France.
- ²⁵ World Bank. "Making the Most of Water Scarcity: Accountability for Better Water Management Results in the Middle East and North Africa." Washington, D.C.: World Bank, 2007.
- ²⁶ World Bank and the Agence Française de Développement, 2010.
- ²⁷ UN FAO Food Price Index, www.fao.org/worldfoodsituation/wfs-home/foodpricesindex/en



▲ Temple of Hercules, Amman, Jordan. Jordan is one of the most urbanized countries in the world with 78 per cent of the population living in urban areas. ©Ahmad A Atwah/Shutterstock

Total and Urban Population Growth

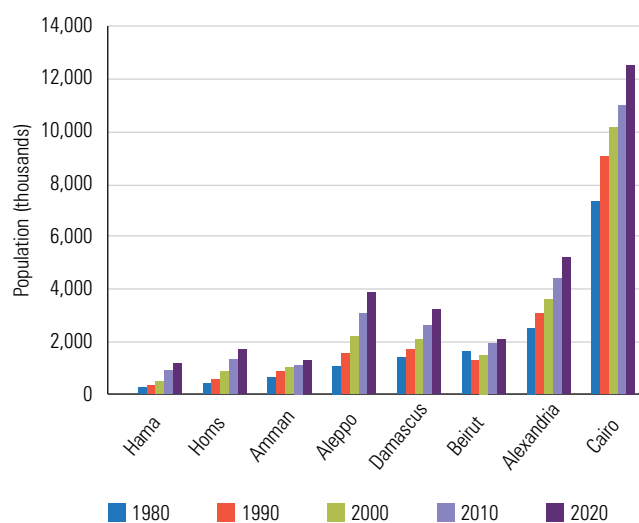
The countries of the Mashreq – Egypt, Iraq, Jordan, Lebanon, the Occupied Palestinian Territories (OPT) and Syria - have a total population of approximately 146 million people. Egypt is the largest with 83 million people and the OPT is the smallest, with just over 1.7 million.¹

Recently, with the exception of the OPT, the Mashreq countries have been growing moderately at annual rates of 1-3 per cent. Population growth rates are now expected to decline further to between 0.5 and 2.3 per cent by 2030 with most expanding at an average annual rate only 1 per cent.²

The sub-region's rates of urbanization range between 43 per cent in Egypt and 86 per cent in Lebanon.³ By 2030, it is estimated that 90 per cent of Lebanon's population and 70 per cent of Iraq's total population will live in urban areas while in Jordan and the OPT approximately 80 per cent of the population will reside in cities.⁴

While the rate of growth of the sub-region's urban areas has slowed in recent years and is expected to decline further, migration will continue to be a major vector of urban growth. As a result, it will be necessary to develop policies and programmes to ensure the orderly expansion of urban areas and curb informal development on valuable arable land. Ensuring a supply of affordable serviced land will be critical to the management of urban growth.⁵

FIGURE 7: POPULATION GROWTH IN LARGEST CITIES IN THOUSANDS (POPULATION OVER 750,000)



Source: United Nations, Department of Economic and Social Affairs, Population Division (2010). *World Urbanization Prospects: The 2009 Revision*.

Urban Concentrations and Growth

With few exceptions, the sub-region's large cities (those with an agglomeration population of 750,000 or greater) have been expanding slowly at an annual rate of 1-2 per cent in the past decade. Cairo, the largest city in the Arab world, has been expanding at less than 1 per cent per year since 1995, followed by Amman at around 1 per cent.⁶ From 1995 to 2005, Baghdad (the Arab world's second largest city), Mosul and Basra grew by 2.5, 3.3 and 3.6 per cent each year respectively.⁷ Hama, Syria, has been the fastest growing city with annual rates between 5 and 6.5 per cent over the past decade. Beirut is the only large city to experience a negative growth rate from 1980 to 1995 as a result of Lebanon's 16-year civil war, which devastated parts of the country, including Beirut.

In Egypt, most cities are concentrated either along the Nile River Valley or in the Delta Region. Almost all have been growing relatively slowly at 1-2 per cent and are expected to maintain that pace. Only Alexandria, Luxor, Qina and Al'Arish have been expanding at or above 2 per cent.⁸ As part of its Cairo 2050 Plan, the government is channelling growth to satellite towns in the desert east and west of the Nile Valley to limit growth on the urban periphery and mitigate the loss of valuable agricultural land.

Jordan is one of the more urbanized countries in the world with 78 per cent of the population living in urban areas and 71.5 per cent of the total population concentrated in only three urban areas: Amman, Irbid and Zarqa.⁹ Much of this urbanization can be attributed to the relocation of refugees from the OPT and Iraq as well as to migration from rural areas generated by a period of rapid industrialization in the late 1970s and early 1980s.¹⁰ Most of the urban expansion of the major cities has been occurring as suburbanization, with the fastest growth occurring in the immediate urban periphery.¹¹

The Jordanian cities, Khuraybat as-Suq, Khalda wa-Tila al-Ali and al-Quwaysimah have been growing the fastest with average annual rates between 7 and 15 per cent. Salt has also been expanding rapidly at 9.9 per cent each year, nearly doubling the population over a ten-year period.¹²

Most Jordanian cities including Amman, Salt, Irbid and Aqaba have developed plans to guide growth and ensure environmental sustainability. In Amman, the plan includes a corridor intensification strategy, a downtown revitalization strategy, the outlying settlements policy and the industrial lands policy. In addition to these city strategies, there are also regional development strategies for Shafa, Balqa and Zarqa which emphasize the important role of urban areas.

In Iraq, it is estimated that some 70 per cent of the population lives in urban areas. Baghdad has had a relatively steady 2 per cent growth rate since the 1970s. Accurate growth data is not

FIGURE 8: CAIRO 2050 PLAN

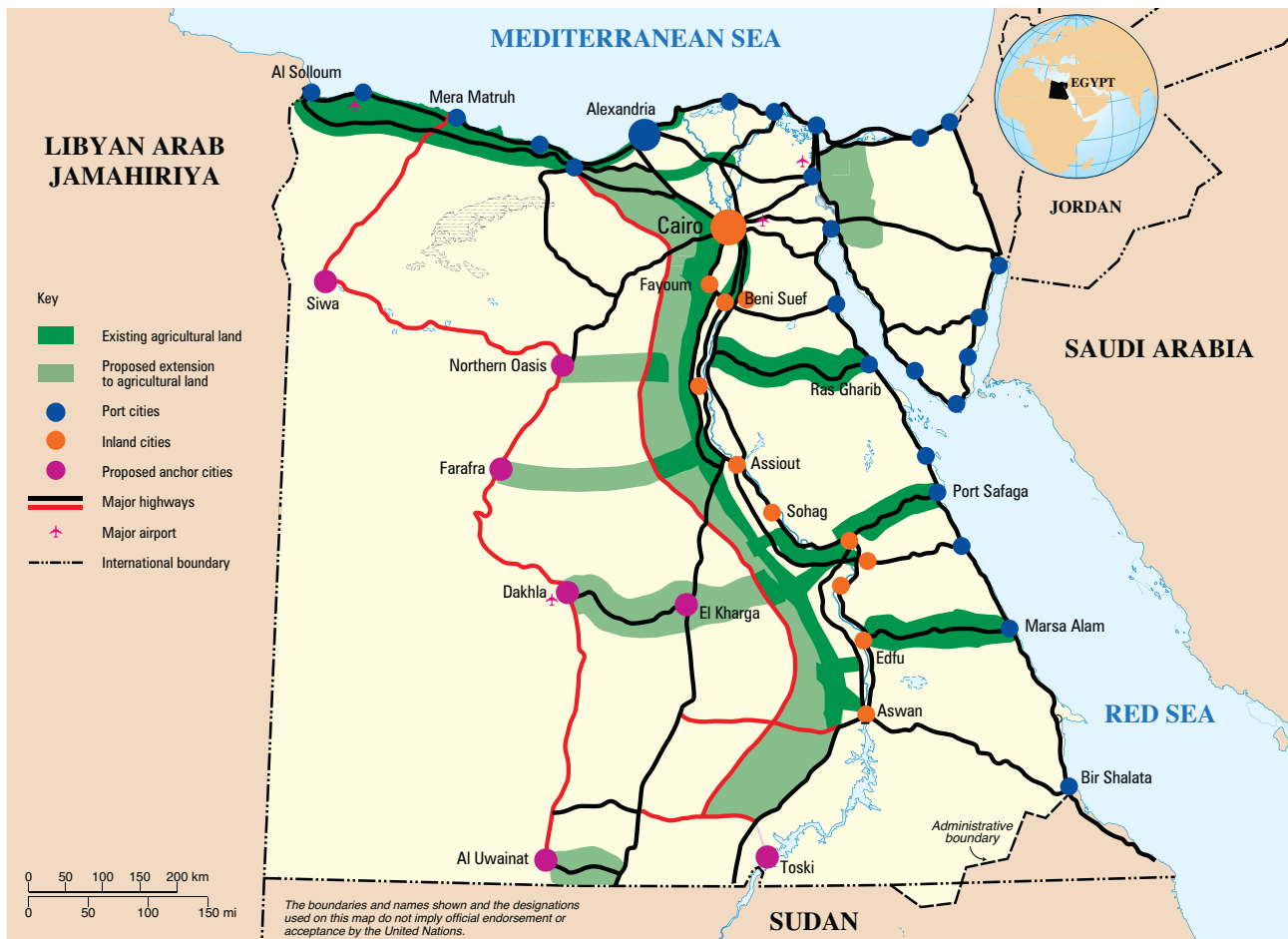
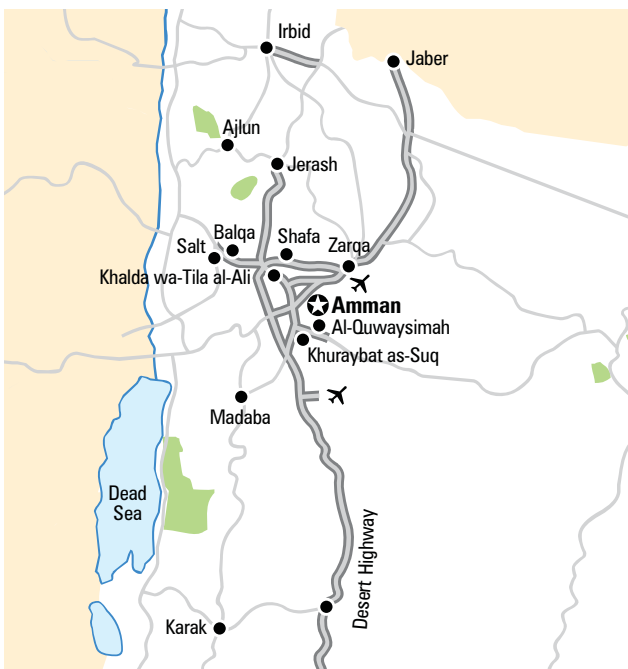


FIGURE 9: JORDANIAN CITIES



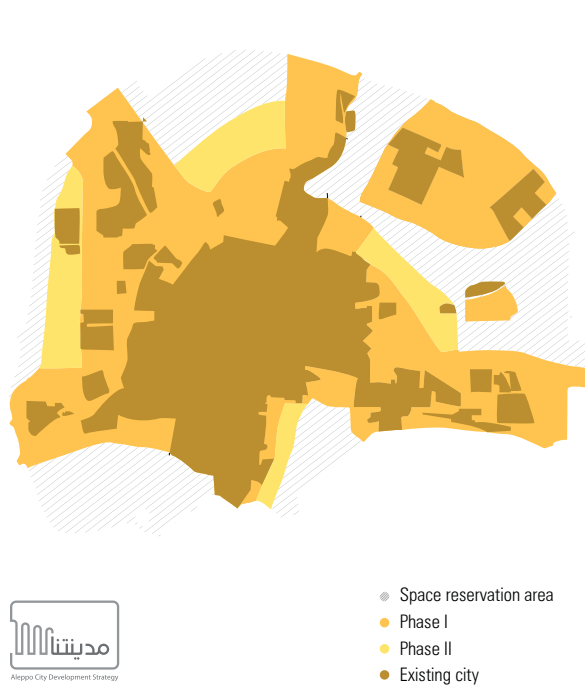
available on Iraq's other major cities - Basra, Erbil and Mosul. Much of Iraq's population has been in flux since the onset of war in 2003, after which internal conflict prompted many to migrate from the countryside to cities as well as moving within and among cities. There are estimates that ten per cent of Baghdad's population left the city or moved within the city since 2006¹³.

Most of Syria's cities are located in rain-fed agricultural regions, including the basin of the Euphrates River, or along interior trade routes. Recently, there has been some population spread to smaller cities as a result of migration caused by environmental degradation in some rural areas. The two largest cities, Damascus and Aleppo, account for nearly 37 per cent of the urban population and 20 per cent of the total population. Cities ranging in size from 300,000 to 1 million – including Homs, Lattakia and Hamas – account for 14 per cent of the urban population.

The highest rate of urbanization is in intermediate size cities (100,000 to 300,000) located on major transportation corridors; they are home to 15 per cent of the urban population and 8 per cent of the total population and include Deir-ez-Zor, Ar-Raqqah, al-Hasakeh, Tartous, al-Yarmuk, al-Sayyia Zaynab, Jarmana, Duma and al-Qamishli.

FIGURE 10: ALEPPO VISION PLAN

Phasing & Space Reservation



Source: <http://madinatuna.com/urbanform/vision#vision>

Open Space Network & Proposed Zones for New Centres



The fastest-growing cities are located along the major transportation corridors connecting Syria with Iraq, Jordan or Turkey. For example, the city of Ar-Raqqah grew from 165,000 in 1994 to 344,000 in 2004, at an annual rate of 7.6 per cent.¹⁴ It is located in the corridor to Iraq near the Euphrates River. Deir-ez-Zor, also situated in this corridor, grew at a rate of nearly 5.5 per cent per year from 1994 to 2004. Further growth is expected in the next 15 years along these corridors, particularly in the provinces of Dar'a, Idleb, Ar-Raqqah, Deir-ez-Zor, Hasakeh and Aleppo.¹⁵ In Homs and other urban areas, expansion has occurred as a result of international migration from Iraq, Lebanon and Palestine and internal displacement from conflict.¹⁶

The 2006-2010 Five-Year Plan in Syria proposed new planning initiatives to balance development and manage urban growth. It focused on a longer-term vision for Syria that decreased existing geographical imbalances of population and economic activities by linking regional development strategies with the national development plan. The plan emphasises decentralization with integrated planning at all levels of government and an institutional planning framework. It also includes staff capacity building programmes, partnerships with non-governmental organizations and the private sector.

The impacts of the 2011/12 violence could not be evaluated at the time of writing of this document.

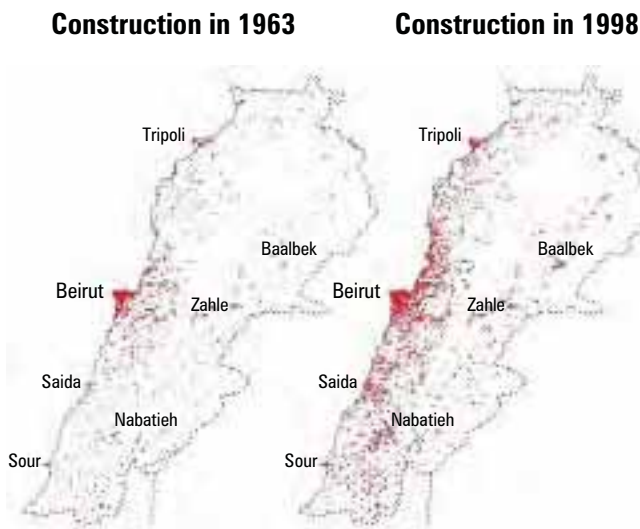
A comprehensive regional strategy is being developed as part of the Municipal Administration Modernisation (MAM) project financed by the European Union. MAM is advocating for more balanced growth between the west and the east and urban and rural areas. It highlights cross-border development, investments in corridors and an urban hierarchy of regional centres.¹⁷ As part of the process, Aleppo has embarked upon a city development strategy to lessen pressure on the central area by creating five self-sufficient and accessible sub-centres.¹⁸

Much of Lebanon's population (45.5 per cent in 2010¹⁹) is concentrated in the Greater Beirut Region. Urban sprawl has spread steadily in the past few decades along the coast and on the outskirts of Beirut and Tripoli.²⁰ By 2030, it is estimated that the total urbanised area will increase by approximately 30,000 hectares. In Greater Beirut, most of the population expansion will occur outside the 2,000 hectare-core in a suburban outer ring that will grow from 8,000 to 12,500 hectares. Peripheral growth will also occur in other larger urban agglomerations, including Nabatieh, Saida, Tyre, Baalbek and Jbail (600 to 1,500 hectares each). Growth in Tripoli will occur in both the core and the suburbs, with most



▲ Damascus, Syria. Syria's two largest cities, Damascus and Aleppo, account for nearly 37 per cent of the urban population and 20 per cent of the total population.
©Dudarev Mikhail/Shutterstock

FIGURE 11: NEW CONSTRUCTION IN LEBANON 1963 TO 1998



Source: Government of Lebanon. 2005 National Physical Master Plan of the Lebanese Territory. Beirut: Government of Lebanon.

of the expansion on the periphery. Tripoli's population is expected to grow from 102,000 in 2000 to 210,000 in 2030 with an increase in the built-up area from 15 to 27 km². Smaller urban agglomerations and villages will consume another 12,000 to 15,000 hectares of fringe land.²¹ It will be critical to manage growth to minimize the negative aspects of urban sprawl on water resources and agricultural land on the urban periphery.

Lebanon's 2005 National Master Plan proposed an urban structure that places less emphasis on the central area of Beirut and focuses on the development of secondary cities – Nabatieh, Saida, Tripoli, Tyre and Zahle-Chtaura – to spur a more balanced and integrated growth pattern that improves the connections between rural and urban areas. In the South, the government plans to support the creation of an industrial zone shared by Nabatieh, Saida and Tyre, which currently account for 44 per cent of the population of the two southern governorates.²² The government is also focusing on the development of ten smaller urban localities in each governorate that will provide employment opportunities and improved public and administrative services.²³

FIGURE 12: LEBANON NATIONAL MASTER PLAN URBAN STRUCTURE PRINCIPLE

National level:

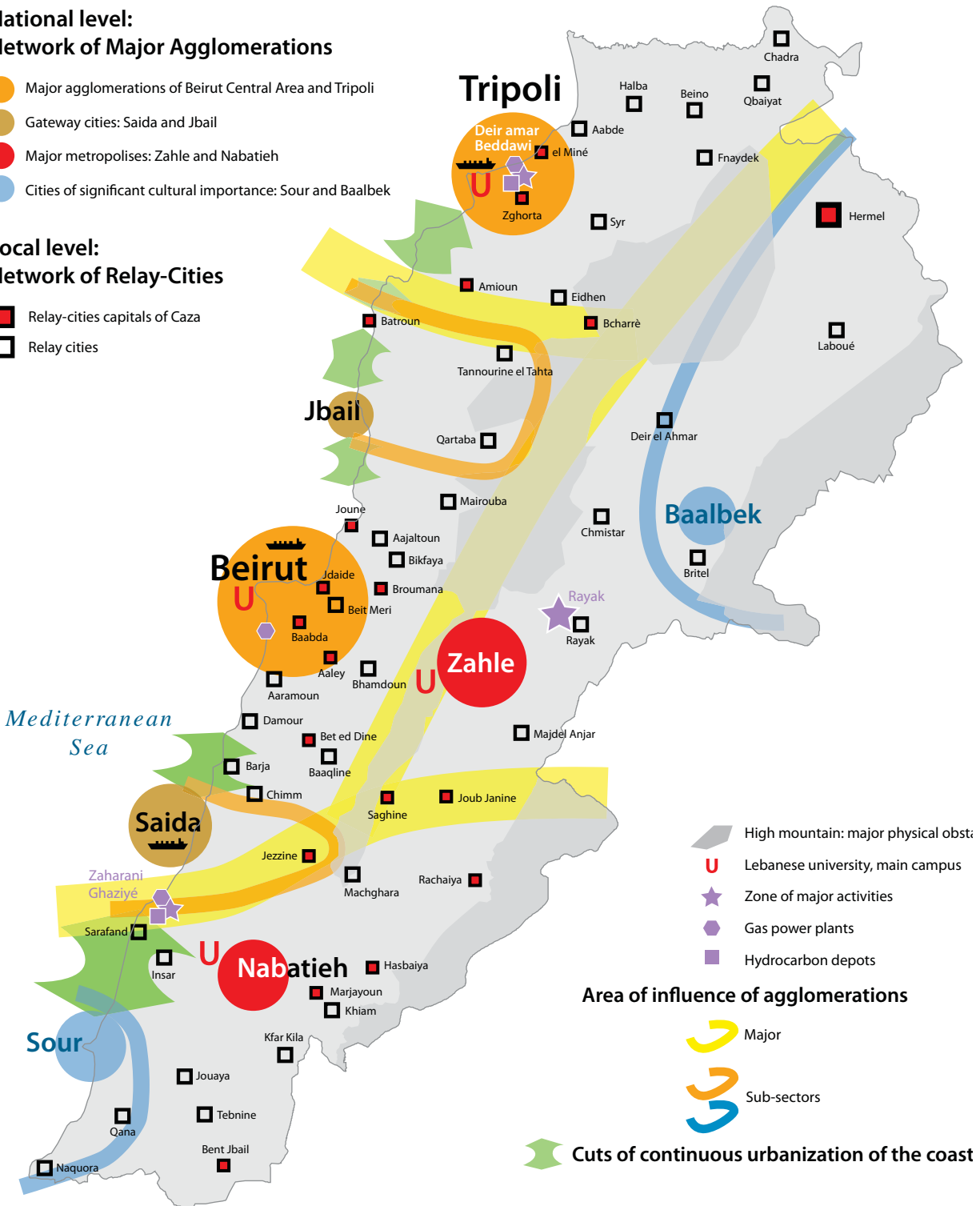
Network of Major Agglomerations

- Major agglomerations of Beirut Central Area and Tripoli
- Gateway cities: Saida and Jbail
- Major metropolises: Zahle and Nabatieh
- Cities of significant cultural importance: Sour and Baalbek

Local level:

Network of Relay-Cities

- Relay-cities capitals of Caza
- Relay cities



Source: Government of Lebanon. (2005). National Physical Master Plan of the Lebanese Territory. Beirut: Government of Lebanon



▲ Beirut, Lebanon. The Lebanese Government has invested significantly in urban infrastructure. ©diak/Shutterstock

Most economic activities are concentrated in the primary cities of the Mashreq. Financial services and tourism dominate the economic base but all governments are developing policies to redirect domestic and foreign investments to industry and secondary cities by improving their infrastructure and diversifying their economy.

Lebanon. Lebanon is recovering from the political turmoil of recent years and its economic growth has been strong: 9.3 per cent in 2008, 9.0 per cent in 2009 and an estimated 8.0 per cent in 2010. Most of the growth can be attributed to the increase in demand for services and increased inflows of capital transfers.²⁴ In 2007, most of the active labour force worked in services (41.6 per cent) and trade (22.6 per cent) while industrial employment was only 13.8 per cent.²⁵ By 2009, services and trade represented 73 per cent of the labour force and 60 per cent of GDP, with tourism and financial services accounting for approximately 35 per cent of GDP.²⁶

Most economic activities are concentrated in Beirut, where government has made significant investments, including in the modernization of the downtown and port areas, improving roads, redeveloping the airport and encouraging development in peripheral agglomerations. Other projects include the development of the Hadath University campus and tourist activities along the southern coast.²⁷

In addition to upgrading the Greater Beirut area, the government plans infrastructure improvements in other cities, including Tripoli, Zahle-Chtaura, Nabatieh, Said, Jbail, Baalbek and Tyre. The government plans to re-establish the Beirut-Tripoli rail service, improve the road network and upgrade the port.²⁸

Tripoli is a centre for trade and services and a prime tourism destination. However, the city's infrastructure must be improved for it to realise its potential and help kick-start the economic development of the North, which has primarily focused on agriculture and food processing. Saida is the administrative centre of South Lebanon; it has maintained a strong agricultural sector and is also a tourist destination. Baalbek and Tyre are archaeological sites on the World Heritage List and major tourist destinations; Baalbek's cultural festival attracts an international audience. Tyre is also a tourist destination with Roman and Phoenician sites and its sandy beaches. These localities require improved protection of their archaeological assets, investments in hotels and the diversification of their economy.²⁹

The government has looked at ways to redirect economic activities to inland urban agglomerations, such as Nabatieh, an active commercial centre that provides medical, social, cultural and educational services to its region. The government

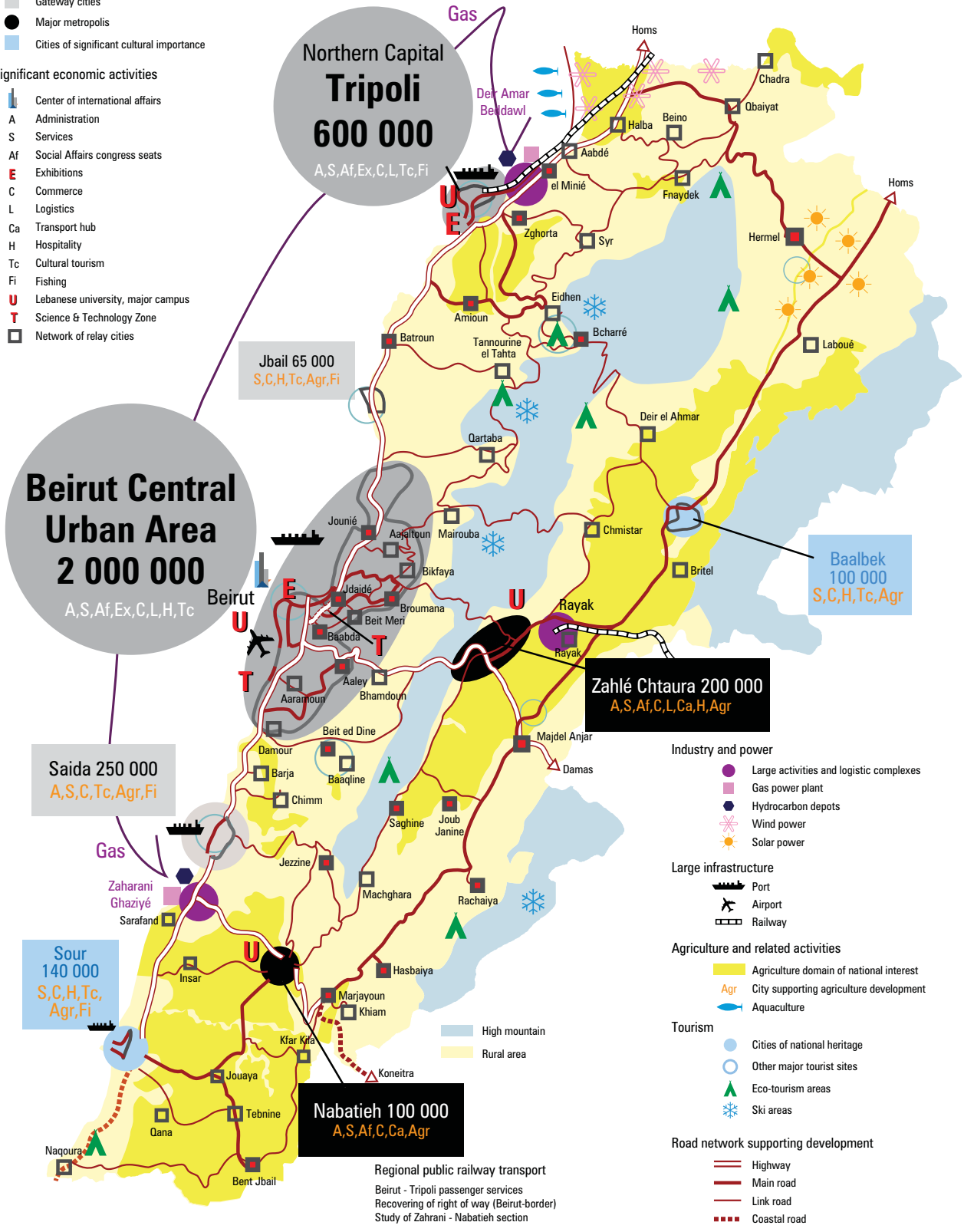
FIGURE 13: ECONOMIC ACTIVITIES IN LEBANON

Network of major agglomerations at the national level

- National and northern capital cities
- Gateway cities
- Major metropolis
- Cities of significant cultural importance

Significant economic activities

- Center of international affairs
- A Administration
- S Services
- Af Social Affairs congress seats
- E Exhibitions
- C Commerce
- L Logistics
- Ca Transport hub
- H Hospitality
- Tc Cultural tourism
- Fi Fishing
- U Lebanese university, major campus
- T Science & Technology Zone
- Network of relay cities



Source: Government of Lebanon. (2005). National Physical Master Plan of the Lebanese Territory. Beirut: Government of Lebanon.

BOX 3: OCCUPIED PALESTINIAN TERRITORIES – THE IMPACTS OF OCCUPATION ON THE URBAN ECONOMY, URBAN FORM AND URBAN MOBILITY



▲ Israeli soldiers search a Palestinian's car at the Hawera checkpoint outside the town of Nablus in the West Bank
©Kobi Wolf/IRIN

Since 1967, Israel has implemented a broad range of policies and practices aimed at controlling the movement of Palestinians in the West Bank (including East Jerusalem) and Gaza. The strategies include road blocks, check points (permanent and 'flying'), 'Israeli Only' highways, residency requirements, access permits, restricted expansion and development possibilities, a rigged building permit process and the notorious Separation Wall. Together, these impediments constitute a major dimension of the occupation and have a devastating impact on Palestinian freedoms, economic well-being, quality of life, and the

urban form of their communities.

While the choke-collar effect of these restrictions occasionally relaxes, it is more often tightened and over the past two decades has horrendously degraded Palestinian life. 'Closure', the term commonly used to encompass many of these strategies, has severely affected the quality of daily life for many Palestinians by increasing unemployment levels, declining wages and surging poverty, growing dependence on unreliable welfare, home demolitions, business failures, restraints on trade, polluted environments, major declines in GDP, income

averages and consumption of daily necessities and a fragmentation of the Palestinian urban fabric. Many of these impacts arise from seemingly legitimate zoning, planning and land classification policies selectively enforced by various Israeli administrative departments, including the Israeli army.

Two important Israeli occupation phenomena have received minimal public attention but have far-reaching consequences: the creation of a 'seam zone' adjacent to the Separation Wall, and the implementation of the Oslo-based division of Palestinian land into areas A, B, and C.

The seam zone refers to the areas between the Separation Barrier and the Green Line of the 1967 Armistice. Once the 700-plus kilometre barrier is completed, approximately 50,000 Palestinians in 38 villages and towns will find themselves living in territory walled-off from the West Bank and, often, without ready access to their own lands. In addition, 60,000 East Jerusalemites will be separated from family and community networks and places of employment by the Jerusalem section of the barrier.

Areas A (mainly urban centres) and B of the occupied West Bank are effectively built up or 'illegally' over-built to permitted capacity. Area C - 60 per cent of the West Bank and the natural expansion area for A and B - has significant space for potential development but it is under Israeli authorities who thwart Palestinian development there, despite Oslo provisions that supposedly ensured it.

plans to bring industry to the area through the development of an industrial zone near Rayak, rehabilitate the roads, and improve waste management.³⁰

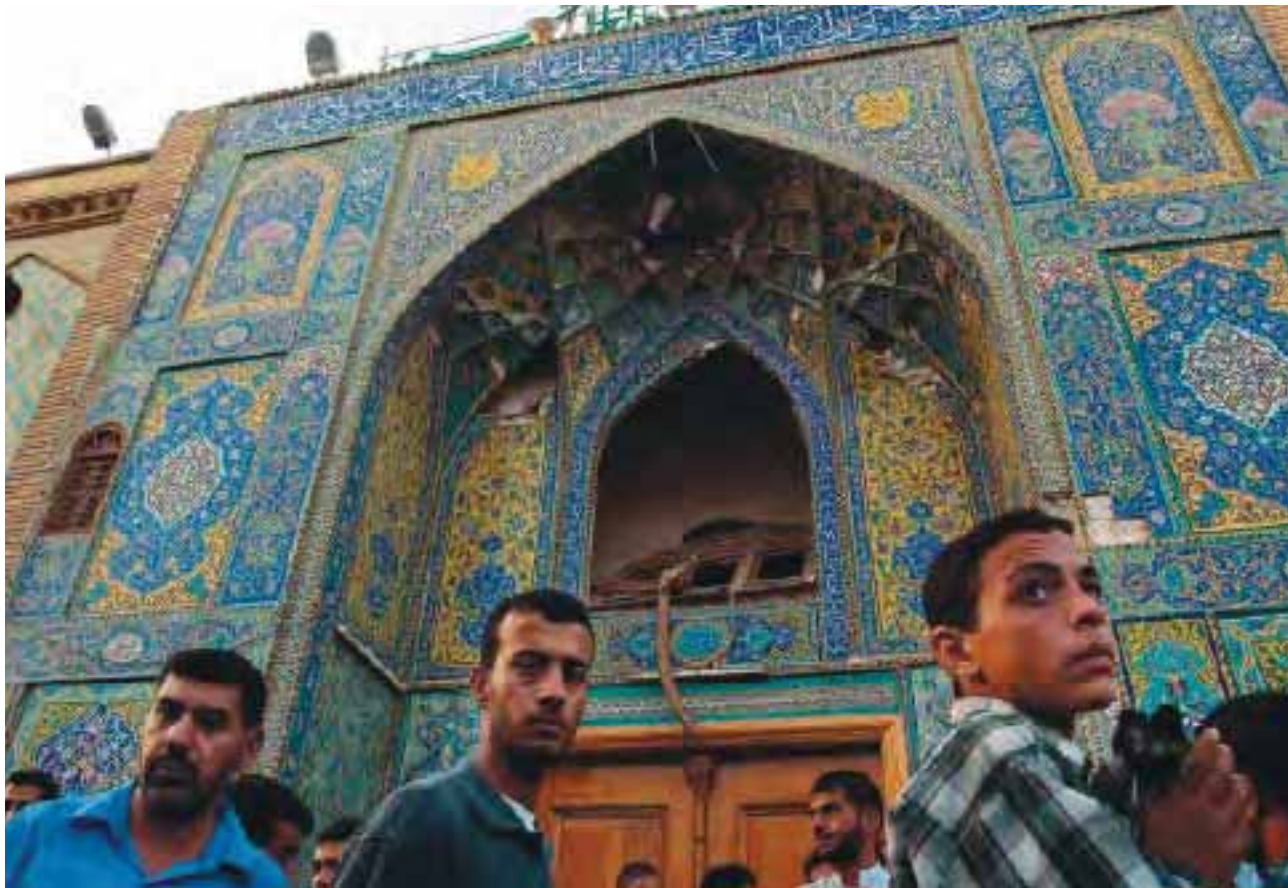
Iraq. The Iran-Iraq war, the first Gulf War in 1990s and the economic embargoes that followed, the 2003 invasion and the exodus of thousands of professionals from the country's largest cities in the mid-2000s have had a devastating effect on Iraq's economy. Since the 1990s, the annual economic growth rate has declined by 25 per cent.

While oil comprises 60 per cent of GDP and 95 per cent of foreign earnings, it employs few people. Most people work in small- and medium-sized enterprises and efforts to promote this sector is a key national strategy to reduce unemployment. State-owned enterprises continue to employ one out of eight workers and represent 90 per cent of industry in the country. Over the past decade, the service sector, including public

institutions, the military and police, has grown rapidly.

The tourism industry is not yet a significant contributor to GDP, but there is strong potential. For example, Najaf is an important pilgrimage city in the Islamic world and attracts hundreds of thousands of visitors from other countries as well as other Iraqi cities. Najaf's International Airport receives four international airlines in addition to Iraqi Airways. Najaf and Karbala are important pilgrimage cities and have the potential to attract as many as ten million pilgrims each year when security is restored.³¹

Jordan. Services make up 70 per cent of the GDP and 75 per cent of employment. Although manufacturing, construction and real estate have been growing, there has been a greater emphasis on the higher value-added knowledge economy which should provide better employment opportunities for the highly-educated youth population.³²



▲ Najaf, Iraq. Iraqi men survey the damage to the Iraqi Shiite Tomb of Ali (Imam Ali Mosque), following a massive car bombing that killed at least 70 people. ©EdStock/iStockPhoto

Most economic activities are concentrated in the Greater Amman Region.³³ While Amman is the kingdom's administrative and financial centre, 52 per cent of the country's industrial activities are concentrated in the satellite towns of Zarqa and Russeifa.

Irbid, the second largest city and home to approximately 18 per cent of the total population, is the commercial centre for the northern part of the country. Although not a tourist destination, it is centrally located between two ancient sites, Gadara and Pella, and provides supporting accommodations for tourists visiting them.³⁴ The economy of the country's secondary cities - Al-Karak, Jerash, Ma'daba and Salt - depends on trade, services and some manufacturing. In 2006, the Jordanian government undertook a project to revitalize urban cores and improve urban management practices in Jerash, Karak, Ma'daba and Salt.³⁵

Tourism has been on the rise in Jordan with the number of visitors to archaeological sites and museums more than doubling from 2006 (1,439,449) to 2008 (2,943,157). The greatest attraction in 2008 was the archaeological sites in Petra (813,300), followed by those in Jerash (351,500) and Mount Nebo (326,700). Recently, there has also been an emphasis on tourism in the smaller city of Salt.³⁶

Syria. Services account for 55.2 per cent of GDP, followed by industry (26.3 per cent) and agriculture (18.5 per cent).³⁷

Most economic activities are concentrated in Damascus, Aleppo and, to a lesser extent, Homs. Aleppo is the country's industrial capital, producing 30 to 40 per cent of the national manufacturing with a heavy emphasis on textiles and chemicals, including plastics, cosmetics, rubber products and pharmaceuticals. Thirty firms in Aleppo are responsible for 60 per cent of the national pharmaceutical production. Other economic activities in Aleppo include agro-processing, handicrafts production and limited tourism.³⁸

The tourism sector has been expanding and the number of non-Arab visitors increased from 385,000 in 2004 to 678,000 in 2008. Although the number of Arab tourists increased from 2004 to 2008, the 2008 figures were lower than in the previous two years.³⁹ Damascus is the main tourist destination, attracting nearly 888,000 visitors, followed by Aleppo and Lattakia.⁴⁰ Both Aleppo and Damascus have the potential to expand tourism given their significant cultural heritage. Greater investments should be made to support and expand cultural activities in both cities. But, obviously, the country needs to return to peace before tourism can be expected to pick up again.

Egypt. In 2009, Egypt's GDP was dominated by services (48.7 per cent) and industry (37.6 per cent) with agriculture contributing only 13.7 per cent.⁴¹ Cairo and Alexandria are the main engines of the economy: 57 per cent of all manufac-

BOX 4: OCCUPIED PALESTINIAN TERRITORIES - DISPLACING THE DISPLACED


▲ Al-Walaja, West Bank. Palestinians clash with Israeli soldiers in a protest against the Israeli separation wall.
©Ryan Rodrick Beiler/Shutterstock

At the beginning of the 20th century, most Palestinians lived inside the borders of Palestine, which is now divided into the State of Israel, the occupied West Bank and the Gaza Strip. Until 1947, Palestinians owned and used approximately 90 per cent of Palestine's land. Major episodes of forcible displacement have transformed Palestinians into the largest and longest-standing unresolved refugee case and humanitarian crisis in the world today as approximately 82 per cent of the land has been confiscated by Israel.

As many as 150,000 Palestinians were arbitrarily displaced within or expelled from Palestine during the British Mandate (1922 – 1947). More than 750,000 Palestinians were displaced during the *Nakba* (catastrophe), referring to the ethnic cleansing that took place in the context of a UN plan to partition Palestine, armed conflict and the establishment of the State of Israel. Tens of thousands of Palestinians were displaced within and expelled from Israel between 1949 and 1967. Approximately 400,000 to 450,000 Palestinians were displaced from the West Bank - including East Jerusalem - and the Gaza Strip during the 1967 Israeli-Arab war and Israel's subsequent occupation of these areas.

Since 1967, Israel has developed a regime that combines occupation, apartheid and colonization which act as the root cause of

contemporary forced displacements. Hundreds of thousands of additional Palestinians have been displaced on both sides of the Green Line, and forcible displacement is ongoing as a result of the unlawful policies and practices of Israel's regime.

During the second *intifada* (uprising) in 2000, the number of Palestinians displaced or at risk of displacement rose sharply. Palestinian refugees also faced a secondary displacement in various countries of exile, most recently in Iraq and Lebanon. Denied reparation and durable solutions based on their right to return, displaced Palestinians remain vulnerable to the impact of armed conflict and human rights violations in their host countries.

Some 90,000 people are reported to be at risk of displacement in 2012 as a result of Israeli policies such as restrictive and discriminatory planning, the revocation of residency rights, the expansion of settlements and the construction of the West Bank Separation Wall, including more than 60,000 in East Jerusalem alone (OCHA, November 2009; OCHA March and May 2011). Communities most at risk include those in East Jerusalem; those in Area C of the West Bank, particularly Palestinians in the Jordan Valley, Bedouin communities and those in 'seam zones' between the Green Line and the Separation Wall and those living in or near the extended buffer zone separating the Gaza Strip from Israel (Save the Children, October 2009; OCHA, January 2008).

Increased awareness of forced displacement of

Palestinians amongst local and international organizations has led to the identification of a number of core triggers. These include excessive and indiscriminate use of force, home demolition and forced eviction, violence by Jewish settlers and other non-state actors, revocation of residency rights, closure and segregation, confiscation and discriminatory distribution of land and settler implantation. Human rights and humanitarian organizations have long called for the addressing of forced displacement in the Occupied Palestinian Territories and have warned of the continuing deleterious impacts of Israeli policies but the international community has only begun to respond to such calls in the past few years.

In West Bank C areas - where Israel retains authority over law enforcement and control over construction and planning - more than 70 per cent of the land has been allocated to Israeli settlements or the Israeli military, while severe restrictions apply to its use by Palestinians. A total of 342 Palestinian-owned structures, including 125 residential structures and 20 rainwater collection cisterns, were demolished by the Israeli authorities in the first half of 2011. Consequently 656 people, of whom 351 are children, were left without homes. One-third of these people were displaced in June 2011 alone. Over 3,000 demolition orders are outstanding, including 18 targeting schools.

Located to the North of the Old City in occupied East Jerusalem, Sheikh Jarrah, a Palestinian residential neighbourhood is becoming an extreme case of displacement. The neighborhood houses around 2,800 Palestinians as it is a centre for many diplomatic missions and well-known landmarks such as the Orient House, the American Colony Hotel and the Palestinian National Theatre.

Due to its strategic location, Israeli settler groups have in recent years made persistent efforts to take over land and property in Sheikh Jarrah to establish new settlements in the area. As a result, over 60 Palestinians have lost their homes and another 500 remain at risk of forced eviction, dispossession and displacement in the near future.

BOX 5: IRAQI REFUGEES IN SYRIA

Since the spring of 2003, the Middle East has seen massive migratory movements from Iraq into its neighbouring countries. Syria continues to be the primary destination of Iraqi refugees due to historical relations between the two countries and because of easier entry regulations. Some have since been resettled to third countries, while some others have returned to Iraq - most of them spontaneously and a few with limited assistance from UNHCR. Most, however, remain in Syria. There is an estimated 1 million Iraqi refugees and asylum-seekers in Syria, 44.5 per cent of whom sought refuge there five or more years ago. In August 2010, 151,000 refugees were registered under the protection of UNHCR but each month some 2,000 additional Iraqis approach the agency for registration.

66.5 per cent of Iraqis in Syria originate from urban areas in the Baghdad and Nineva governorates and all UNHCR-registered Iraqis in Syria live in urban areas - mainly Damascus and its suburbs. Some 41 per cent of these have special needs and 36.8 per cent of the 34,849 families registered are female-headed households.

Approximately 40 per cent of all registered Iraqis in Syria are considered vulnerable and in need of assistance. About 34,000 suffer serious medical conditions, while 9 per cent of the refugee population is classified as 'women at risk'. Although many refugees left Iraq with some savings, these have run out after years of exile. As a result, refugees rely on food and financial assistance from UNHCR.

Syria has offered Iraqi refugees care and assistance and continues to do so despite limited material resources. The large number of arrivals has had dramatic impacts on the economy, infrastructure and public services delivery in Syria. Water consumption has increased by 21 per cent. It has also led to rises in the cost in all areas of life: food and basic goods have gone up by 30 per cent. Property prices have gone up by 40 per cent and rentals by 150 per cent.

Most of the Iraqis surveyed by UNHCR say that they face financial barriers to accessing adequate housing and cited paying rent as their



▲ Iraqi refugees use a WFP food voucher on their mobile phone to purchase food from a shop in Damascus.
©Selly Muzammil/WFP

most significant financial difficulty. The Iraqi refugees have also become a burden on the labour market. Only a small number of Iraqis work as professionals in the formal sector (such as doctors or university professors) and hold legal work permits. The great majority of refugees in Syria take advantage of the gaps in labour law and poor enforcement mechanisms to find low-skilled work in the informal sector.

Basic education in Syria is free and the cost of higher education is nominal. As a result of the influx of Iraqis, there has been a steady rise in enrolments, leading to school and classroom overcrowding. Around 10 per cent of schools run on a double-shift system to accommodate the high number of pupils. The number of Iraqi students enrolled in primary or secondary schools, however, has fallen from 30,000 in 2007 to 24,600 in 2009-2010 mainly due to financial constraints and lack of documentation.

A 2010 UNHCR survey carried out in July and August at the Al-Waleed border crossing between Syria and Iraq showed that most Iraqis are reluctant to return home on a permanent basis. Of 498 families asked, representing more than 2,000 individuals, 46

per cent cited political uncertainty for this while 15 per cent blamed unstable security conditions. A further 13 per cent said they are holding back from returning because of poor educational opportunities, and 6 per cent cited housing shortages.

Most of those crossing the border – 89 per cent - said it was for a short trip only. In 42 per cent of cases this was for visiting family members, 18 per cent said they were checking conditions on the ground, 15 per cent were going to obtain documentation and 10 per cent were checking on property. A similar survey on the Iraq-Jordan border among 364 families (about 1,450 people) found that none was returning to Iraq permanently. Similar reasons were cited.

The number of refugees who return permanently to Iraq has been very low, with UNHCR having supported just 163 to return from Syria since the beginning of 2010. According to Iraqi government statistics, only 18,240 Iraqi refugees returned from exile between January and August. This represents 20 per cent of the total returns of 89,700 in the same period, including internally displaced people.

turing activities are located in Greater Cairo and another 22.5 per cent in Alexandria, the country's main seaport.

Cairo is also home to 83 per cent of foreign establishments. Although Cairo benefits from its strategic location at the southern apex of the Delta, with excellent access to transport and communication infrastructure as well as opportunities for expansion on the surrounding desert lands, it also suffers from worsening traffic congestion and pollution.⁴²

Other cities including Port Said, Damietta and Suez produce textiles, furniture and chemicals, petrochemicals, steel, iron and non-metallic mineral products.⁴³ Tourism has been growing in the past few years, particularly on the Red Sea coast.⁴⁴

Urban Poverty and Inequality

Overall, the Mashreq countries are on track to achieving the Millennium Development Goals, with the exception of Iraq, Lebanon and the Occupied Palestinian Territories. The proportion of people living below USD 1.25 per day – the absolute poverty line established by the MDGs – which was already very low in Egypt, Jordan, Lebanon and Syria in 1990 has further decreased since then. However, the proportion of people in urban areas living below each country's designated national poverty line is much higher – as much as 30 per cent in Syria, 29 per cent in Lebanon, 28 per cent in Egypt and 13 per cent in Jordan.⁴⁵

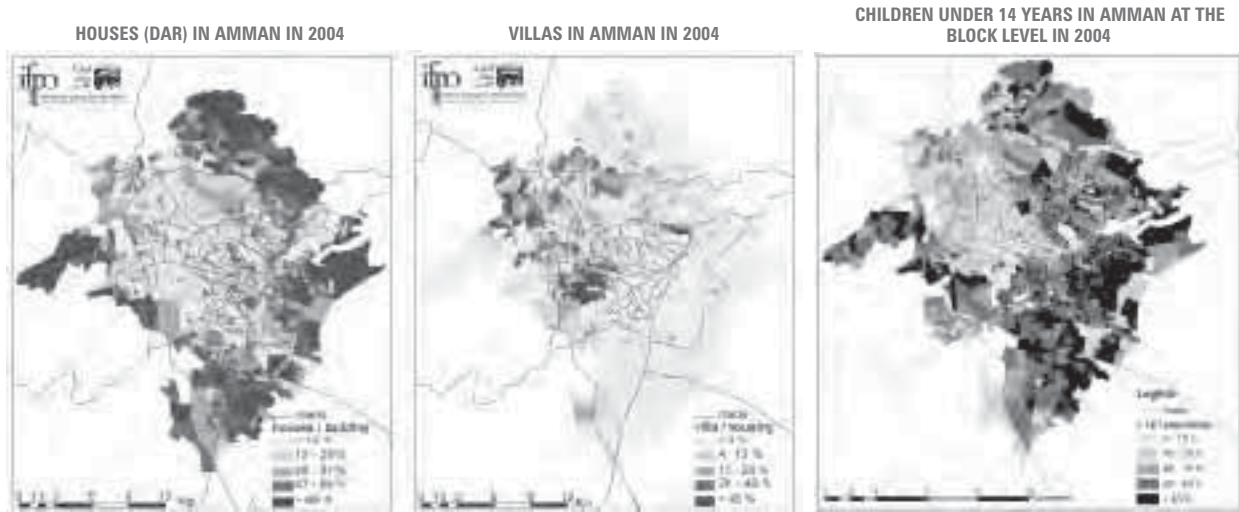
The incidence of urban poverty is higher in specific parts of each country. In Jordan, 57 per cent of citizens living below the national poverty line reside in Amman, Irbid and Zarqa, and the number of poverty pockets – defined as areas where over 25 per cent of residents live below the national poverty line – increased to 32 in 2008 from 22 in 2006.⁴⁶ 52 per cent of the population of North Lebanon and 42 per cent of the population of South Lebanon live below the upper poverty line.⁴⁷ Despite the impressive economic growth in the region in the 1990s and 2000s, overall poverty ratios have only declined slowly. The recent conflicts in Iraq, Lebanon and the Occupied Palestinian Territories as well as the global economic crisis with its resultant reductions in remittances and employment, have had a disproportionate impact on the poor.

In each city, poverty is spatially concentrated in specific zones, as shown in the distribution of overcrowded traditional dwellings in Amman and the distribution of informal settlements in Aleppo. In Syria, research has shown that the family size is a better explanatory variable for poverty than the urban-rural divide: for every increase of one family member, poverty deepens by 3 per cent. Urban inequality has increased slightly across the region, with Gini coefficients in all Mashreq countries higher today than they were in 1990, with the exception of Jordan.



▲ Making ends meet selling fresh fruit juice in Aleppo, Syria. ©Ugurhan Betin/iStockPhoto

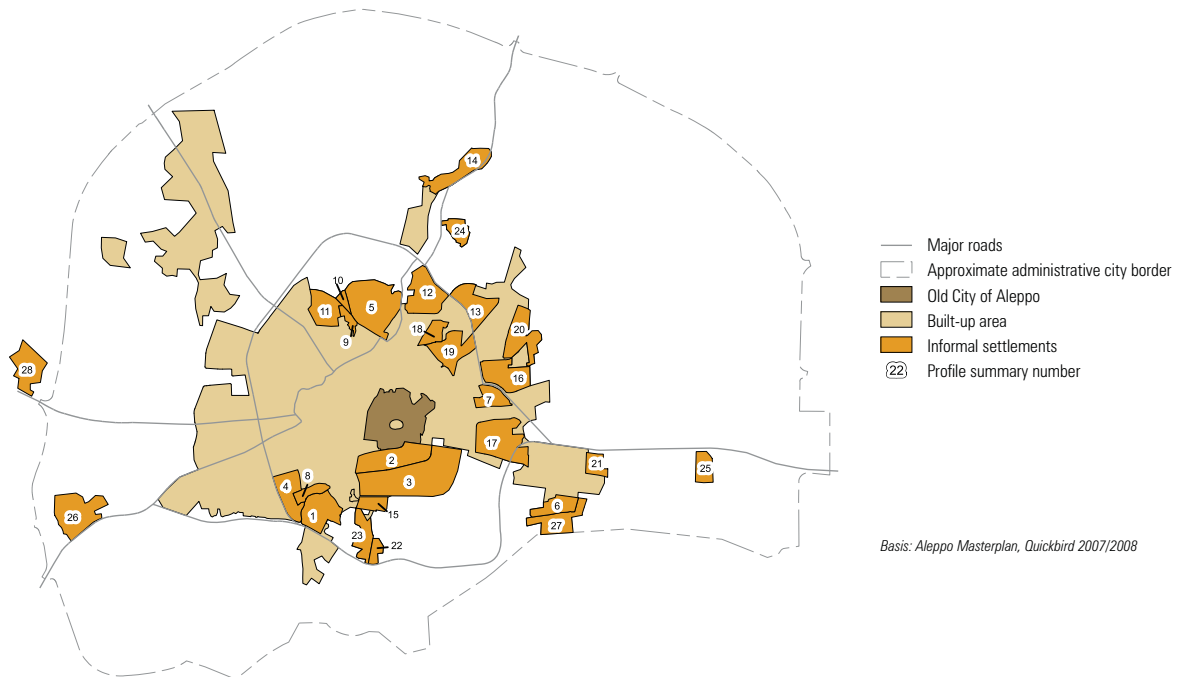
FIGURE 14: GEOGRAPHIC INEQUALITIES OF AMMAN⁴⁸



Source: Department of Statistics and Greater Amman Municipality

(Ababsa, IFPO, 2009)

FIGURE 15: INFORMAL SETTLEMENTS IN ALEPPO⁴⁹



Basis: Aleppo Masterplan, Quickbird 2007/2008

Unemployment

Unemployment and underemployment in rural areas and smaller cities has been a vector of urban migration in the region. In Jordan, Ajloun had the highest urban unemployment rate at 34.5 per cent, followed by Jerash at 32.7 per cent while it was around 15 per cent in Amman and Aqaba.⁵⁰ In Syria, unemployment rates have been higher in rural areas, largely as a result of drought and desertification.⁵¹ Al-Hasakeh, Al Sweida, Dar'a and Lattakia have the highest rates of urban unemployment while Aleppo's unemployment rate is just over 7 per cent but the unemployment rate for women is twice that of men.

In Iraq, the American occupation has undeniably altered the structure of the labour force, with significant redundancies in the public sector, military and state-owned enterprises. Nearly 500,000 men were discharged from the army between 2003 and 2005. As of 2009, Iraq's real unemployment rate was 28 per cent, with 18 per cent of the labour force jobless but another 10 per cent composed of part-time workers seeking more work. Youth unemployment stands at 28 per cent, while only 17 per cent of Iraqi women participate in the labour force, in part due to various cultural and social mores.⁵²

As in other parts of the Arab world, youths comprise a large segment of the unemployed, particularly in urban areas. The unemployment rate among youths in Lebanon is on par with



▲ Iraqi female recruits at the Iraqi Police Academy in Karbala, Iraq. Only 17 per cent of Iraqi women participate in the labour force. ©U.S. Navy photo by Mass Communication Specialist 1st Class Wendy Wyman/Released

the rest of the Arab region (around 26 per cent)⁵³, which is the highest rate in the world. Many leave Lebanon to seek employment opportunities elsewhere.⁵⁴ In Jordan, young people are the largest segment in urban unemployment (45 per cent of total urban unemployed for women and 53 per cent of total urban unemployed for men), and comprise over 49 per cent of total urban unemployed in Amman.⁵⁵ In Egypt, urban unemployment has also disproportionately affected the youth.⁵⁶

In some of the countries, unemployment is correlated with lower or higher educational attainment. In Jordan most of the urban unemployed were either illiterate or held secondary degrees, rather than tertiary degrees. Residents with tertiary degrees (18.4 per cent) and vocational training (19.8 per cent) made up the smallest portions of the urban unemployed.⁵⁷ However, in Egypt, those with a tertiary degree tend to experience higher rates of unemployment. In Lebanon, which has the highest rate of tertiary enrolment in the region (52 per cent), holders of university degrees account for 29.7 per cent of the unemployed population.⁵⁸ In Jordan, with a 41 per cent enrolment rate in tertiary education, university graduates comprised 19.8 per cent of the urban unemployed. Many of the protestors in the Arab world were highly educated youths whose skills did not match the demands of the labour market, further demonstrating the need for policies to create better employment opportunities for this segment of society.

Education

School enrolment rates are high in all countries of the sub-region, with all children attending primary schools, between 74 and 88 per cent in the secondary level and between 17 and 52 per cent enrolled in university level programmes. Adult literacy rates are high, ranging from 98.9 per cent in Jordan to 92.5 per cent in Syria. All countries face the challenge of ensuring that school curricula better match the evolution of skills demanded by the changing economy, particularly at the university level to ensure the full employment of university graduates.

Educational attainments tend to be higher in urban areas. As of 2004, in Jordan, 8.4 per cent were illiterate and 3.6

TABLE 14: SCHOOL ENROLMENT (GROSS, %)

Country	Primary	Secondary	Tertiary
Egypt	100	79	28
Iraq	103	51	N/A
Jordan	97	88	41
Lebanon	101	82	52
Syria	124	74	17

Source: World Development Indicators (latest years available)



▲ School children walk home after a day of classes in the hilly Jordanian capital, Amman. School enrollment rates are high in all Mashreq countries. ©Joel Carillet/iStockPhoto

per cent could read and write, while 41.4 per cent of the population had achieved a level of basic education. Some 1.2 per cent held a vocational degree, 33.8 per cent had achieved a secondary degree and 11.6 per cent held a tertiary degree or higher. In Amman, over 50 per cent of the population had a secondary degree or higher and 42 per cent in Irbid. In rural areas, residents were more likely to have less than a secondary degree or be illiterate.⁵⁹

Health

Most countries in the region have relatively good access to health services and improved sanitation facilities in urban areas, with the exception of Syria. Overall government spending on health care in the region varies from 8.9 per cent of GDP in Jordan to 6.3 per cent in Egypt⁶⁰ and 3.6

per cent in Syria, an amount generally insufficient to meet the demand for health services of a growing population.⁶¹

Medical services tend to be concentrated in urban areas. For instance, in Syria, most of the medical facilities, particularly specialized medical services, are concentrated in Damascus and Aleppo.⁶²

In urban areas, health is often tied to housing conditions. In Aleppo, families living on the urban periphery have suffered from poorer health due to inadequate housing and limited access to health services.⁶⁴ In Beirut, residents in informal settlements had a higher incidence of chronic illnesses.⁶⁵ In Jordan, the Ministry of Health, in cooperation with the World Health Organization, has launched a campaign to overcome urban health challenges.⁶⁶ In Egypt, the private sector is becoming more prominent in the delivery of health services in urban areas.

TABLE 15: HEALTH EXPENDITURES

Country	Egypt	Iraq	Jordan	Lebanon	Syria
Total % of GDP	6.3		8.9	8.8	3.6
Under 5 Mortality Rate per 1,000 Live Births	21	44	25	12	16

Source: % of GDP from World Development Indicators, 2007; Under-Five Mortality Rate from The Henry J. Kaiser Family Foundation, 2009⁶³

The Growth Patterns of Mashreq Cities

The structure of Mashreq cities typically consist of successive rings of growth. The oldest, the historic medina, several of which are on the UNESCO World Heritage List, is characterized by dense clusters of buildings with commercial uses on the ground floor. The *awqaf* charitable foundations may own as much as 40 per cent of properties. Governments have implemented a number of restoration projects to improve public spaces, streets and facades that recapture the cultural significance and value of historic centres.

During the colonial era, urban settlements spread to planned extensions with wide boulevards, larger blocks and multi-storey buildings that reflected the introduction of European styles of living for the upper-class. With continued urban growth, many of these residential areas have been converted into offices.

At independence, several governments adopted land reforms that nationalized large land holdings and repossessed properties owned by foreigners who had left the country, adding sizeable areas to public land reserves. Nevertheless, with the accelerated urbanisation of the 1960s to 1980s during which annual city growth rates ranged from 4 to 8 per cent, then slowed to 2 to 4 per cent in the 1980s, the existing public land reserves were unable to accommodate land demand. The land area of the main cities nearly doubled, fed by massive inflows of private capital and the remittances of expatriate workers. Urbanized areas spilled over into a third layer with unplanned subdivisions on fringe agricultural land that densified rapidly.

Egypt and Jordan have developed national housing strategies and created public and parastatal agencies to redirect expansion beyond the urban fringe by developing new towns, constituting a fourth urban layer. They are reshaping larger urban centres into structured city-regions, changing the spatial distribution of land values as they increase in and around newly developed sites.

For instance, in Egypt, 110 km² of desert lands were urbanised between 1995 and 2007 while expansion on agricultural lands was contained to 55 km². In Iraq, a National Housing Policy was launched in late 2010 with the intent to improve overall housing delivery, to better anticipate urban growth and to direct urban expansion.⁶⁷

Informal Settlements and the Challenge of Affordable Housing

Despite the efforts of government agencies, the growth of informal developments and the unmet demand for affordable housing will continue to be a major challenge in the foreseeable future. Given the age structure of the population, with those under the age of fifteen making up 44 per cent of the total population in Iraq, 32 to 35 per cent in Syria, Jordan and Egypt and 25 per cent in Lebanon,⁶⁸ the annual rate of household formation will range from 250,000 in urban areas in Egypt⁶⁹ to 61,000 in Jordan.⁷⁰

A significant amount of new housing is required in all cities of the region to accommodate this demand. From 2007 to 2017, Egypt will need 2.1 to 5.3 million additional housing units while Syria's 2006-2010 Five-Year Plan estimated a national housing shortage of 687,000 units.⁷¹ In Amman, 30,000 housing units need to be built each year to satisfy demand. In Iraq, the poorest 20 per cent of the population in the six main cities requires an additional 160,000 new housing units and it is estimated that there is an overall shortfall of 2 million units throughout the country.⁷²

Frequent regional and internal conflicts in the region have caused both internal displacement and the inflow of international refugees contributing to the demand for housing. Syria currently hosts 1.1 million refugees, many of them from Iraq.⁷³ Since 1948, Jordan has hosted over 1.5 million displaced persons from the OPT and Iraq. By 1980, half a million Palestinian refugees lived on one-quarter of Amman's land area.⁷⁴ Lebanon currently hosts an estimated 415,000 Palestinian refugees, 215,000 of whom

TABLE 16: FORMAL HOUSING MARKET PERFORMANCE INDICATORS

	Cairo	Amman	Beirut	Damascus
Average Rent (USD /m ² /month)	USD 4.50 - 6.65	USD 7 to 8	USD 10 to 12	USD 210
Average Sales Price (USD /m ²)	USD 1,000 to 1,420 in Cairo (USD 300-880, 6 th of Oct)	USD 1,200 to 2,200	USD 2,800 to 6,000	USD 4,160
Vacancy Rate (high-end)	5%	17%	..	10%

BOX 6: URBAN BAGHDAD: IMPACT OF CONFLICT ON DAILY LIFE



▲ A displaced family carries aid material in a sponge bed in an IDP camp in Abu Ghriab area, western Baghdad. ©Contributor/IRIN

During the height of the violence in Iraq, Baghdad suffered 45 per cent of all casualties with an estimated 10,463 conflict-related deaths in 2007¹ alone. Some 68 per cent of Baghdad residents described local security as ‘very bad.’². Over 10 per cent of Baghdad’s population, almost 700,000 people, have left or moved within the city since 2006. Most were displaced in 2006 and 2007³. Families cited direct threats to life and general violence as the most common reasons for fleeing to areas where their religion or sect predominated and where they felt safer⁴. This process has cemented social divides and created city neighbourhoods spatially fragmented along religious and sectarian divisions.

The most vulnerable displaced families live in public buildings, old military encampments, crude group squatter settlements or on publicly or privately owned land. A total of 136 camps have been identified with at least 48,000 families resident⁵.

People living in camps and public buildings have limited or no access to decent housing, water, sanitation, electricity or health services. As a result, children and the elderly are particularly at risk of serious health problems and chronic illnesses. They are also at risk of being evicted at any time, creating constant stress.

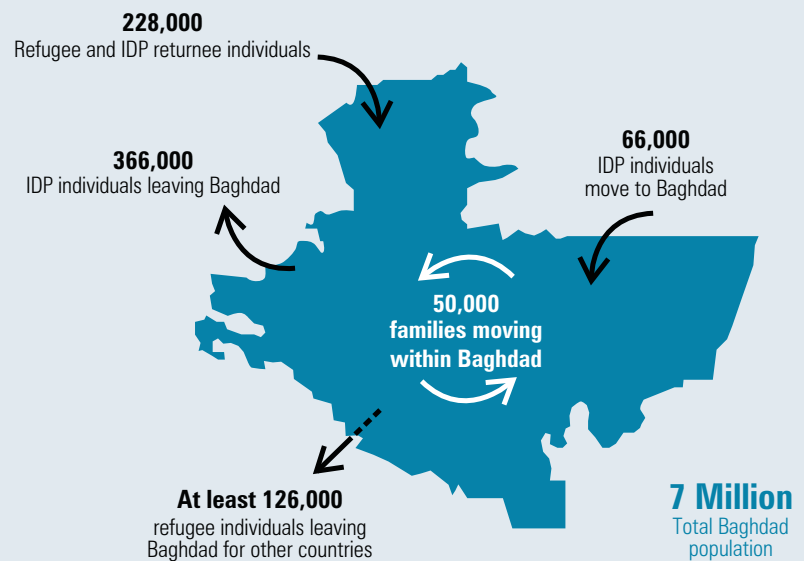
Before 2003, a network of arterial roads crossed the city, linking neighbourhoods in the north and south and on the west and east bank of the Tigris. Cars and buses moved freely allowing people easy access to places of work, education and recreation.

After 2003, the establishment of military-controlled zones and bases - including the International Zone, road-blocks and checkpoints - interrupted movement along arterial roads linking the different areas of Baghdad. As a

security measure to control movements in and out of neighbourhoods experiencing sectarian violence, lengthy runs of T-wall and road blocks prevent access for vehicles from the secondary roads onto the main roads.

All these barriers and diversions have created widespread congestion and made regular journeys longer in time and distance⁶. Over time, the congestion and inconvenience has reduced the number and length of journeys people take, preferring instead to shop, work and socialize within their local neighbourhood.

Since 2003, major recreation areas and facilities have been closed or rendered off-limits. Open spaces normally used by families have become dumping sites or now are filled with sewage and stagnant water. Nearly half the population of Baghdad cited a poor-quality environment as one of the key problems they have faced since 2003⁷. They complain of leaking sewers, uncollected garbage and foul odours. Recreation space has a role in urban life, especially when housing is overcrowded and lacks outside space, but many local open spaces such as city parks and the stadium or walking along or boating on the Tigris have been either closed or are off limits since 2003. Four of the centrally located hotels used in the past for business, weddings and celebrations are now either closed or used as safe areas for foreign businesses and media⁸.



Sources: Iraq: Where Things Stand, ABC NEWS BBC/INHK Poll, September 2007

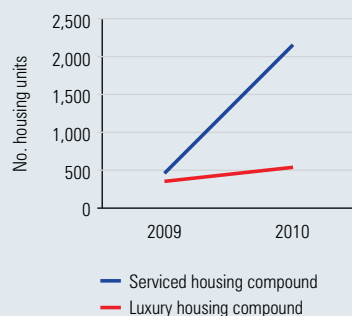
BOX 7: GATED COMMUNITIES IN LEBANON: EVOLUTION AND DEVELOPMENT TRENDS


▲ New apartments on Beirut's coast. ©diak/Shutterstock

Gated Communities (GCs) belong to a residential development typology that combines residential property rights with the rights to co-use, co-own and co-manage, in an exclusive manner, collectively-consumed local public goods such as roads, parks, swimming pools, tennis courts, security, electricity and so on.

By enabling exclusivity of consumption, this residential typology transforms public goods into 'club goods' (Buchnan, 1965). Some see GCs as a solution that overcomes the free-rider problem of local public goods as GCs ensure that those who actually profit from local public goods pay fees. Others criticize GCs for their segregating capacity and for accentuating social hierarchies.

Termed as *Moujamaat Sakaniah* in Lebanon, which translates into 'residential compounds', GCs are governed by real estate contract law and internal private rules. In Lebanon, GCs mainly come in two forms. The first is the condominium that contains apartments and combines residences to a landscape amenity



such as ski slopes, mountain areas, views or a beach. The second is the single-family detached house in model towns, usually marketed along the popular theme of 'the authentic Lebanese village community'.

In the 1960s, the early Lebanese GCs comprised small apartments near beaches and mountains used as second homes. In the 1970s and 1980s, when the civil war led to rapid population movements, many of these became primary homes (Glazze et al, 2002).

During the civil war, delivery of public services deteriorated because of the diminished tax base in the divided Lebanese state. The private sector initiated deliberate GC construction, targeting those able to afford 'club' solutions to lack (or poor quality) of security, electricity and water supply.

When the civil war was halted in the 1990s, public provision of basic public services resumed, but post-war urban conditions continued to drive the demand for GCs. 2002 estimates indicated that GCs represented approximately one per cent of the Lebanese housing supply (Glazze et al). By 2009, 3.8 per cent of all units built were GCs, almost tripling to reach 10 per cent in 2010 (data compiled from the Order of Engineers and Architects). 2010 also saw a marked growth in development of GCs catering for middle-income groups. (See graph)

The spread of GCs in Lebanon is encouraged by the fact that zoning exists only for a small part of the national territory, rendering all un-zoned lands potential sites for large-

scale developments. Additionally, the *grand ensembles*, under which large construction projects approved by the Higher Council of Urban Planning can have all existing legislations waived, encourages these types of projects. Within these contexts, further proliferation of GCs in Lebanon is a most likely outcome, posing several problems.

Since sectarian-based identities and loyalties remain territorially anchored in Lebanon, the Lebanese housing market is spatially segregated and fragmented along lines of confessional affiliation (Alaily-Mattar, 2010). This means that GCs typically cater for homogenous religious groups. Consequently, as GCs in Lebanon increase, they create additional physical and social barriers, reinforcing further undesirable urban fragmentation.

Moreover, public provision of basic public services will continue to deteriorate if more affluent societal groups increasingly cater for themselves. The economically weaker urban strata will increasingly be left to their own devices. Due to the resulting social fragmentation, they will lack the political weight to enforce even minimum levels of public services delivery adequacy.

Although GCs are now catering for broader urban population strata, this should not be taken for a sign of improved sectarian mixing or the tearing down of sectarian barriers. At the upper income levels, GCs function mostly as second homes that facilitate networking among affluent groups, clientilism and 'relational rights' (Joseph, 1994). Hence, more GCs in Lebanon, particularly the affluent ones, could generate more elitist power concentration.

Finally, critique of GCs in Lebanon on the basis of their segregating capacity should extend to the segregation in leisure, transit and other public urban spaces. The phenomenon of gating clearly extends beyond the residential domain to create a highly fragmented urban spatiality that undermines daily life (Alaily-Mattar, 2010). It obstructs more appropriate usage of public spaces throughout cities by establishing highly undesirable social barriers, over and above physical hindrances, to the accessibility of public space. Ultimately, these processes can only lead to total urban dysfunctionality.

BOX 8: ISLAMIC HOUSING FINANCE

Islamic finance gained attention in the Arab world in the early 1970s when Islamic jurists started calling for alternative financial practices to, what - from *Shari'a* perspective - is considered usury. Islamic financing's basic principles include: a ban on interest (*riba*), uncertainty, risk and profit sharing and a focus on ethical investments that enhance society and asset backing. These principles are also applicable to housing finance and have been used by banks to promote access to housing finance, especially for middle- and lower-income groups.

The rise of Islamic finance originated from within the Arab world with the creation of the Organization of Islamic Countries (OIC) and the oil boom of 1973-74 with its commensurate increase in capital that turned several Arab countries into financial powerhouses. The Islamic Development Bank, founded at the OIC summit in 1974, became the cornerstone for Islamic finance.

The earliest private Islamic banks were established in the United Arab Emirates, Egypt and Sudan and were followed by Egypt,

Sudan, Kuwait, Bahrain and Jordan. Recently, Lebanon increased its Islamic banking profile with the Saudi-based Al-Baraka, while Syria also licensed its first Islamic bank, jointly-owned with Qatar. In 2010, the Faisal Islamic Bank of Egypt realized a USD 325 million net return on its banking investments under the three main Islamic finance models: *Musharaka*, *Murabaha* and *Mudaraba*.

The Jordan Islamic bank is now one of the most active in housing finance. Established in 1979, it focused on housing loans to modest-income households and soon grew into the country's third-largest bank with almost 15 per cent of its JOD 400 million (USD 565 million) investment account dedicated to housing-related lending. The bank issues *Ijara wa Iqtina* contracts (rent to own) for house sales and leasebacks that also exempt the home buyer from the large transfer fees. Up to JD 2,000 (USD 2,815) of the annual mortgage interest can be deducted from borrowers' taxable income. The bank further finances home improvements through bulk purchasing of building materials, particularly for the home extensions which are

common practice in low-income urban areas.

Islamic financing should be seen as complementing and augmenting conventional financial systems through its deep knowledge and experience. Successful integration of Islamic instruments with conventional financing has facilitated the realization of many large and complex multi-source financing deals. Whereas only five years ago, Islamic financing was still regarded as an infant industry striving to prove its viability and competitiveness, Islamic financing is now among the fastest-growing segments in the international financial system with an estimated average annual growth of 15 to 20 per cent. Islamic capital invested in global financial institutions is now estimated at USD 2 trillion.

Islamic project financing has offered opportunities for risk diversification, avenues for resource mobilization and revenue sharing and enhanced services between contractual parties. These financial deals have illustrated how conventional and Islamic financing can blend and coexist under common legal and regulatory arrangements.

live in United Nations Works and Relief Agency for Palestine Refugees in the Near East (UNRWA) camps.⁷⁵ In Iraq itself, the ongoing movement of returnees and IDPs has resulted in informal housing practices in many urban areas throughout the country.⁷⁶

The formal housing market has focused largely on building housing for upper- and upper-middle income households, overseas émigrés and second-home investors. Damascus, ranked the eighth most expensive residential property market in the world in 2009 with sales prices of flats ranging between USD 2,000 and USD 10,000 per square metre, compared to the average annual per capita income of USD 2,450.⁷⁷ Following the 2008 Doha Accord that ended internal conflict, Lebanon experienced a housing boom, with property values in Beirut growing by 40 per cent a year.⁷⁸ Property values in Amman and Cairo are similarly expensive, ranging from USD 1,200 to USD 2,200 per square metre in Amman and USD 1,000 to USD 1,420 per square metre in Cairo.⁷⁹ In the new communities of New Cairo and Sixth of October, property values have risen by 75 per cent per year since 2005.⁸⁰

While the underdevelopment of housing finance in the Mashreq shielded these economies from the global financial crisis, rental and sales prices of high-end property prices nevertheless fell by 60 per cent in Amman and 37 per cent in Cairo. Industry experts predict that developers in these two

countries will shift to the upper-middle, middle and even lower-income households where demand remains strong; the unmet demand for middle-income housing in Egypt in 2010 exceeded 200,000 units.

However, the construction of affordable housing by the private sector faces two major challenges: a) availability of affordable serviced land; and b) access to housing finance by both developers and homebuyers. Complementary and integrated government policies to supply affordable serviced land, support mortgage markets and microfinance and more efficient land registration will be critical in leveraging and encouraging the private sector to invest in affordable housing.

While most Mashreq governments have prioritized the construction of affordable housing to varying degrees, they have not been able to meet demand. Furthermore, these initiatives have rarely been integrated into broader policy reforms to address the causes of informal development, one of which is the high price of real estate. Given escalating housing and land prices, a middle-income family in Lebanon must save for nine years before it can afford to buy a modest home in a major city, and across the Arab region the poorest income groups commonly spend 30 to 40 or even 50 per cent of their monthly income on housing.⁸¹

The high prices of the formal housing market effectively exclude middle- and lower-income groups. A USAID survey



▲ Gilo, Occupied Palestinian Territories. New construction in the Israeli settlement of Gilo covers a hillside between Jerusalem and the West Bank town of Bethlehem.
©Ryan Rodrick Beiler/iStockPhoto

of urban households in Egypt found that housing units were 25 per cent smaller in informal than in formal areas, per square metre prices were 13 per cent that of formal units and median purchase prices from 2003 to 2008 were 50 per cent lower in informal areas.⁸² In Egypt and Jordan, as much as 95 per cent of housing construction is done by the private sector, with most of it in the informal markets.

Lebanon and Syria have yet to develop national housing strategies, as evident in their limited and uncoordinated responses to the sprawl of informal housing. Since 1980, seven per cent of Lebanon's cultivated land and 15 per cent of its irrigated land have been taken over by informal settlements.⁸³ In Greater Beirut, 300,000 people, or 25 per cent of the city's population (not including Palestinian refugees) live in 22 informal settlements and own illegally occupied land.⁸⁴

Today, 38 per cent of Syria's total population lives in informal areas, including an estimated 71 per cent of residents in Hassakeh, 60 per cent of residents in Damascus, 49 per cent of residents in Ar-Raqqah and 44 per cent in Aleppo.⁸⁵ With an estimated 16 per cent of urban residents in informal settlements, Jordan is currently implementing a lower-income housing programme to build 100,000 units from 2008 to 2013.

The occupation of the Palestinian territories has crowded a growing Palestinian population onto decreasing amounts of land. Although the construction of Israeli settlements in the OPT is illegal, the settler population in the West Bank is increasing by 5.5 per cent each year, with 450,000 living there as of 2007.⁸⁶ Over 38 per cent of the West Bank, including military zones, Israeli settlements and nature preserves, is closed to Palestinians.⁸⁷ Palestinian communities in the West Bank have become increasingly fragmented and impoverished as they become encircled by roads, checkpoints and Israeli

settlements. It is estimated that, in East Jerusalem, there is an unmet housing need of 10,000 units, with an additional 1,500 units needed each year.⁸⁸

Access to health and education for many residents has worsened in East Jerusalem after the building of the separation wall, which cut off around a quarter of Palestinian Jerusalemites from their city. In Gaza, where over 4,000 housing units have been destroyed and more than 20,000 units damaged since 2008, the ongoing blockade has prevented residents from reconstructing or building new housing, leading to a housing shortage of 60,000 units.⁸⁹

Egypt stands out among the Mashreq countries with a steady annual production of affordable housing that had ranged from 15,000 to 35,000 in past decades and started to mushroom in 2005 with the adoption of the National Housing Project that aimed to create 500,000 new affordable homes by 2011 in the Aswan, Borg Al Arab, Sadat City and Sixth of October. In Alexandria, the World Bank approved a five-year, USD 100 million loan in 2007 to address the living conditions in 30 squatter settlements, as well as to improve accessibility to economic centres and enhance the local business environment through regulatory changes.

Unplanned urbanization in the Mashreq includes unauthorized subdivisions, unregistered property, and construction in environmentally sensitive areas. Consequently their residents often face social challenges. They typically possess the four basic components of adequate shelter cited by UN-Habitat: safe access to water and sanitation, durable housing and sufficient living area. In 2006, for example, while the governorate of Alexandria documented 41 per cent of the population as living in 62 informal areas, UN-Habitat cited only 7.2 per cent of the city as living in slums, most of which were only deprived of sanitation.⁹⁰

BOX 9: EGYPT'S INFORMAL SETTLEMENT DEVELOPMENT FACILITY

As a result of high rates of population growth, demand for housing has far outstripped the capacity of the public and private sector to provide housing on serviced land affordable to middle- and lower-income families.

Starting in the mid-1960s, vast unserviced and underserviced informal settlements proliferated illegally on agricultural lands on the urban fringes and on state-owned desert lands at the edge of the valley. Between 1976 and 1994, the country lost an average of 8,000 ha of agricultural land yearly to urbanisation and has only been able to reclaim 4,800 ha of desert land per year and bring it under cultivation using the available water resources. To manage the chaotic expansion of the informal settlements, the government has committed massive investments since 1976 to draw urbanization into the desert. It has recently turned to land-based financing to cover the high cost of extending services to the desert and attract private developers to invest in the development of desert sites.

In 2009, the Government of Egypt set up a dedicated facility to support informal settlement upgrading. The Facility is run by an executive director and a board chaired by the Minister of Local Development with representatives from six government departments, three civil society organizations and three specialized experts. The Facility was capitalized with a

government seed grant of EGP 500 million (or USD 87.6 million) and an additional EGP 200 million (USD 35 million) budget allocation. It received an EGP 100 million (USD 17.5 million) grant from USAID.

The executive director of the Facility has prepared and is implementing a national action plan, which includes:

- Mapping of all informal settlements in the country for the first time, categorizing the areas and developing priorities for action. By prioritizing the projects, the process has become much more manageable with initial interventions affecting 850,000 residents in informal settlements, rather than the total of 20 million;
- Identifying the technical assistance and capacity-building to be extended to those local authorities implementing projects;
- Entering into partnerships with stakeholders, including private sector entities;
- Scheduling of projects in accordance to the prioritization and the readiness of local authorities to launch projects; and
- Use of land-based financing to generate revenue.

The Facility has requested a government allocation of land in the new towns to be used as an asset to recapitalize and to speed up disbursements. In addition, the Facility has requested the following:

1. About 75,000 subsidized housing units for priority re-housing of urban dwellers that have to be relocated, specifically:

- Families living in environmentally hazardous, life-threatening areas; and
- Families living in shacks, in structurally unsound buildings and alongside health-threatening activities (dumps, noxious industries and so on).

2. The use of land-based financing for on-site re-housing of families living in unsanitary, dilapidated dwellings on publicly-owned land

In the first phase, the Facility launched 25 pilot projects testing various approaches in five cities in Upper Egypt, four cities in the delta, and the three cities along the Suez Canal. It provided technical assistance to Alexandria for its upgrading projects, which the governorate is funding from its own resources. This first phase does not include projects in the Greater Cairo region.

Moving forward, Egypt's Informal Settlement Development Facility faces two major challenges:

1. Creating a legal framework that can accommodate the complex land transactions required for land-based financing of upgrading projects; and
2. Ensuring repayment by borrowing local authorities.⁹

One of the challenges faced by the residents of informal settlements is the inability to use their unregistered properties as financial collateral. The lack of cadastral information also poses problems for local governments that are unable to collect property taxes beyond those levied from the formal sector, limiting resources available to defray both operating expenditures and community improvements.

Land Tenure, Property Rights and Titling

The Mashreq countries share a common history of land tenure, titling laws and local institutions. Under the Ottoman Empire, land tenure systems were solidly anchored in *Shari'a* law and reflected the evolution of Islamic jurisprudence over 1,500 years. The Ottoman Land Code of 1858 established five categories of land tenure that still serves as the basis of modern land laws: privately owned land (*mulk*); religious endowments (*waqf*) that retain such designation in perpetuity; communal land and pasture (*musha*); state land (*miri*) and "dead" or uncultivated land (*mewat*).⁹¹

Ottoman practices of land registration entailed either a court seal on a document demonstrating proof of ownership or the transfer of property or witnesses (*hujja*) affirming the transfer of property. In modern times, the land registration process has become mired in bureaucracy: across the Middle East and North Africa, property registration takes on average six steps over 36 days, at a cost of 5.7 per cent of the property value – the second most expensive registration process in the world after sub-Saharan Africa.⁹²

The difficulty of reconciling complex traditional bundles of land rights with modern categories, the refusal of the authorities to recognize developments that challenge their own zoning regulations and the complexity of property registration procedures have resulted in a significant proportion of unregistered properties in the Mashreq. This includes 90 per cent of all properties in Egypt and 38 per cent of those in Syria.

In **Egypt**, formal land registration is a lengthy and cumbersome process involving no fewer than 71 bureaucratic procedures with 31 different offices, which can take six to

14 years to complete.⁹³ Once equivalent to 12 per cent of property value, the registration fee has been reduced to a flat fee of £E 2,000 (USD 350).⁹⁴

A practical common alternative is the *hujja* transfer of property under which builders of informal settlements revived the Ottoman traditions of gaining rights to unused land through improvements. Most property owners rely on the traditional *hujja* system, thereby creating a parallel property system since *hujja* agreements are upheld in the courts. Efforts to regularize land titles have been a fundamental component of settlement upgrading projects.

Jordan's zoning regulations during the British Mandate set a minimum parcel size of 250m², which was too large to be affordable for most households. This resulted in development of 250m² parcels co-owned by several people (*musharak*).⁹⁵

In recent years, the Department of Land and Survey has taken the important step of permitting subdivided titling and registration of these parcels, thereby allowing owners to use their properties as collateral for financing. In the last housing survey conducted by the Housing and Urban Development Corporation in 2000, more than half of Amman's informal settlements had some form of land tenure, most commonly in the form of *musharak*.⁹⁶

Syria's Law No. 33 of 2008 seeks to confirm property ownership, updates property registers and removes common ownership; it is being applied first in Aleppo, Damascus and Homs.

Ongoing conflict in the region has also deterred efforts to maintain records and update property registers. In **Lebanon**, the long civil war destroyed a number of public institutions, including property registration. The automation and updating of cadastral information is a priority in the country's economic development efforts.⁹⁷

In **Iraq**, land registration and ownership are complex, muddled issues due to the flight of many Iraqis after 2003; the informal or illegal occupation of evacuated homes and land by squatters; conflicts and mutual claims placed by both returnees and squatters; and the lack of any specific legal framework for resolving land and property disputes.⁹⁸

Urban Land and Fiscal Policies

Governments influence urban land policies by managing demand through fiscal policies that regulate property taxes, the availability of subsidies and incentives, and supply of land through zoning and the construction of infrastructure. The widespread development of informal settlements is a direct result of an imbalance between these urban drivers.

Government land ownership, particularly of key areas surrounding modern cities, restricts land supply, resulting in shortages, speculation and high land prices.⁹⁹ A common government response has been to increase the provision of serviced parcels or, more rarely, subsidised low-income housing. **Egypt and Jordan** have defined clear public 'initiatives' and 'roles' in urban land markets; Syria's urban land and housing market is rapidly opening after years of socialist policies.

Public ownership and price controls have distorted rental markets. Whereas publicly-subsidised rental housing should include the cost of maintenance, public housing in the Mashreq does not and has become synonymous with rundown housing. Rent control, whether in the form of a frozen rent or capped rent growth rates, is widespread in the Mashreq.

In Egypt, around 60 per cent of units are leased under the old rent law, which is capped at 18 per cent of the real value, while new rent law units are capped at 80 per cent.¹⁰⁰ Rents in the pre-1960 building stock have not increased and affluent families living in large five- or six-room apartments pay four to five times less than poor households renting two rooms in an informal settlement. Low rents and the difficulty of evicting errant tenants have led many landlords to keep their properties vacant, including an estimated 800,000 to one million apartments in *Cairo* in 1996.¹⁰¹

In Lebanon, pre-1990 apartments are subject to rent control. In Syria, rent control has contributed to as many as 500,000 units being kept vacant today.

Regulations on property taxes have also deterred owners from registering their properties to avoid not only the high registration fees but also multiple annual taxes based on property value. The challenge of levying taxes on unregistered properties; outdated property records; obsolete assessments of property value; and centralized tax collection systems have limited the ability of the governments of the region to collect property tax collection and, in turn, limited the provision of public service.

In Egypt, informal settlements have encroached upon 400,000 hectares of peri-urban agricultural lands over the past 25 years. As of 2007, there were an estimated 8.5 million informal housing units in Egypt, 55 per cent of which are on agricultural land, 38 per cent are outside of administrative village boundaries and 7 per cent on government-owned desert land within municipal boundaries.¹⁰² In the Greater Cairo Region, 62 per cent of households live in informal settlements, 81 per cent of which sit on privately owned land, 10 per cent on government-owned desert land and the remainder on government-owned agricultural land.¹⁰³

In the 1970s, to reduce development on agricultural land the government began to promote the development of new cities in the desert. They have successfully attracted private investors as land prices doubled every other year with land development investments growing from EGP 15 million (USD 2.6 million) in 2005 to EGP 3,000 million (USD 526 million) in 2009.¹⁰⁴ They are becoming middle-class bedroom communities as high standard of construction and planning and their distance from central Cairo precludes their socio-economic diversity.¹⁰⁵ As seen in the case of Sixth of October, most investment has been speculative and commercial with properties lying vacant.

The National Housing Project promotes the development of 500,000 units of affordable housing. The initiative leverages an unprecedented level of private sector support, with 126 private real estate companies building 95,000 of the units and individual homebuyers building another 100,000.¹⁰⁶ The



▲ In Greater Cairo, 62 per cent of households live in informal settlements. ©David Evers. Licensed under the Creative Commons Attribution 2.0 Generic license.

average home cost is EGP 50,000 (USD 8,600), 30 per cent of which is subsidized by the government, and the remainder paid for by the buyer in monthly instalments of EGP 160 (USD 28) for 20 years with an interest rate of 7.5 per cent.

In addition, the government provides a per unit subsidy of EGP 13,000 for infrastructure and public services, a construction cost supplement of EGP 8,000 and a maximum subsidy of EGP 15,000 to developers or local governments. Indirect subsidies per unit include the provision of land at below market rates, amounting to EGP 12,500, as well as below market rate mortgage interest rates equalling EGP 5,700, and construction loans of EGP 17,000.

In total, direct and indirect subsidies equalled approximately EGP 6.7 billion for all the units or 0.4 per cent of Egypt's 2007 GDP. Despite these subsidies, the target population of households earning less than EGP 640 (USD 107) per

month was too poor to afford the mortgage, leading to greater subsidies for those families and a change in the target population to a higher ceiling.

Egypt embarked on a series of important tax reforms in 2008, including a new Real Estate Tax Law that reduced the property tax from 60 to 10 per cent of the calculated "rental value" and encouraged property registrations to create a wider tax base and mortgage market. According to the tax authority, this law will effectively tax only the most expensive 10 per cent of properties in the country, exempting those worth less than EGP 450,000 (USD 77,000). How property values are assessed will be a critical component of this tax reform; the law provides owners with the right to challenge assessments within 60 days and have properties reassessed every five years. The law's impact on housing registrations, however, remains to be seen.

Jordan. The government's role in urban land markets has focused on the construction of infrastructure and the redevelopment of slums. The most significant infrastructure projects include the Amman first ring road and an outer ring road now being constructed to alleviate inner city congestion and open up new areas for development.

Under the Social Productivity Program, the government has upgraded 38 sites since 1980. These programmes have applied three very different approaches to slum upgrading: a comprehensive, top-down approach that provided 23,000 people in Amman and Aqaba land title and full infrastructure services; a comprehensive partnership approach that provided 1,350 households with secure land tenure within fully serviced communities in Aqaba and a community infrastructure programme that provided 290,000 people in settlements and refugee camps with infrastructure but not tenure.¹⁰⁷

In 2001, Jordan's receipts from the property tax equalled two per cent of GDP, comparable to OECD levels but had a collection rate of only 50 per cent to 60 per cent. Under a UNDP project, the Ministry of Finance adopted a new tax law that merged land, building, education and sewerage taxes into one levy set at 10 per cent on 80 per cent of the imputed rental income and reduced exemptions.

The project created a new tax information system and training system for municipal staff. As a result, property tax revenues, which had been stagnant, increased by 14 per cent from 2006 to 2007 in the Greater Municipality of Irbid and Al Rusayfa, and by 7 per cent in the Greater Municipality of Mafraq.¹⁰⁸ From 2008 to 2009, the government waived property registration tax for the first 120 m² of apartments smaller than 150 m², saving low- and middle-income owners JOD 4,000 (USD 5,600) per unit.

Lebanon. With a weak national government and prolonged conflict, the state has been unable to implement national planning laws or provide clarity in future comprehensive planning. Development, including all housing initiatives, is based on the private sector while government initiatives focus on urban infrastructure. In 2005, the government issued a new national comprehensive physical master plan, which provides a new strategy of integrating national development by improving urban-rural links.

In the 1990s, with World Bank and UNDP support, Lebanon's Department of Land Registration and Cadastre under the Ministry of Finance began to reform its revenue and fiscal management process and implemented a Cadastre Operations Modernization and Automation programme. Launched in 2002 for Beirut with 120,000 land titles, the new system allows residents to request affidavits and property information almost immediately.¹⁰⁹ Lebanon's national property taxes equalled 1.5 per cent of GDP in 2009,¹¹⁰ up from 1.1 per cent in 2003.

However, property transactions account for 13 to 15 per cent of the state budget and, of the property tax collected, 77 per cent comes from property registration, 12 per cent from built property and the rest from inheritance transfers

and other fees.¹¹¹ The high reliance on a property registration tax of 5 per cent of the imputed rental value discourages those with smaller properties from registering.

Adding confusion to tax collection, municipal governments also administer a property tax. People in the highest quintile of income pay 74 per cent of the municipal property tax, most of which is derived from commercial and industrial properties.

Syria. Centralised planning has had a significant and not always positive impact on urban development and the production of housing. In 1979, under Law No. 60, the Government of Syria seized significant areas of undeveloped lands around Damascus for social housing, with limited compensation to the owners, and froze further urban expansion.

On the eve of the law's enactment, landowners rushed to subdivide their land and sell it at market rate. Since the law's enactment, two-thirds of informal settlements have taken place on private land through unauthorized subdivisions.

Given land constraints, informal settlements tend to be very dense, with an average of 400 people per hectare (with peaks of 800 people per hectare), as compared with 266 people per hectare in formal areas.¹¹² Informal areas are growing at 40 to 50 per cent per year in Damascus, while in Aleppo 160 new informal dwellings are built each week.¹¹³

Syria is currently undergoing an intense period of structural and market reforms. The 10th Five Year Plan introduced a decentralization of responsibility to municipal government. Through the Municipal Administration Modernization programme, funded by the EU, local governments in Aleppo, Damascus, Deir-uz-Zor, Homs, Latakia and Tartous have improved their capacity to plan and implement much needed urban improvements.

With the establishment of a new regional planning commission, Syria will also develop a new national development strategy. In 2008, Syria enacted the Law of Real Estate Development to promote private investment by reducing restrictions on foreign investment. The law divides the country into three zones with minimum investment criteria for the development of new cities, integrated housing in the suburbs, and housing for the poor.

In most Mashreq countries rental income is the basis of property tax rates. Like Lebanon, Syria has a high registration fee levied upon the sale or inheritance of the property, 10 per cent of its value, as assessed by the Ministry of Finance. The high cost of property registration in the face of inadequate low-income housing provision will likely conflict with another 2008 law, which punishes the construction of illegal units by prison time and large fines.

Noticeably, all of these countries lack provisions on taxing vacant land, a common tool to mitigate speculation. Of the Mashreq countries, Iraq is the only country to have a vacant tax law, which dates back to 1962 and is still in effect; the government levies a 10 per cent tax on the value of built property and a 2 per cent tax on vacant land.



▲ Tripoli, Lebanon. Prolonged conflict in Lebanon has resulted in housing initiatives being left to the private sector. ©Olga Kolos/Shutterstock

Housing Finance and Mortgage Markets

Mortgage markets are highly underdeveloped in the Mashreq countries, accounting for no more than 11 per cent of GDP. State-owned banks with relatively small borrowing limits are the main providers of short-term, high-interest housing loans.

As a result, only middle- and upper-income households benefit from these financial services and most people purchase properties with cash up front that draws on savings, loans from friends and family, informal market loans, remittances and sales of personal items. In Egypt, for instance, 60 per cent of households pay for homes with cash.

Several countries, including Iraq, are in the process of developing new policies on mortgage lending. The degree to which they can support the shift in developers' interest to middle- and lower-income housing is critical to the formalization of the housing market.

In 1996, Jordan became the first country in the region to create a secondary mortgage market through the Jordan Mortgage Refinance Company. Today, it has the most developed mortgage market in the Mashreq, with mortgages equalling over 11 per cent of GDP. While traditionally only catering to developers, the housing mortgage market in Lebanon has grown to 6 per cent of GDP in recent years and outstanding loans are more than double that of Egypt.¹¹⁴ Unlike Egypt or Jordan, where developers are prohibited from selling properties prior to construction, pre-sales are an important form of financing for developers, with households making a down payment upfront and paying instalments until construction is completed.

For the past few decades, Syria's Real Estate Bank has dominated the mortgage market where mortgage loans represent 5 per cent of GDP. It issues only 10,000 loans per year, with a maximum of USD 25,000, not enough to buy a home in most Syrian cities¹¹⁵ and lower-income households turn to the informal market where interest rates can be as high as 30 per cent.¹¹⁶ In 2008, a medium-sized bank developed a new mortgage product that would reduce down payments to 20 per cent, down from 35 per cent, extend the repayment schedule to as much as 17 years, and charge an interest rate of 9 per cent for a minimum loan of USD 16,300.¹¹⁷

While Egypt initiated mortgage markets in 2001, the combination of complex bureaucracy and conservative lending rules prevented its development: mortgages cannot exceed 25 per cent of the down payment, interest rates average 12 per cent and loan maturities around 12 years. At present, Egypt's mortgage market serves 75,000 customers and represents only 0.4 per cent of GDP.¹¹⁸

Housing financing is also available through:

- The Housing and Development Bank for middle, upper-middle and high income households at lower interest rates than commercial banks;
- The Government Employee Housing Projects Fund that offers civil servants housing subsidies in the form of matching grants; and

- Government-subsidized 40-year loans at an interest rate of five to six per cent through housing cooperatives, usually for a housing unit priced at about EGP 15,000 (USD 2,600).

A new mortgage financing law adopted at the end of 2010 seeks to increase the efficiency and transparency of the lending system, permits the merger of mortgage financing firms with government approval and allows the eviction of loan defaulters after six to seven months. If successful, the law could double the number of recipients by 2012.

Several new developments are helping to strengthen mortgage markets and extend access by lower income households. In 2008, King Abdullah II launched a JOD 7 billion (USD 9.8 billion) Royal Initiative – A Decent Home for a Decent Living – which aims to build 100,000 housing units over five years. The programme will build affordable apartments for those with incomes of less than USD 1,400 per month, help beneficiaries obtain free land and a USD 7,000 grant to build their own homes, allow them to buy existing homes or provide mortgages for those with land but no funding to build their own home. With USD 250 million provided by the U.S. Overseas Private Investment Corporation, this initiative will provide mortgages up to USD 28,000 with a repayment period of up to 25 years, no down payment and the provision that monthly payments do not exceed one-third of income.

Similarly, in 2010, a consortium of international and Palestinian financial institutions provided USD 500 million in funding to create a mortgage lending facility in the Occupied Palestinian Territory to provide 25-year mortgages. The programme works with a number of local and international non-governmental organizations and in coordination with plans to develop new working- and middle-class communities.¹¹⁹

Microfinance is a growing sector in the Mashreq but is almost entirely focused on microenterprises rather than housing. As of 2004, there were 700,000 microfinance loans outstanding in the Arab countries, including 256,000 in Egypt. Syria's microfinance sector is the youngest in the region; in an effort to strengthen the sector, the government enacted the General Microfinance Decree No. 15 (2007), the first of its kind in the Arab world, which allows the Central Monetary Council to license social financial banking institutions to provide micro-financing to the poor, with interest rates no higher than 9 per cent.

The first to receive a license was a branch of the Aga Khan Development Network, the single largest provider of microfinance products in the country, including housing loans. Given the close relationship between housing and productive activities in low-income households – all earnings from commercial activities go towards building or improving a home, which often doubles as the workshop or shop front – much greater efforts are needed to establish microfinance products for housing in the Mashreq.

The Challenge of Urban Transportation

Rapid urbanization in the Mashreq has overwhelmed the public sector's ability to provide mass transit. The historic centres of many of the largest cities in the region, including Aleppo, Cairo, Damascus, Gaza City and Ma'daba, were not designed to accommodate vehicular traffic. In Karak, Jordan, for instance, the street network of the old city is only suitable for one-way traffic, creating difficult circulation patterns that exacerbate congestion and pollution.

A key challenge to the region lies in promoting public transportation and reducing the environmental and health impacts of vehicular traffic. In some cases, a reorganization of circulation and the creation of off-street parking to maximize existing rights-of-way can lessen congestion. Public transportation and sidewalk improvements can also decrease motorization. Another strategy is the addition of road infrastructure: both Amman and Cairo are building ring roads to bypass currently congested roads and facilitate new peripheral development.

The West Bank has a network of 1,661 km of roads. While Israelis travel freely on these roads, Palestinian access is restricted by 85 checkpoints, 460 roadblocks and a permit system for Palestinian vehicles.¹²⁰ This has encouraged Palestinians to use secondary roads instead, resulting in a two-tiered road system, one for Israelis and one for Palestinians.¹²¹

Lack of free movement has had a profound impact on Palestine's economy, as well as residents' access to hospitals and schools. Furthermore, newly-created roads are designed to constrain the growth and connectivity of Palestinian towns.¹²²

Although still below the world average, with the exception of Lebanon, the number of motor vehicles per 1,000 people is increasing quickly and outpacing the development of new roads. Lebanon has the highest rate of car ownership, 291 passenger cars per 1,000 people, compared to 137 in Jordan, 52 in Syria and 16 in the OPT.¹²³ Car ownership rates are increasing rapidly in Jordan (5.7 per cent a year) and Egypt (2.8 per cent a year). From 2003 to 2007, the number of vehicles per kilometre of road rose to 101 from 72 in Jordan and to 26 from 19 in Syria. These national averages hide the fact that most vehicles are concentrated in a few major cities. In Jordan, 77.5 per cent of all vehicles are registered in Amman¹²⁴, while one-third of Syria's registered vehicles are in Damascus.¹²⁵

The transport sector consumes 16 to 33 per cent of all energy in most Mashreq countries and over 50 per cent in the OPT, with almost all fuel being gasoline or diesel. The growing numbers of diesel vehicles are due in part to the fuel being either at par or cheaper than gasoline. In Mashreq countries, diesel vehicles collectively emit 30 to 50 times as much air pollutants as gasoline.¹²⁶



▲ Squeezing through a narrow street in Tripoli, Lebanon. Lebanon has the highest rate of car ownership in the region. ©Joel Carillet/iStockPhoto

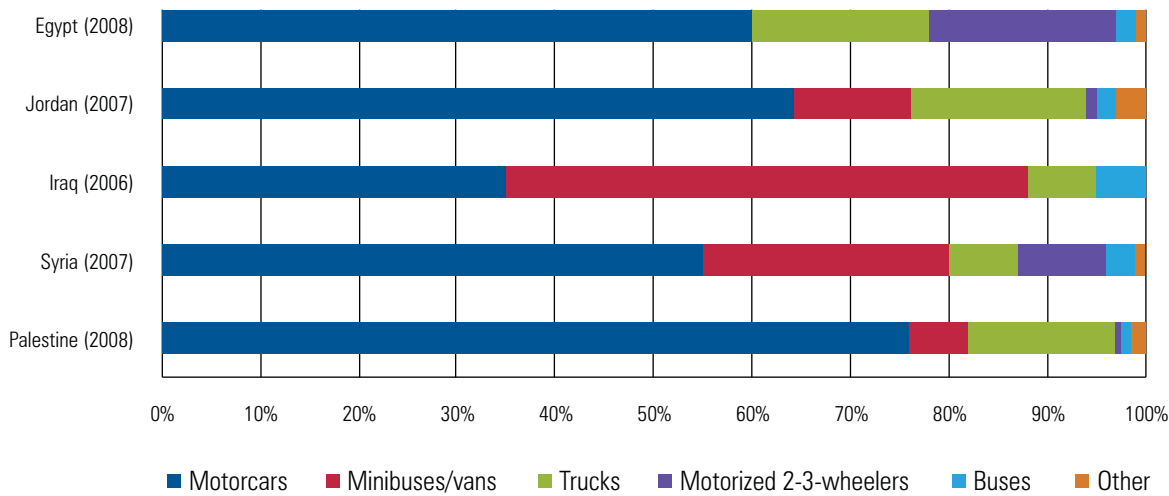
In Jordan, the transportation sector is estimated to contribute 50 to 90 per cent of all air pollutant emissions in the country.¹²⁷ The reliance on diesel is particularly high among public transport vehicles, which consume, in Syria for instance, 38 per cent of all diesel fuel. Vehicular emissions impact upon the quality of the urban environment and public health, as well as long-term energy costs and climate change.

Mass Transportation

Mashreq cities have long under-invested in public transportation in part due to the availability of cheap fuel, which was subsidized by the government. The cost of diesel fuel per litre in 2008 was USD 0.20 in Egypt, USD 0.53 in Syria, USD 0.61 in Jordan, USD 0.76 in Lebanon and USD 1.25 in the OPT, compared to a world average of USD 1.03. Similarly, the cost of gasoline was also far below the world average in most Mashreq countries, except for the OPT.¹²⁸

Private motorcars dominate the registration of motor vehicles in most countries, with the exception of Iraq. Public transportation is limited in most cities while private minibuses and shared taxis along designated routes are the most common form of transportation.

Damascus, like other Syrian cities, relies on privately-run minibuses with 100 lines currently operational. Two public transport companies that operate minibuses and buses in Beirut account for around 90 per cent of all buses and minibuses in the country.¹³⁰ In Karak, Jordan, the predominant form of public transport is unregulated minibuses.¹³¹

FIGURE 16: PERCENTAGE OF REGISTERED MOTOR VEHICLES BY CATEGORY¹²⁹

In Cairo, a series of surveys from 1971 to 2001 on the mode share of motorized trips found that the use of shared taxis rose from 0 to 37 per cent, of cars and taxis from 14 to 23 per cent, while use of buses and minivans fell from 70 to 22 per cent while the tram, which used to carry 16 per cent of motorized trips, was decommissioned.¹³² Across Egypt, rail and metro serve 8 per cent of riders, buses 26 per cent, taxis 41 per cent and private cars 26 per cent.¹³³

In Amman, 16 per cent of passengers use 500 public buses, 20 per cent use the 12,000 taxis and white cabs and 64 per cent use private cars.¹³⁴ As these figures demonstrate, ridership preferences have shifted away from buses and minivans towards passenger cars and public transit fails to capture a significant share of riders in most cities. Baghdad has one million public transport vehicles, 750,000 of which are taxis, and there are nearly two buses and five minibuses per hundred people.¹³⁵

Cairo's subway system, launched in 1987, was the first in the Arab world and remains the only fully-fledged metro system in Africa. Currently, the two operational lines carry on average 2 million passengers per day (17 per cent of the city's passenger trips). Two additional lines are to be built: one 33 km line will link the northwest to the northeast sections of Greater Cairo, as well as the Cairo International Airport, and will be fully operational by 2019; another line will connect Greater Cairo from west to east and will become fully operational by 2020.

The economic loss caused by congestion and delays is estimated to be USD 1.2 billion/year in Amman and USD 85 million in Damascus and the rising cost of fuel is prompting a number of cities to develop new public transportation systems. In Syria, the government announced in 2008 that it will develop a metro network in Damascus, with the first line opening in 2015, and all four planned routes open by 2050. Amman is planning three new light rail lines for the

downtown area, part of which will be underground, as well as a link to nearby Zarqa, the country's industrial city.

The city is also developing a new bus rapid transit system scheduled to open in 2011 with three lines operating on a combined length of 32 km. The system will cost an estimated USD 170 million and operate on dedicated lanes.

Road Safety

Ninety per cent of road traffic fatalities take place in low- and middle-income countries which, together, account for only 48 per cent of all registered vehicles. The World Health Organization predicts that such fatalities will be the fifth leading cause of deaths worldwide by 2030. It is already the main cause of death among 15 to 29 years-old and second leading cause of death among those aged 5 to 14.¹³⁶

Mashreq roads are among the most dangerous in the world, with over 23,000 fatalities in 2007, and over 200,000 injuries. Egypt has the second highest rate of annual road fatalities in the world (behind Eritrea) at 41.6 deaths per 100,000 people, followed by Iraq (38.1), Jordan (34.2), Syria (32.9), Lebanon (28.5) and the OPT (4.9), compared with the world average of 20.8 fatalities per 100,000 and 10.3 among high-income countries.

Around 70 to 83 per cent of the victims were male in each country; in Egypt and Jordan, estimates indicate that 20 to 40 per cent of the victims are pedestrians.¹³⁷ The rate of fatalities in the region is increasing (Jordan witnessed a 50 per cent increase from 1989 to 2007 while Syria's rate went up by the same amount from 2001 to 2007), except for Iraq, where it has declined from 20 in 1980 to 7.5 in 2005. The Arab Mashreq Road Safety Partnership has worked to increase regional collaboration on identifying best practices in road safety and achieving selected targets by 2015, including the reduction of road fatalities by 30 per cent.



▲ Egyptians fetching water. Water scarcity has already become a part of daily life for Egyptians. ©Amr Emam/IRIN

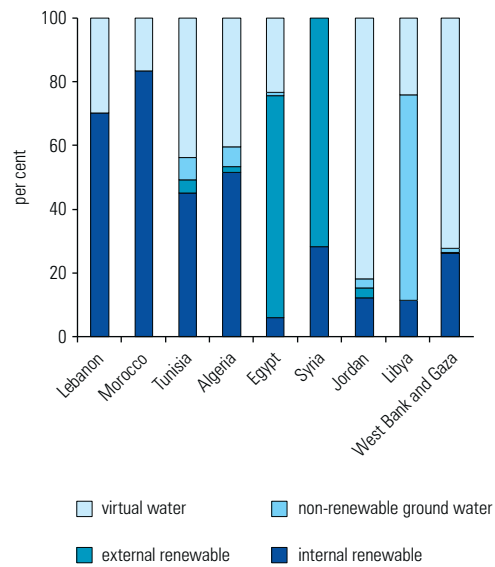
The Challenge of Water Scarcity

Primarily arid, the sub-region's greatest environmental challenge is water scarcity. Mashreq countries have a total of around 80 million cubic meters of renewable water supply (2008 data) but use 88 million cubic meters annually (data from various years 2000-07).

Egypt, Jordan and Syria are using their water at unsustainable rates, leaving little to no room for population growth – currently 0.7 to 2.7 per cent per year in the region.¹³⁸ At the same time, rapid urbanization and rising quality of life standards are leading to a greater demand for water.

In Amman, government-distributed tap water is limited to a few hours one day a week; private trucks distribute well water to households but the depletion of local water resources forces trucks to queue four to five hours to fill their tanks. While the old city of Karak receives a continuous supply of water, the water authority rations water to the surrounding suburbs, where an estimated 68 per cent have only intermittent supply.¹³⁹ The growing scarcity of water is leading to greater competition between sectors and between countries and could become a major cause of future conflict.

FIGURE 17: SHARE OF WATER AVAILABLE BY SOURCE



Source: World Bank, *Making the Most of Scarcity*, 2007

Major reforms in the water sector, including water rationing and tariff structures, are needed but politically difficult to implement. More than half of all arable land in Jordan, Lebanon and Syria relies on rain-fed agriculture, which is increasingly susceptible to the impact of climate change.¹⁴⁰ In Jordan, agriculture consumes 70 per cent of the water resources and contributes 3 per cent to the GDP. As countries urbanize, changing demographics will alter the political interests behind different water rights. To meet demands, these countries are increasingly importing “virtual water”, i.e. food and other products that have been produced with water in other countries.

Iraq is also facing a serious water shortage problem: water control structures, including dams and diversion schemes in neighbouring countries such as Turkey and Iran, have exacerbated the seasonal natural occurrence of drought conditions, inflicting harm on Iraq’s economy

and environment and forcing the Iraqi Ministry of Water Resources in 2010 to declare that it may not be able to meet the water requirements for the summer season of that year.

Since Iraq is the most downstream country on both the Tigris and Euphrates rivers, it is extremely difficult to manage and allocate its water resources in the absence of any binding international water-sharing agreements. Rather, the current state of water management practices in Iraq and neighbouring countries limits the resource available to meet the critical needs of the rural economy and urban living.¹⁴¹

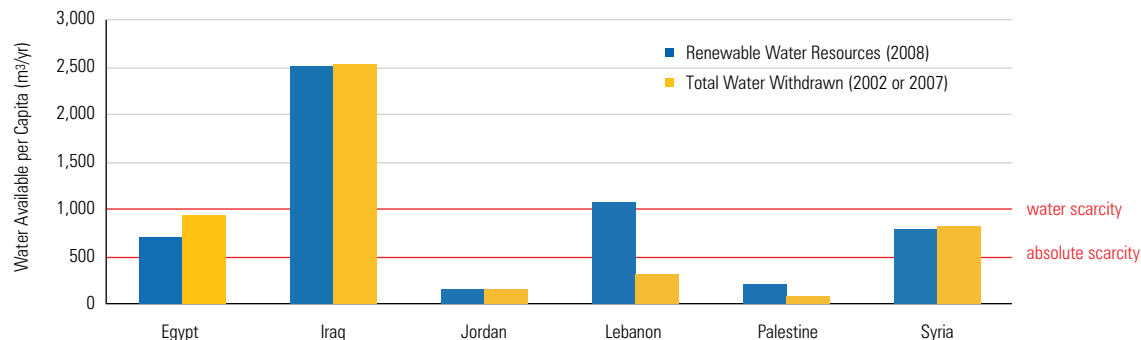
Adapting to Climate Change

Models predict that by 2050 the Mashreq countries will be 2.5 to 3.7°C hotter in the summer and 2.0 to 3.1°C hotter in the winter.¹⁴² Changing temperatures will alter precipitation patterns, with declines in wet season precipitation slightly outweighing small precipitation increases in the dry season. Rainfall will become more erratic. Warmer temperatures and lower rainfall will reduce aquifer recharge and river flow rates. A rise of 0.1 to 0.3 metres in sea level is also predicted by 2050, which will increase salt water intrusion into important coastal aquifers, including in Gaza.

A 2002 study predicted that the combined impacts of increased demand, water resource declines, flood and water quality damage, hydropower losses and ecosystems damage will cost Jordan 1 to 2 per cent of its GDP, Lebanon 2 to 5 per cent, the OPT 2 to 5 per cent and Syria 4 to 7 per cent.¹⁴³

Climate change therefore has the potential to destabilize the region, increasing competition for scarce resources, intensifying food security concerns, deepening poverty and social instability through reductions in economic growth, catalyzing environmental migration and increasing militarization over natural resources which may pose a challenge to existing peace agreements.¹⁴⁴ More energy will be required to pump water from greater depths, to treat and reuse wastewater and to desalinate saltwater, even as Jordan, Lebanon, the OPT and Syria reach the limits of existing energy resources.

FIGURE 18: AVAILABLE AND WITHDRAWN WATER RESOURCES



Source: FAO *Aquastat 2008*

The growing cost of energy will also affect the cost and allocation of water. While the amount of water consumed to produce energy is not known for the Mashreq, in the United States, 40 per cent of total freshwater water consumption is used to produce energy, and around 5 per cent of total energy consumption is used to provide water.

As demand for both water and energy increase and supplies diminish, the costs of both will escalate with the severest impact on the poor. Adapting to climate change hinges on the management of water resources – improving water conservation, a more optimal allocation of water use rights, reducing fossil fuel energy reliance, investing in renewable energy and strengthening international cooperation for water resource sharing.

Water Security

Despite a near doubling of the urban population since 1990, access to improved water and sanitation in the cities of the Mashreq countries continues to be almost universal, with most households having direct access to piped water and water-based sanitation. While the share of urban residents in Syria and the OPT with access to improved water has decreased slightly, the absolute number of people with access is growing. However, inequitable allocation of water resources, access that favours Israelis and water quality that does not meet WHO standards continue to be major challenges for Palestinian communities.

For countries where data is available, per capita water consumption has decreased from 2002 to 2007. Given the scarcity of water in the region, further improvements are needed to increase the efficiency of water use for domestic consumption, such as through reductions in water losses, water use efficiency improvements, and the reuse of wastewater. For instance, one study found that retrofitting 8 per cent of the 360,000 domestic customers in Amman with a more efficient kitchen faucet could reduce residential water consumption by 12 per cent each year.

Water tariffs in the Middle East are low compared to other countries, but raising tariffs – one effective strategy to promote voluntary improvements in water efficiency and conservation – is politically difficult.

Non-revenue water, or water loss due to leaks in the distribution network and illegal water taps, ranges from

35 to 50 per cent, compared to 7 to 20 per cent in Europe and the United States. Due to the low water tariffs and limited government subsidies, water utilities do not have the resources to repair and renovate aging pipe networks. Reducing leakages, which also introduce new contaminants to the distribution system, is often more cost-effective than developing new water supplies.

Domestic and industrial water use account for 10 to 50 per cent of total national water consumption in Mashreq countries, making treated wastewater a major potential resource. Wastewater treatment in the region varies widely, from less than 5 per cent of domestic wastewater in Lebanon, to 50 per cent in Jordan, and 80 per cent in Egypt. About 50 per cent of treated wastewater in Lebanon, 80 per cent in Jordan, and 100 per cent in Syria and Egypt is used to irrigate landscaped areas, fodder crops and even edible crops. Increasing wastewater treatment for agricultural purposes can further reduce demands for freshwater. In 2009, the Ministry of Housing and Construction of Syria announced a plan to build 180 new sewage treatment plants nationwide.¹⁴⁵

Food Security

The Arab region is the largest net importer of food of all regions in the world and therefore vulnerable to variations in world food prices. More than half of all arable land in Jordan, Lebanon and Syria relies on rain-fed agriculture and experts estimate that future agricultural productivity may decline by as much as 10 per cent.

At the same time, the region's demand for food is growing rapidly: the population is growing at 1.7 per cent, compared to 1.1 per cent worldwide; purchasing power is growing at 3.4 per cent, compared to 3 per cent worldwide and the urban population grew by 3 per cent from 1990 to 2006, compared with 2.2 per cent worldwide.¹⁴⁶ Given the state of conflict in the Occupied Palestinian Territories, a 2009 WHO report estimated that 56 per cent of the population living in Gaza and 25 per cent of those in the West Bank were food insecure, and that chronic malnutrition in Gaza had risen to 10 per cent.¹⁴⁷

In 1990, Iraq instituted food rationing under the UN FAO Oil for Food programme. By 2005, two-thirds of the population was dependent on food baskets.¹⁴⁸ The government has essentially ended this system, but rations continue to be

TABLE 17: 2005 TARIFFS ON DOMESTIC WATER AND WASTEWATER (USD/M³) AND WATER LOSS RATE FOR SELECTED CITIES

	Cairo	Alexandria	Amman*	Beirut	Damascus	Ramallah
Water Tariff	USD 0.87		USD 0.14	USD 0.25	USD 0.07	USD 1.04
Wastewater Tariff			USD 0.04		USD 0.01	USD 0.27
Water Loss Rate	50%	50%	42%	40%	45% (Syria)	35% (OPT)

Sources: Global Water Intelligence, 2005 Water Tariffs Survey (2010 available, for fee); World Bank, *Making the Most of Scarcity*, 2007 unless noted otherwise.

* *Water Uses and Demands, Jordan National Water Master Plan Series, June 2004, page 11*

BOX 10: JORDAN – ADDRESSING URBAN WATER SHORTAGES



▲ Delivering water in Jordan. ©High Contrast. Licensed under the Creative Commons Attribution 3.0 Germany license.

Jordan's water scarcity has reached critical levels with a 2010 demand of 1,564 million m³ against a supply of only 1,150 million m³. With current population growth, the annual amount of water available per capita is expected to fall from 140 m³ in 2006 to less than 120 m³ in 2012 - far below the internationally recognized water scarcity threshold of 500 m³.

Jordan's water stress is well illustrated by Greater Amman, the capital, which has grown dramatically from a population of around 2,000 in the 1920s to more than 2 million today. Greater Amman's water supply has been rationed since 1987, with households receiving water one or two days a week for various durations. Despite efforts by the Ministry of Water and Irrigation (MWI) to improve services, people are still suffering from lack of water supply.

But Jordan's water scarcity is not just a supply problem. The Kingdom needs to improve its water management strategy. Non-revenue water is more than 40 per cent of the supplied water. In addition, groundwater is overpumped from most of the aquifers in the country.

Moreover, it is estimated that between 65

and 75 per cent of the nation's water is used for irrigation. Agriculture only contributes 3.6 per cent to the GDP and therefore provides low economic water value compared to urban uses.

Measures should be taken to minimize crops with a large water footprint that could easily be imported, while hydroponic farming should also be encouraged to save water. A major problem in this regard is the lack of coordination between MWI and the Ministry of Agriculture. But irrigated agriculture supports Jordan's food security and small farmers, so policymakers continue to examine measures to produce 'more crop per drop' in irrigated agriculture and to meet growing urban food and water demands.

Whereas more than 95 per cent of the Jordanian population is served by public piped water, the unreliable and discontinuous supply has increased demand for expensive tanker water that puts pressure on household bills. In general, the subsidized but interrupted domestic piped water prices are affordable for the Jordanian poor but tanked water is 8-10 times the cost of piped water, while bottled water (used solely for drinking) is more than

100 times as expensive.

The Jordanian Ministry of Water and Irrigation is attempting to address the problems through:

- Centralized water management to assure more reliable urban water delivery;
- Public-private partnerships for managing and operating water and wastewater facilities;
- Enhanced management, planning, monitoring, pollution control and human and technical capacity building;
- Reducing systemic losses and applying progressive pricing mechanisms to promote conservation;
- Using more than 95 per cent of the treated wastewater for irrigation; and
- Awareness building to further promoting water conservation.

In addition, the government is now constructing a 325 km pipeline from the Disi Aquifer to Amman that could convey 100 million m³ annually and supply Greater Amman for the next 50 years. The total cost of the project is around USD 1 billion and it is expected to be completed in 2013. However, the controversy over radiation levels in the Disi water should be further examined and resolved to ensure the safety of that water.

The concept of water as a human right and the criteria stipulated by the United Nations General Assembly in 2003 should be better promoted through awareness campaigns, especially within the international community. The integration of the water rights concept could have a positive steering role for Jordan's policymaking and consumption behaviour.

Regional cooperation can also be helpful to solving Jordan's chronic water shortages. A comprehensive regional assessment of the socio-economic dimensions of the right to water should be conducted and a portfolio of interventions developed to monitor and support internationally endorsed water rights concepts. But regional cooperation is constrained by the complexity of social, economic and environmental aspects of water resource management in a region whose hydro-politics are far more conducive to conflict than cooperation.

TABLE 18: PROPORTION OF POOR IN URBAN AND RURAL AREAS

	Egypt	Jordan	Syria	OPT
% of urban who are poor	10%	12%	8%	21%
% of rural who are poor	27%	19%	15%	55%
% of poor in urban areas	22%	71%	38%	33%

Source: World Bank, *Food Security*, 2009

provided for six million Iraqis, with a total of USD 3 billion spent on rations in 2010. Having exploited 75 per cent of their renewable water resources, Arab countries will not be able to increase their agricultural production significantly. Recycled water will not be able to account for more than 20-25 per cent of total water sources for agriculture.

The dependency on food imports poses a potential threat to the sub-region's stability as the most at risk to food price increases are the urban poor. Jordan and Lebanon are particularly vulnerable, as they are dependent on cereal imports. In early 2008, due to the fiscal deficit, Jordan removed almost all fuel subsidies, causing prices to rise 76 per cent overnight and the price of basic foods to double or more. The subsequent world financial crisis, declining oil prices and the depreciation of the U.S. dollar mitigated the food crisis, although prices are still above pre-2008 levels.

Governmental responses to rising food prices have been to increase both the wages of government staff and food subsidies which now account for 2.1 per cent of GDP in Syria, 1.8 per cent in Jordan, 1.3 per cent in Egypt and 0.03 per cent in Lebanon. These tend to be imprecise, while inflationary measures often fail to target the poor and cannot be retracted when food prices drop. In Egypt, the social assistance program has a leakage rate of 48 to 60 per cent to the non-poor and Jordan's National Aid Fund supports fewer than 20 per cent

of the eligible population, while only 14 per cent of those who actually received aid were eligible.

To increase domestic productivity, all Mashreq countries need to increase investment in agricultural research and development (R&D). Jordan invests 1.2 per cent of agricultural GDP on R&D, Lebanon and Syria 0.4 per cent each, and Egypt 0.5 per cent, far below the 2 per cent recommended to maintain agricultural productivity. Reducing water and energy subsidies for farmers also increases efficiency investments and the voluntary switching from low-value, high water-consumption crops to higher-value crops.

Energy Security and Air Pollution

Access to electricity is nearly universal in the Mashreq countries – 99 per cent in Jordan, Lebanon, and the OPT, 98 per cent in Egypt, and 90 per cent in Syria¹⁴⁹ – and, in tandem with rapid economic growth, peak energy demand has increased by 135 per cent from 1990 to 2007.¹⁵⁰ According to the International Energy Agency, energy demand across the Middle East is increasing at 3.2 per cent each year, meaning a quadrupling of future energy demand from 2006 to 2030.¹⁵¹

Generating capacity has not kept up with demand, and Syria and Lebanon have had significant load interruptions. Iraq faces similar issues, as in 2010 only 8,000 megawatts



▲ Gaza City, Occupied Palestinian Territories. A Palestinian fisherman mends his nets on Gaza City's beach. Israeli restrictions have severely impacted Gaza's fishing industry. ©Ryan Rodrick Beiler/Shutterstock

of electricity were produced to meet 13,500 megawatts of demand. Many households and neighbourhoods receive fewer than 18 hours of power per day, and are running expensive diesel generators to meet their power needs, contributing to significant local noise and air pollution. Many private sector businesses have had to invest in generators as well, cutting down on the potential for urban job growth.¹⁵² All countries will need to significantly develop new generation capacity to keep up with demand.

Mashreq countries are highly dependent on fossil fuels. With the rise in oil prices, they have been shifting to natural gas whose share of power generation rose from 24 per cent in 1990 to 51 per cent in 2007.

Due to the prevalence of oil in the Middle East, investment in renewable energy has lagged far behind other regions of the world. Recently, however, a number of countries have created renewable energy policies, incentives and targets. By 2020, Egypt aims to provide 20 per cent of its energy through such renewable sources as solar and wind, Lebanon 12 per cent, Jordan 10 per cent and Syria five per cent.

The potential of utility-scale solar and wind power generation is very high in Egypt and, to a lesser extent, Jordan.¹⁵³ The integration of energy networks for electricity and natural gas will require significant institutional and technical resources.

With their arid climates and infrequent precipitation, the Mashreq countries are susceptible to natural air pollution

due to airborne dust. The situation is compounded by significant anthropogenic air pollution from an ageing motor vehicle stock, reliance on high sulphur diesel fuel, poor traffic management resulting in excessive idling, industrial emissions and inefficient domestic diesel heaters (which account for up to 33 per cent of Syria's diesel consumption).¹⁵⁴

In Greater Cairo, industrial areas are a major source of sulphur dioxide, PM10 and lead as 17 per cent of private cars and 32 per cent of taxis are over 25 years old.¹⁵⁵ In 2009, Egypt's Ministry of Finance announced a project to abolish the 34,000 taxis older than 30 years and replace them with new vehicles.

Although the sub-region's air quality continues to be the worst in the world, after South Asia, improvements in vehicle efficiency and public transport have helped to reduce particulate matter of 10 micrograms or less (PM10) in all countries. Three per cent of the world's compressed natural gas (CNG) vehicles can be found in Greater Cairo, where there are 65,000 CNG vehicles, 75 per cent of which are taxis, and 93 CNG fuelling stations.¹⁵⁶ There are drastic local variations in air quality figures. In Syria, where daily concentrations of PM10 vary between 115 and 600 mg/m³ (micrograms per cubic meter), concentrations of PM10 reached 1,290 in Damascus, a city known for narrow streets and high congestion.¹⁵⁷ Improving air quality to reach the WHO standard of 20 micrograms of PM10 per cubic meter will require a major effort.¹⁵⁸



▲ Pollution in the River Nile. ©Mark Henley/Panos Pictures

Solid Waste Management

By 2001, solid waste collection in major cities in Egypt, Jordan, Lebanon and Syria had reached 80 to 100 per cent. Due to rising incomes and urbanization, the generation of municipal solid waste is projected to increase by 2.5 to 7 per cent per year. As a result of widespread scavenging, the majority of waste is organic, mostly disposed of in open dumps.

Improper waste management and resulting environmental damage and foregone economic opportunities are estimated to equal 0.2 per cent of GDP in Egypt, and 0.1 per cent in Lebanon and Syria. Due to the conflict, Iraq's solid waste management system is overwhelmed by the volume of rubble in addition to traditional waste streams, particularly since disposal sites are often inaccessible and public landfills absent. An estimated 50 per cent of urban households bury their waste or dump it in open sites.¹⁵⁹

Each country manages solid waste differently. In Lebanon, the Council of Development and Reconstruction collects and treats waste on behalf of the municipalities, while it is the responsibility of municipalities in Jordan, Syria and the Occupied Palestinian Territories (OPT). Although municipal governments manage solid waste in Egypt, collection is often outsourced to private concessions. In the OPT, residents often organize privatized services for their communities.¹⁶⁰

In 2008, the World Bank signed its first greenhouse gas emission reduction purchase agreement in Egypt for a solid waste-composting project. The Cairo Southern Zone Composting Project will receive 1,100 tons of municipal waste each day and sort it for recyclable materials and aerobic composting of organic waste. In turn, the World Bank will purchase 325,480 tons of carbon dioxide equivalent greenhouse gas emissions reductions over 10 years on behalf

of the Carbon Fund for Europe. The compost will be sold to farmers. Projects such as these have tremendous potential for replication in other cities.

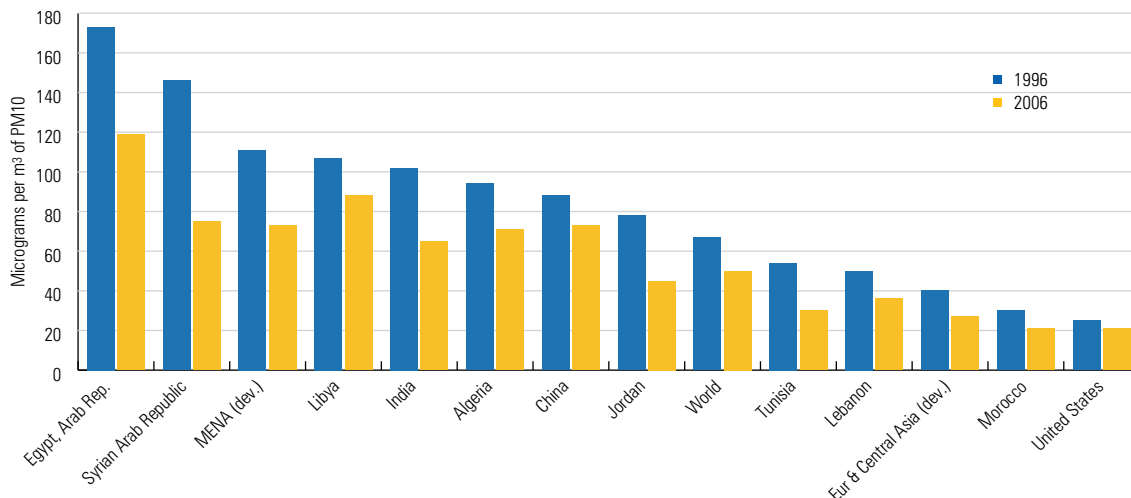
Urban Liveability and Quality of Life

Environmental factors that affect a city's overall liveability and quality of life include noise pollution, access to green space and public safety. Noise pollution is high in the larger Mashreq cities. In Damascus and Aleppo, most areas have an average noise level of 70 to 80 decibels-A (dB (A)), well above the maximum residential standard of 55 dB (A).¹⁶¹ In Amman, a study of 28 locations showed that maximum morning and evening rush hour noise levels were 81 and 71 dB (A) respectively.¹⁶² In Cairo, a 2007 study by the Egyptian National Research Center found that noise levels average 90 dB (A) and never dropped below 70 dB (A). According to the WHO, exposure to loud noise for eight hours a day has the same effect on an individual's health as exposure to high stress.¹⁶³

Useable open space in cities, including plazas, squares, parks and greenways, create pockets of reprieve from dense urban developments, allow children a place to play and provide space for community gatherings and cultural events. Given the density of cities in Mashreq, rapid urbanization and limited water resources, available per capita open space in the region is not only limited but also often concentrated in city centres and wealthier neighbourhoods, creating unequal access.

There are significant opportunities, however, to transform vacant and underutilized lots into public space. In Beirut, the government purchased 114 plots of land to create 33 new gardens and enlarge 23 existing parks. The city intends to construct off-street parking underneath, solving two problems at once.¹⁶⁴

FIGURE 19: PARTICULATE MATTER (PM10) AS A WEIGHTED AVERAGE OF THE URBAN POPULATION



Source: World Bank WDI



▲ Reconstruction work in front of the bomb-scarred former Holiday Inn in Beirut, Lebanon. ©Joel Carillet/iStockPhoto

National Urban Policy

In the Mashreq, national ministries are responsible for the planning and implementation of sectoral development projects. The rapid growth of cities, the emergence of urban corridors, and serious environmental challenges, have led to a renewed focus on national and regional strategic plans and spatial frameworks. In parallel with this effort, several countries are strengthening national-local collaboration on planning and development, creating sub-national/governorate-level planning agencies and empowering local administrations to draft and implement their own plans.

In **Egypt**, the Ministry of Planning formulates economic development strategies and, since 1976, the General Organization for Physical Planning (GOPP), under the Ministry of Housing, Utilities and Urban Development has prepared regional development plans that provide the framework for the governorate and city level plans and projects. GOPP also prepares the greater Cairo regional structure plan and develops key projects. The recently-instituted Informal Settlement Development Facility provides funding and technical assistance to local authorities implementing urban improvement projects.

Lack of coordination among plans and projects in the different regions led to the elaboration of a national development strategy to accelerate the spread of urbanization onto desert land along specific development corridors to the east and west of the Nile Valley and along Egypt's Mediterranean and Red Sea coasts including the Sinai Peninsula.

In **Lebanon**, the Council for Development and Reconstruction (CDR), established in 1977 to plan for the

rehabilitation of the country after the civil war, prepares master plans and finances projects. CDR has absorbed the responsibilities for the planning and management of major projects in Beirut and other cities. A relatively independent organization that reports directly to the Council of Ministers, CDR prepared Lebanon's first national physical plan in 2005 (Master Plan of the Lebanese Territory). It is in charge of coordinating activities with municipal governments and other ministries, such as the Ministry of Public Works and Transport.

In **Jordan**, the Ministry of Municipal Affairs (MOMA) is responsible for overseeing the activities of municipalities and joint service councils, the Higher Planning Council and the Cities and Villages Development Bank. In 2006, MOMA developed the country's first national land use master plan and proceeded to develop comprehensive master plans for eight major municipalities. This was a much-needed step to arrive at a more balanced urban structure since development had historically been concentrated in the Amman region. In general, zoning is the main tool to regulate urban development in Jordan.¹⁶⁵

In **Syria**, the Higher Commission for Regional Planning, established in 2010 under the prime minister, is charged with the formulation of a national framework for an integrated multi-sectoral development strategy and its spatial configuration. This framework will shape the regional structure plans that the Commission will develop. These plans will provide the context for governorates and cities to prepare their own master plans.

In **Iraq**, there is no national urban policy but the country's National Development Plan for 2010-2014 outlined the importance of spatial policy, providing recommendations and next steps for what is to ultimately be a unified urban policy. In the meantime, and in the absence of local planning capacity, Iraq relies on external consultants to prepare the Master Plans for most governorates and key cities.¹⁶⁶

Decentralization and Local Government Systems

After years of nation building and the consolidation of power in central governments, all Mashreq countries have since the early 1980s committed to decentralize authority and empower local bodies. However, central governments retained their authority through the control of financial resources. Most local governments may not borrow funds and most cannot set tax levels or collect certain taxes.¹⁶⁷ Public services that are usually performed by local governments are delivered by line ministries, either directly or through de-concentrated local offices at the governorate level.

In **Egypt**, there are four sub-national tiers of government, including 26 governorates (the main provider of public services), 166 counties (*markaz*), 200 cities and over 4,300 villages.¹⁶⁸ All the heads of these jurisdictions are appointed. The governorate and district levels have executive councils composed of line ministry officials appointed by the central government and elected popular councils, whose limited powers were broadened by law 119 introduced in 2009 to encourage community participation and support greater autonomy in finance by local governments with continued central control over major planning decisions and development projects.

Iraq has 18 governorates, including three in the semi-autonomous Kurdish region. There are 251 municipalities, each of which has an elected council that is chaired by an executive officer appointed by the central government. In effect, municipalities have limited executive power, and are managed and directed by the Ministry of Municipalities and Public Works.¹⁶⁹

Jordan has 12 governorates, whose governors are appointed by the Cabinet. The governorates are divided into districts and sub-districts. Below the governorates, municipalities are led by elected councils composed of a mayor and between six and 11 members. The sole exception is the mayor of Amman who is appointed by the king.

There are 382 village councils, appointed by the Ministry of Municipal and Rural Affairs and the Environment. The governorates are responsible for regional planning and the delivery of services, in coordination with line ministries. Municipalities conduct master planning, maintain streets, collect solid waste, issue construction permits, build and maintain public facilities and set local fees and taxes. Responsibility for fire protection, primary education, water supply, gas, electricity, disaster prevention and public assistance are legally under the municipalities but are implemented by

national authorities. In addition, the central government has created 41 public enterprises, which have financial and administrative autonomy to undertake special tasks.

Lebanon is divided into eight governorates. Historically, it has a strong tradition of local governance and decentralization that was gradually constrained in the 1960s and 1970s by laws that granted the central government power over local authorities, including the right to dissolve them. During the Civil War and the invasion by Israel, municipalities lost their autonomy, as well as the human and financial resources needed to provide services.

The national government has again started to devolve power to local governments. Decree 118 (1997) stated that "every work having a public character or utility within the area of a municipality falls under the jurisdiction of the Municipal Council." However, a lack of clarity on the delegation of responsibilities and inadequate local funds prevent municipalities from discharging their full mandate and national ministries continue to provide health, education, public works, energy, water supply and social services.¹⁷⁰

Local governance in the **OPT** is particularly strong. Since the Palestinian National Authority (PNA) was established in 1994, it has taken steps to strengthen decentralized governance. There are 119 municipal councils and 251 village councils. According to the 1997 Law on Local Government, these elected councils are responsible for town planning, issuance of construction permits, and providing water and power.

East Jerusalem remains under the jurisdiction of Jerusalem Municipality while the West Bank is classified into three categories (A-C) of governance based on the Oslo Accords. In Area A, which comprises the West Bank's major urban areas and equals 17.7 per cent of the land area, the PNA has control of civilian and security issues. In Area B, which comprises most Palestinian rural communities and equals 18.3 per cent of land area, the PNA controls civilian affairs while Israel controls security. In Area C, the remainder of the West Bank, Israel retains both civilian and security authority; almost all Israeli settlements have been built in Area C, where no Palestinian building permits have been granted.¹⁷¹

The weakening of the PNA following the split between Fatah and Hamas has undermined the provision of basic services. To date, political decentralization has progressed further in municipalities than villages, where land is often confiscated by the Israeli occupying forces.¹⁷²

Local elections were held for the first time in 30 years in 2004, although they have yet to be repeated. However, there is widespread support for political decentralisation and strategies to practically implement this are under development, as well as to restructure the four administrative levels of region, province, district and municipality into a two-tier system of regions (*muhafaza*) and municipalities (*nahiya*)¹⁷³.

Syria is divided into 14 provinces headed by governors appointed by the Ministry of Interior and reporting to the president; 60 districts (*manatiq*), 14 counties, (sub-districts) and 6,432 towns/villages. Districts and sub-districts are led

BOX 11: SYRIA'S MUNICIPAL ADMINISTRATION MODERNISATION (MAM) PROGRAMME

From 2005 to 2010, the Municipal Administration Modernisation (MAM) programme, implemented by the Syrian government and supported by the European Union, provided assistance in urban planning, public services delivery and institutional capacity building to the Ministry of Local Administration and six municipalities (Aleppo, Damascus, Deir-ez-Zor, Homs, Lattakia and Tartous). MAM has been recognized nationally and internationally for its achievements and contributions to the modernisation of decentralized administration and local development practices in Syria.¹⁰

MAM has undertaken a variety of activities which include reviewing and revising legislation, increasing the capacity of central and local governments and working jointly with municipalities to prepare sustainable urban development plans, developing approaches to the regularization of informal settlements, streamlining procedures for the delivery of urban services and improving financial management.¹¹

The programme has addressed the issues involved in the preservation of cultural

heritage in the Damascus historic centre and the archaeological site of Palmyra. It has also underscored the importance of regional planning to promote economic growth and sustainable development focusing on the Eastern region. Through sustained support of, and cooperation with, different levels of government, MAM has enabled municipalities to function more efficiently and effectively, which is particularly important as planning responsibilities continue to be devolved to local levels of governance.

One way in which MAM has helped municipalities operate more effectively is through assistance in the preparation of urban development plans. In an underdeveloped area on 30th Street in Damascus, MAM helped create three development scenarios, which provided stakeholders with the information and future visions that participants then discussed to select a preferred option and course of action. MAM then helped prepare a final plan to develop and revitalize this area in an environmentally responsible manner. In Lattakia, MAM also developed a regional tourism strategy analyzing the volume of

tourists attracted, pollution, requirements for water supply and wastewater treatment and public transport to create a more sustainable development plan that integrates the promotion and management of tourism.¹²

In June 2010, following on the success of MAM, the EU launched the Decentralisation and Local Development programme. This programme, in collaboration with the Ministry of Local Administration, provides support to Syrian cities in the continued modernisation of municipal planning and administrative functions including the management of public investments. It also facilitates capacity building for local authorities, fosters economic and social development and improves access to urban services.¹³

To support the new programme, MAM has established the Regional Centre for Sustainable Local Development. The centre supports local communities and provides local authorities with access to international networks and cooperation programmes and opportunities to participate in study tours and international conferences. The centre will also facilitate access to funding.¹⁴

by officials appointed by the provincial governors and have locally elected councils. Governance is highly centralized although current policy is to decentralize and strengthen local councils. As part of its Municipal Administration Modernization project (see Box 11) the government has drafted a new National Law on Regional Planning and a National Law of Local Administration. The first called for the creation of a new Regional Planning Commission, launched in 2010, and the second for the Governorates to implement spatial planning.

Local Government Finance

The Mashreq region inherited a tradition of centralized taxation from both the Ottoman Empire and the European colonial states.¹⁷⁴ In most countries, the devolution of responsibilities to local governments has not been accompanied by fiscal reforms that either ensure adequate central transfers or grant local administrations the ability to collect their own revenues.

Because central government transfers finance most local expenditures, revenue and expenditure information is only available in aggregate forms. In Egypt, 94 per cent of local budgets are provided through central transfer and an estimated 90 per cent of local budgets are spent on wages.¹⁷⁵

Local government expenditures as a share of total national expenditures declined from 22 per cent in 1996/97 to 16 per cent ten years later, due to the importance of central finance of capital investments. The lack of budget allocated for training civil servant and the absence of performance-based incentives constrain improvements in the quality and efficiency of local administrations.¹⁷⁶

In **Egypt**, local budgets draw on three major sources of revenue: taxes on property and vehicles, non-tax current revenues (user fees, licenses) and current transfers, which together account for 83 per cent of the budget.¹⁷⁷ In a pilot project, the Governorates of Alexandria and Qina are testing different strategies to collect user fees to finance their own development priorities.¹⁷⁸

In **Lebanon**, municipalities can theoretically draw on as many as 35 sources, including locally collected fees and tariffs, taxes collected by the central government on behalf of municipalities, central transfers and fees collected by private institutions and transferred to local governments. In reality, they are highly dependent on central transfers, which have become less reliable as the central government focuses on debt service and infrastructure investments. In **Syria**, local government finance is centralized, and all local government operations are funded through central transfers. Any unspent funds are returned to the national treasury.

Only the **OPT** has a truly decentralized budgetary system, due to the necessity for each city to raise its own revenues.¹⁷⁹ Central transfers comprise only 15 per cent of local revenue, with 90 per cent of property taxes (collected directly in Gaza or indirectly through the Palestinian National Authority in the West Bank) going to the municipalities. Municipalities undertake the majority of infrastructure programmes, with funding generally provided (and often overseen) by foreign donors.¹⁸⁰

The Role of Civil Society

Civil society organizations (CSOs) in the Arab region are active in social services delivery; knowledge-oriented activities; leisure and social activities and public interests and rights.¹⁸¹ Due to the rapid growth of cities and the limited resources of governments, the burden of providing social services to the poor has increasingly fallen to CSOs.

In **Egypt**, CSOs must register with the Ministry of Social Affairs. Lack of funding is a constraint on CSOs, which are often prevented from or wary of accessing international funds. They rely on donations from religious institutions or state funding. This situation was recently reinforced by widespread perception of foreign interference in the country during the civil unrest in early 2011.

Islam has a strong tradition of charitable giving (*zakat*) that is the root of religious endowments (*waqf*, plural *awqaf*) that dedicate the proceeds of real estate holdings to specific charitable purposes. Once an important provider of social welfare, most *awqaf* are now regulated by dedicated ministries.¹⁸² Today, a growing number of CSOs are invoking the *zakat* model to solicit funds and the revival of the endowment model has potential to revitalize Islamic philanthropy.

CSOs in **Jordan** play a major role as the government's privatization of previously public services in the past decade has also forced civil society to take on new roles in poverty alleviation, the empowerment of women, community development and youth services. Today there are an estimated 3,200 civil society organizations in Jordan with a total of over one million members, 36 per cent of which do charitable social work.¹⁸³

In **Egypt**, as the state withdrew from certain social services as part of its decentralization policy, civil society has blossomed, growing from around 7,600 organizations in 1985 to around 25,000 in 2008, 70 per cent of which are in urban governorates. Coptic and Muslim civil society groups are among the oldest in Egypt and provide support for the needy.¹⁸⁴

In **Lebanon**, there are 6,032 registered civil society groups.¹⁸⁵ Following the conflict between Hezbollah and Israel, a number of CSOs shifted their activities to providing relief and support to victims of the conflict. While they have limited impact on the political realm, civil society groups in Lebanon lead the promotion of good governance, transparency and accountability.¹⁸⁶

CSOs in **Syria** are mostly active in the cultural and environmental fields. One federation of trade unions and a women's union exist in the country.

In the **OPT**, the absence of a national government has galvanized the development of a diverse array of CSOs that play a critical role in the provision of social services. They provide an estimated 60 per cent of primary health services, managing 42 per cent of hospitals, 90 per cent of rehabilitation centres and 95 per cent of pre-school education.¹⁸⁷

In **Iraq**, the Saddam Hussein regime required CSOs to be registered with the government, fuelling the perception that such organizations were linked to and worked on the regime's behalf. After 2003, the inflow of international NGOs created a widespread perception that civil society is linked with foreign occupation and interests. This has created difficulties for independent and unaffiliated Iraqi NGOs and CSOs, although in 2010, Iraq passed a new NGO Law that seeks to strengthen them and CSOs and position both as independent of the prevailing government.¹⁸⁸

Women in Politics and Governance

Women range from 16 to 25 per cent of the total workforce in the Mashreq. Their low participation can be attributed to a variety of factors: high fertility, a prevailing male-dominant culture supported by biases in the legal framework; the scarcity of jobs; wage and employment discrimination; weak social support systems for child care; and inadequate public transportation.¹⁸⁹ However, women's participation in the administration of NGOs is significant – 45 per cent in Lebanon, 42 per cent in the OPT and 18 per cent in Egypt.¹⁹⁰ Their participation is largely concentrated among NGOs dealing with women-related issues.

In 1952, **Lebanon** became the first Arab country to grant women both the right to vote and to become members of parliament, and all Mashreq countries have since followed suit with Egypt and Jordan having also adopted minimum quota for women in parliament. Despite these laws, the participation of women in politics continues to be low, with women representing only 3 to 12 per cent of the members of parliament, compared to a world average of 15 per cent. In many cases, female parliament members and ministers are educated and often from elite classes.

In **Iraq**, 25 per cent of central government membership is reserved for women. Although no quota exist for governorate or municipal positions, women account for 20 per cent of councillors in Hilla and 25 per cent in Nassiriya.¹⁹¹

Female participation in local administration also remains limited. In the 2004-2005 municipal elections in the **OPT**, 16 per cent of seats were guaranteed for women and, in 2005 in Ramallah, Janet Mikhail became the West Bank's first woman mayor. In 2007, **Jordan** began requiring municipal councils to have 20 per cent female representation and, in the last municipal elections, 20 women were competitively elected and 195 gained seats through the quota system. Of six women who ran for mayor, one was elected in Hasa.¹⁹²



▲ Palestinian refugees in Beirut, Lebanon. ©Al Jazeera English. Licensed under the Creative Commons Attribution-Share Alike 2.0 Generic license.

Migrants and Refugees in the Mashreq

With the exception of Jordan and Syria, who have been net receivers of both migrants and refugees, most of the Mashreq countries have experienced a net outmigration with residents searching for employment opportunities safe havens abroad. Not surprisingly, conflict ridden countries (Iraq, Lebanon and the OPT) have witnessed large outmigrations.

Many migrants in the Mashreq region travel abroad in search of better economic opportunities. In addition, many of the countries are receivers of lower wage workers. In search of employment opportunities, Egyptians have gone to Jordan, Libya, Saudi Arabia and the United States and a growing number have migrated across the Mediterranean to Italy via Libya.¹⁹³ Conversely, 2.2 million to 4 million people from sub-Saharan Africa, primarily Sudanese, have settled in Egypt and work in the informal service sector.¹⁹⁴

Many well-educated and highly-skilled Jordanians emigrated during the 1970s and 1980s in search of employment opportunities in the oil-producing countries while semi-skilled workers from Egypt, Syria and Asian countries have come to that country to work in the agricultural, industrial and service sectors.¹⁹⁵

TABLE 19: EGYPTIAN NATIONALS ABROAD BY HOST COUNTRY

Country	2000
Canada	110,000
Jordan	226,000
Libya	332,000
Saudi Arabia	923,000
United States	318,000

Source: International Labour Organization

The Lebanese diaspora of around 14 million is larger than the resident population.¹⁹⁶ While the civil war has contributed to emigration,¹⁹⁷ there has also been an outmigration of the better educated, higher-skilled population looking for job opportunities abroad.¹⁹⁸ The departure of higher-skilled individuals is, in part, due to the low returns on education in the domestic labour market.¹⁹⁹

Once abroad, migrants begin to remit a portion of their earnings to their families back home. These infusions can have a positive impact on household income, especially in urban areas. With its huge diaspora, Lebanon is the largest receiver of remittances. Egypt is the second largest, with

approximately USD 7.1 billion in 2009, but the remittances only represent 3.8 per cent of GDP.²⁰⁰ Remittances in Jordan, although more modest in absolute terms, account for 16 per cent of GDP, one of the highest percentages worldwide.²⁰¹

Remittances can have a significant impact on urban development. When migrants remit a portion of their earnings, the additional income is often saved, initially to cover the travel expenses of sending other family members abroad. Further savings are typically used to purchase land and the incremental construction of housing, often with commercial activities. Income generated by these activities supports the education costs of the next generation.

International Migration of Refugees

Iraq, Lebanon and the OPT have faced civil conflict and, as a result, many residents have migrated abroad to seek refuge in other countries. Historically, the **OPT** is the largest sender of refugees, many of whom have settled in urban areas. Approximately 1.4 million live in camps in Jordan, Lebanon and Syria or in the West Bank or Gaza Strip, often in densely settled areas with inadequate infrastructure.²⁰²

In **Iraq**, an average of approximately 115,000 people leave the country each year. Since the 1980s over 2 million Iraqis have migrated to other countries in the region, primarily Syria and Jordan, to escape the insecurity and instability created by the war with Iran, the First and Second Gulf Wars and the sectarian violence of the 2000s.²⁰³

Jordan has been the main destination for refugees from Occupied Palestinian Territories after the wars of 1948 and

1967 and more than 50 per cent of the population is of Palestinian origin.²⁰⁴ Lebanese refugees during the civil war and Iraqis, during both Gulf Wars, contributed significantly to the 2.5 million refugees residing in Jordan as of 2010.²⁰⁵ In 2008, approximately 25 per cent of the Amman population were refugees, the highest ratio in the world.²⁰⁶

Although many emigrated from **Lebanon** to escape the civil war, the country is also home to refugees.²⁰⁷ As of 2008, approximately 417,000 refugees - Palestinian (350,000)²⁰⁸, Iraqi (40,000)²⁰⁹, and Kurdish (27,000) - resided in Lebanon, primarily in Tyre, Beirut, Tripoli and the Beqa'a.²¹⁰ They face restrictions with regards to owning property²¹¹ or securing a job,²¹² forcing them into the informal housing and labour markets. As of January 2010, approximately 750,000 Iraqis were residing in Syria but that number is expected to decline to approximately 512,000 by January 2011 and to 262,000 by December 2011.²¹³

Internally Displaced Persons

It is estimated that 1.9 million Iraqis have been displaced internally as a result of conflict, which has led to significant problems in land claims and ownership, as well as in informal and illegal housing occupancy.²¹⁴ In Lebanon, significant internal displacement occurred during the civil war, fuelling Beirut's informal urbanization.²¹⁵ In Syria, 40,000 to 60,000 families have been migrating from rural to urban areas each year as a result of droughts; rural communities in the northeast have been hit particularly hard spurring the migration of 200,000 to 300,000 Syrians to urban areas.²¹⁶



▲ A view of Jabalia refugee camp. Jabalia is the largest of the Gaza Strip's eight refugee camps. It is located north of Gaza City, close to a village of the same name. ©Suhair Karam/IRIN

Metropolitan Regions and Corridors

Development corridors are an important feature of the Mashreq countries where urban settlements have historically grown and flourished along riverbanks, coastlines and road infrastructures. Modern transportation networks extending across national boundaries have overlaid highways linking key cities across more barren lands.

The Greater Cairo Region (GCR), with almost 20 million residents, is the Arab world's largest extended metropolitan region. Situated at the southern edge of the Nile Delta, the GCR anchors several strategic corridors that link it to

Alexandria, Egypt's second city and largest port with 40 per cent of the country's industries; to the Suez Canal cities; Port Said on the Mediterranean coast, the major trading port; to Ismailiya on the Canal and Suez on the Red Sea a major industrial city and oil terminal.

The 225 km Cairo-Alexandria Corridor is the largest and part of the Arab State's most important mega urban region. It comprises 105,000 hectares of land, 75 per cent of which is agricultural, and 25 per cent of which is desert. The corridor includes Sadat City, a new urban community that will

FIGURE 20: HISTORICAL DEVELOPMENT AROUND THE CAIRO-ALEXANDRIA CORRIDOR

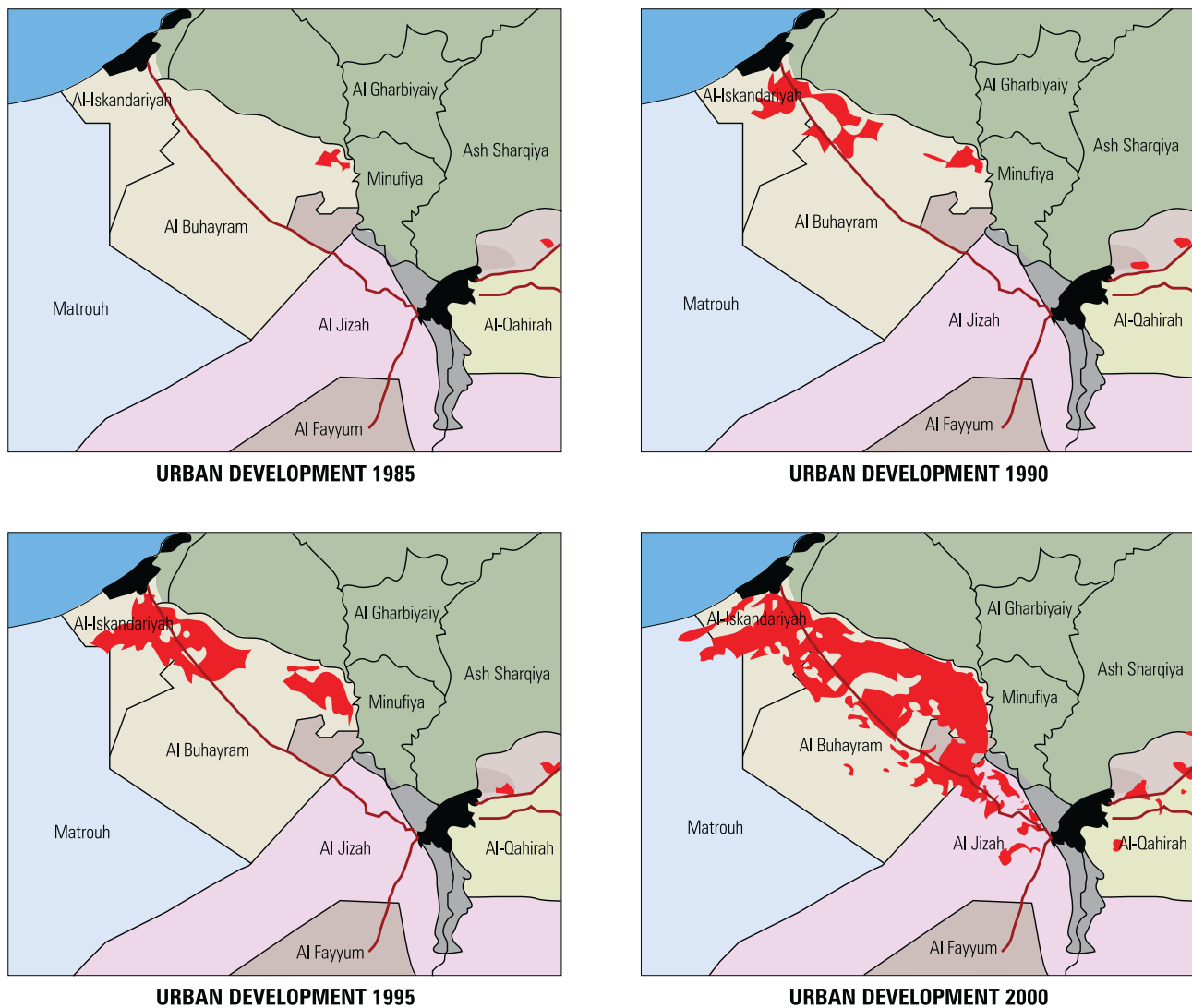


FIGURE 21: URBAN CLUSTERING ALONG THE NILE VALLEY AS SEEN FROM SPACE



Source: NASA Marshall Space Flight Center 2010

accommodate 1 million people by 2030. About 40 per cent of the corridor's area is devoted to agri-export activities that account for over 37 per cent of the country's total output in this sector.

Major challenges include urban sprawl, a rapid inflation in land prices, worsening congestion (traffic volumes ballooned from 6,576 cars per day in 1985 to 26,726 cars per day in 2005), increasing groundwater contamination, aquifer depletion, and untreated wastewater. Alexandria has approved a new development plan that seeks to address some of these challenges, including a new regional ring road and pro-poor policies.

A special feature of the corridor is the development of high technology parks referred to as "smart villages." The success of the first smart villages in Giza across from 6th of October New Town at the beginning of the corridor has led to its expansion beyond the original three square kilometres and plans to develop a similar hi-tech park west of Alexandria close to the end of the corridor. At the end of 2010, 150 hi-tech companies had located in the park and were employing 35,000 professionals, most of them young people. With the expansion, the park is expected to be able to accommodate 500 companies employing a total of 100,000 people.

UN-Habitat is working with the General Organization for Physical Planning (GOPP) to prepare a strategic urban development plan for the Greater Cairo Region. Key features include slum and informal settlement upgrading plans, moving major public sector functions to a new government centre on the periphery, relocating polluting land uses from the inner city, revitalizing the historic centres, and preparing new strategic plans for transportation, infrastructure and local economic development. Links to the ring road and the Cairo-Alexandria corridor have been completed.

Iraq's largest cities – Baghdad, Mosul, and Basra – are geographically spread out, but the 490 kilometre transport

corridor from the southern port of Umm Qasr via Basra to Baghdad is Iraq's most important trade and shipping artery (see Figure 22). As Iraq is a largely landlocked country, Umm Qasr is its only independent means of accessing maritime shipping.²¹⁷

Syria's Damascus-Homs Corridor is another important emerging mega urban region and encompasses the country's key cities and industries. The corridor includes Hissya, a new industrial city 47 kilometres south of Homs that has four major economic sectors: textiles, food, chemicals, and engineering. The city accommodates 66,000 workers and their families. In 2009, the Government of Syria adopted a regional planning law and established the Regional Planning Commission. In 2010, with funding support from the government and UNDP, it started to develop the national framework for regional planning, structure plans for the regions and to assist governorates in preparing strategic urban growth plans.

On a smaller scale, the 28 kilometres Amman-Zarqa corridor is the most important conurbation in Jordan (see Figure 23). Zarqa is its third largest city and home to over 440,000 people and over 50 per cent of the country's industries. Areas between the two cities are rapidly developing. Tameer Holdings, a UAE developer, is building a new township for 50,000 people between Zarqa and Amman; the project includes 7,000 apartments targeting low-income residents. With over 150,000 vehicles per day clogging the corridor, the Government of Jordan intends to build a light rail connection between Zarqa and Amman that would transport almost 100,000 passengers per day, largely constructed in the historic Hejaz Railway right-of-way.²¹⁸ Funded by the International Finance Corporation (IFC), this project is a structured public-private partnership. A separate programme will develop an efficient rapid bus system to link into the light rail system.²¹⁹

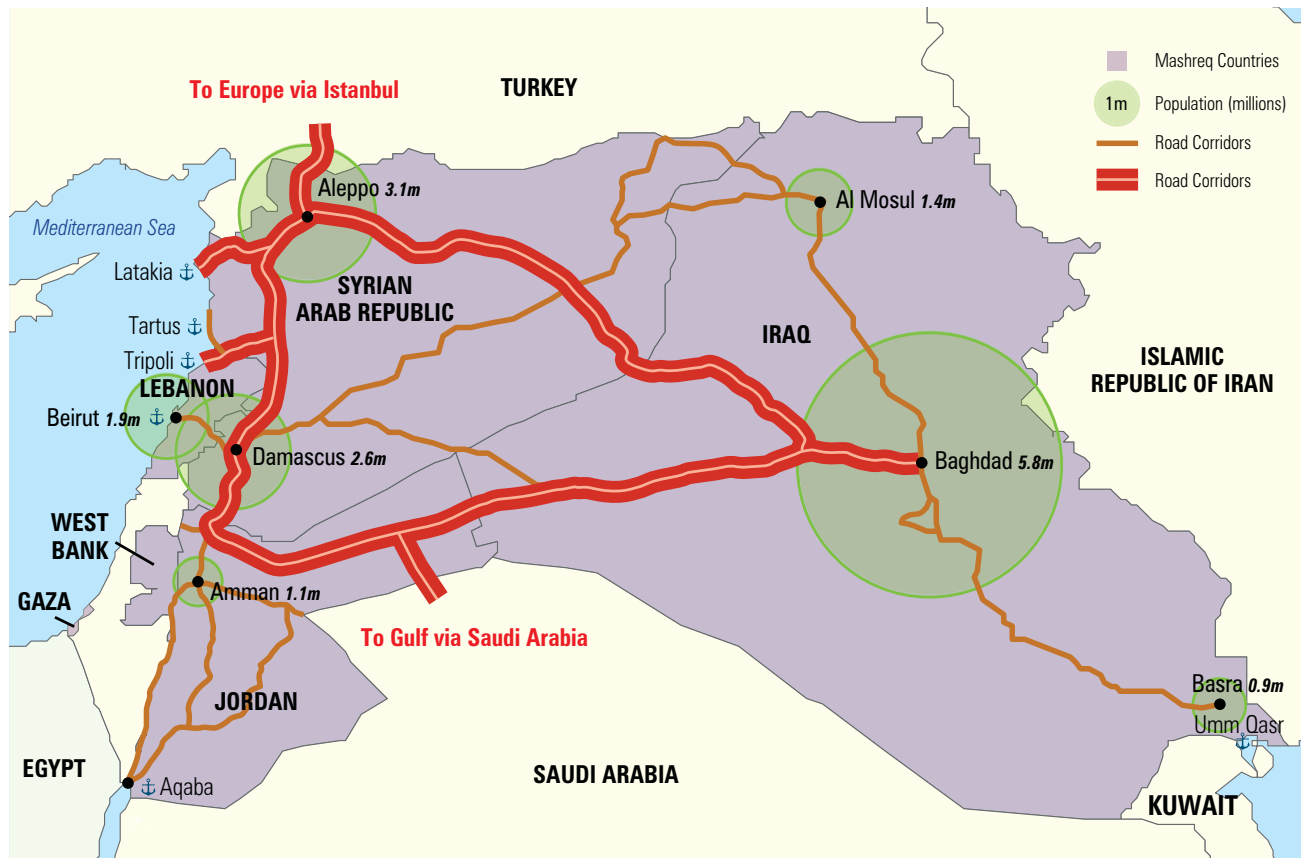
FIGURE 22: CORRIDORS PROPOSED BY WORLD BANK MASHREQ TRADE FACILITATION AND INFRASTRUCTURE PROJECT²²⁵

FIGURE 23: AMMAN-ZARQA CORRIDOR



Source: Railway Gazette 2009

Regional Integration

Arab countries have signed trade agreements with each other, African countries, the European Union and the United States. In addition, the Pan-Arab Free Trade Area (PAFTA) has removed tariffs on trade and facilitates customs clearance while the Agadir Agreement established a Free Trade Zone between Morocco, Tunisia, Egypt and Jordan and can be expanded to the remaining Maghreb and Mashreq countries. Also, bilateral agreements exist between the EU and Jordan, the West Bank and Gaza, Lebanon and Syria, which represent a first step for a future EURO-MED free trade area.

In spite of these agreements, intra-MENA trade accounts for less than 10 per cent of the countries' total exports.²²⁰ Mashreq countries trade more with the EU than with each other or the rest of the Arab world because they produce similar products, regulatory facilitation is inadequate, and investment in an integrated physical infrastructure has lagged. The 2007 UN Economic and Social Commission for Western Asia (UN-ESCWA) index of Arab regional integration for 16 Arab countries ranked Jordan, Lebanon and Syria as the lead countries. This is demonstrated in the relatively strong electrical and transportation networks in the region.

Establishing a regional electrical network is one area where integration is advancing. There is a seven-country interconnection project between Egypt, Iraq, Jordan, Lebanon, Libya, Syria and Turkey that began in the 1990s. Connections have been established between Egypt and Jordan, Jordan and Syria, Syria and Lebanon, and Syria and Turkey; the Syria/Iraq connection remains uncertain. Moving forward, this initiative will increase capacity on existing lines and eventually extend the network west to the Maghreb countries. In addition, Egypt and Saudi Arabia are working on a 3,000 MW-sharing project to be implemented in two phases and completed by 2015.²²¹

Emerging Transnational Transportation Corridors

Transportation accounts for 8 to 13 per cent of the Mashreq GDP and employs around 10 per cent of the labour force.²²² The quality of transportation infrastructure is an important determinant of export productivity, as well as individual mobility and quality of life. According to the World Economic Forum's 2010 ranking, most of the Mashreq countries have stronger infrastructure than others in their class: Egypt's rail and air transport are highly competitive and Jordan has high quality roads and air service. The exception is Lebanon, where poor infrastructure hampers economic activities.

One of the barriers to intra-regional trade in the region is the lack of an integrated, high-quality, multi-modal transportation network. Several transportation agreements were organized by UN-ESCWA in the early 2000s: the Agreement on International Railways in the Arab Mashreq (2002), the Agreement on International Roads in the Arab Mashreq (2002) and the Memorandum of Understanding on Maritime Transport Cooperation in the Arab Mashreq (2005). Most have not been implemented as a result of lack of funding and political conflict in the region, including 60 per cent of the proposed railway networks.

The World Bank has proposed transportation investments to strengthen cross-border trade along three corridors: a north-south corridor that links the European Union and the Gulf Cooperative Council via Turkey, Syria and Jordan (with a connecting link to Egypt) and two east-west corridors that link the ports of Lattakia and Tartous (Syria) and Tripoli and Beirut (Lebanon) to Iraq, giving it access to the Mediterranean.²²³

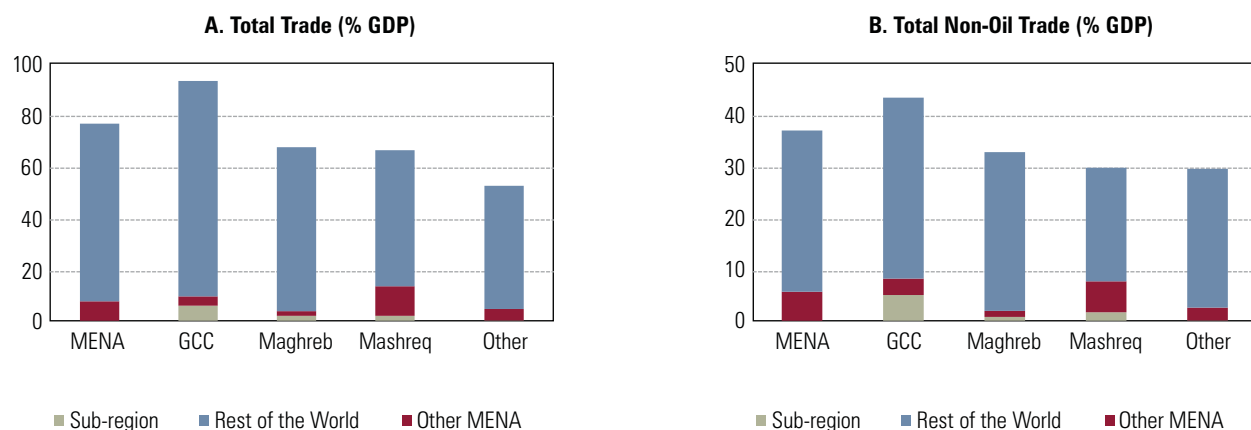
The World Bank estimates that, by 2020, improved infrastructure and more efficient logistics could increase daily traffic in the north-south corridor to 2,500 trucks and 15 trains in each direction, and 1,100 trucks and six trains in each direction in each of the two east-west corridors. The project is estimated to take 15 years and cost USD 5.2 billion, which would be financed by governments, the private sector and international development agencies.²²⁴

A USD 780 million First Phase has been agreed upon by the World Bank and Iraq, Jordan, Lebanon, Syria and the West Bank and Gaza. It will finalise institutional arrangements and a regional trade framework; improve existing road and rail infrastructure and border crossings and define Phase 2 investments.

The largest infrastructure investments would be made in Iraq, followed by Syria, Jordan, Lebanon, and the OPT. Four border crossings will be improved on the Lebanese-Syria border, one on the Iraqi-Syrian border and one on the Iraqi-Jordanian border. Road networks will also require improvements, the most urgent being the upgrading the Jordanian road network leading to the Saudi Arabia border and the Iraqi roads in the east-west corridors. The Mashreq countries have also called for the creation of a corridor management agency to facilitate the implementation of this project and coordinate trade activities among countries.

Rail Infrastructure. The Mashreq has over 10,000 km of railroads, but the international movement of freight and passengers is limited due to the lack of regional integration. Following the signing of the Agreement on International Railways in the Arab Mashreq in 2002, the Mashreq countries

FIGURE 24: MENA TRADE BY COUNTRY SUB-GROUPS, 2007



Source: World Bank, *Economic Integration in the Mashreq*, 2010

are developing new rail lines to create a more integrated network. A major challenge lies in integrating the Mashreq network to Egypt.

Egypt's 5,085 km of railroads operates only within the country and, while a connection to Libya is under construction, defunct links to Israel and Palestine prevent the direct rail connection to the rest of the Mashreq. Jordan's 510 km of railroads serve mainly to transport phosphate from mines to the port of Aqaba and its narrow track gauge prevents integration with the rest of the region. However, Jordan has adopted a EUR 2.7 billion (USD 3.58 billion) project that will convert the system to standard gauge and add another 400-plus kilometres of network linking it to Syria, Iraq and Saudi Arabia by 2013. Lebanon's two lines, totalling 408 km, stopped operating in 1975 due to the civil war; a study is underway to evaluate reopening the Tripoli-Syria segment. Syria's 2,495 km network is the most internationalized with one link to Iraq and two to Turkey; it has been developing a number of rail projects that will enlarge its network by over 400 km by 2013. The Occupied Palestinian Territories have no railroads and none are planned.

Transportation links will play a key role in the new development corridors encompassing economic activity and will shape future urbanization. The timetable for the implementation of these projects will have to be revised when

stability is restored in the region, following the recent civil unrest.

Maritime and Airport Infrastructure. The railway network is closely linked to port facilities, the most important of which are Alexandria, Aqaba, Beirut, Latakia, Port Said, Tartous, Tripoli, and Umm Qasr. Dry ports and intermodal terminals opened in Homs and Adra in 2009, and one is planned to open in Aleppo in 2012. All of these are feeder ports and their performance, as measured by volume of freight, has consistently improved over the past five years. Lebanon's port infrastructure is ranked 55th in the world, followed by Jordan (64), Egypt (69) and Syria (117). The Mashreq corridor infrastructure projects will significantly increase the efficiency of port infrastructure in Lebanon and Syria.

Egypt has 20 civil airports (including ten international), which carried 6.7 million passengers in 2008; Jordan has international airports in Amman and Aqaba that serve 2.4 million passengers; Syria has three international airports in Damascus, Aleppo and Latakia, serving 1.4 million passengers and Lebanon, which has one airport in Beirut, serves just under one million passengers a year. Similarly, air freight transport in the region was the most significant for Egypt and Jordan and, to a lesser extent, Lebanon, which have highly competitive air transport infrastructure. Syria's freight transport infrastructure is minimal.



▲ Cairo, Egypt. The Greater Cairo Region is the Arab world's largest extended metropolitan region. ©Baloncici/Shutterstock

TABLE 20: TOTAL AND URBAN POPULATION ('000S) AND PER CENTAGE POPULATION URBAN

	1990	1995	2000	2005	2010	2015	2020	2025	2030
Total Population ('000s)									
Egypt	56,843	62,064	67,648	74,203	81,121	88,179	94,810	100,909	106,498
Iraq	17,374	20,288	23,857	27,359	31,672	36,977	42,684	48,885	55,257
Jordan	3,416	4,382	4,827	5,342	6,187	6,797	7,366	7,906	8,415
Lebanon	2,948	3,463	3,742	4,052	4,228	4,385	4,516	4,624	4,701
OPT	2,081	2,596	3,199	3,556	4,039	4,648	5,317	6,027	6,755
Syria	12,324	14,171	15,989	18,484	20,411	22,184	24,079	26,009	27,859
Urban Population ('000s)									
Egypt	25,124	27,340	30,032	33,197	36,664	40,712	45,301	50,506	56,477
Iraq	12,602	14,424	16,722	18,891	20,822	23,700	26,772	30,244	33,930
Jordan	2,350	3,366	3,798	4,359	5,083	5,498	5,998	6,533	7,063
Lebanon	2,472	2,961	3,244	3,535	3,712	3,891	4,065	4,231	4,374
OPT	1,462	1,843	2,267	2,749	3,269	3,834	4,447	5,108	5,810
Syria	6,224	7,320	8,577	10,284	12,545	14,181	15,948	17,938	19,976
Per cent Population Urban (%)									
Egypt	43.48	42.81	42.80	43.03	43.40	44.36	45.93	48.12	50.92
Iraq	69.71	68.78	67.83	66.90	66.17	66.05	66.55	67.67	69.37
Jordan	72.23	78.21	78.26	78.31	78.53	79.02	79.78	80.77	81.97
Lebanon	83.12	84.82	86.00	86.60	87.24	87.92	88.63	89.35	90.04
OPT	67.86	70.41	71.97	73.06	74.14	75.32	76.59	77.95	79.37
Syria	48.93	50.10	51.95	53.78	55.74	57.90	60.24	62.74	65.37

Source: UN-DESA, WPP 2008 and WUP 2009

TABLE 21: NATIONAL AND URBAN POPULATION ANNUAL GROWTH RATES

	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025	2025-2030
National Population Growth Rates (%)								
Egypt	2.00	1.89	1.90	1.81	1.66	1.44	1.24	1.10
Iraq	2.97	3.23	2.72	2.17	2.63	2.29	2.10	1.80
Jordan	5.59	2.40	2.74	3.02	1.44	1.55	1.46	1.27
Lebanon	3.20	1.55	1.58	0.83	0.79	0.71	0.64	0.51
OPT	3.89	3.70	3.55	3.18	2.87	2.63	2.42	2.21
Syria	2.77	2.45	2.94	3.26	1.69	1.56	1.54	1.33
Urban Population Growth Rates (%)								
Egypt	1.69	1.88	2.00	1.99	2.09	2.14	2.18	2.23
Iraq	2.70	2.96	2.44	1.95	2.59	2.44	2.44	2.30
Jordan	7.18	2.42	2.75	3.07	1.57	1.74	1.71	1.56
Lebanon	3.61	1.83	1.72	0.98	0.94	0.87	0.80	0.67
OPT	4.63	4.14	3.86	3.47	3.19	2.97	2.77	2.58
Syria	3.24	3.17	3.63	3.97	2.45	2.35	2.35	2.15

Source: UN-DESA, WUP 2009

TABLE 22: AVERAGE ANNUAL RATE OF CHANGE OF URBAN AGGLOMERATIONS WITH 750K+ PEOPLE IN 2009 (PER CENT)

	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025
Alexandria	1.35	1.83	2.02	1.98	1.76	1.64	1.65
Cairo	1.38	0.93	0.76	0.81	1.17	1.45	1.52
Amman	2.67	0.68	0.68	1.19	1.41	1.39	1.40
Beirut	-0.39	3.19	3.57	1.72	0.97	0.55	0.42
Damascus	1.85	2.13	2.13	2.48	2.33	1.93	1.90
Aleppo	3.64	3.35	3.35	3.39	2.57	1.92	1.88
Hama	3.12	6.27	6.26	5.65	3.34	2.14	2.05
Homs	3.83	4.49	4.49	4.29	2.91	2.06	1.99

Source: UN-DESA, WPP 2008 Revision and WUP 2009

TABLE 23: CITY POPULATIONS IN THOUSANDS

	1985	1990	1995	2000	2005	2009	2010	2015	2020	2025
Alexandria	2,826	3,063	3,277	3,592	3,973	4,304	4,387	4,791	5,201	5,648
Cairo	8,328	9,061	9,707	10,170	10,565	10,902	11,001	11,663	12,540	13,531
Amman	736	851	973	1,007	1,042	1,088	1,105	1,186	1,272	1,364
Beirut	1,585	1,293	1,268	1,487	1,777	1,909	1,937	2,033	2,090	2,135
Damascus	1,546	1,691	1,854	2,063	2,294	2,527	2,597	2,918	3,213	3,534
Aleppo	1,292	1,554	1,864	2,204	2,605	2,985	3,087	3,510	3,864	4,244
Hama	273	309	361	495	676	854	897	1,060	1,180	1,307
Homs	470	565	684	856	1,072	1,276	1,328	1,536	1,702	1,881

Source: UN-DESA, WPP 2008 and WPP 2009

TABLE 24: CHARACTERISTICS OF HOUSING MORTGAGES IN THE MASHREQ

	Egypt	Jordan	Lebanon	Syria
Mortgage Loans (million USD)	666-800		1,770	
Mortgages as % of GDP	0.4%	10%	6%	5%
Mortgages as % of Bank Loans	0.89%			
Average Mortgage Interest Rates	12-13%	8-9%	5.9%	9%
Loan Maturities	12-13.5 yrs	Up to 30 years	20-30 yrs	5-17
Borrowing limits	25% of down payment			Down payment: 20%, min loan: USD 16,300

Sources: NBK Capital 2010, Global Property Guide, 2010; Jordan Mortgage Refinance Company 2009 Annual Report; Egypt Eyes Mortgage Law to Boost Property Sector

TABLE 25: LEVEL OF MOTORIZATION IN MASHREQ COUNTRIES, VARIOUS YEARS

	Egypt	Jordan	Lebanon	Syria	OPT
Roads (km, 2000-2007)	92,370	7,768	6,970	40,032	5,147
% Roads Paved (2001-2007)	81	84	100	..	..
Road Density (km of roads per 100 km ² land area)	9	9	67	21	..
Motor Vehicles (per 1,000 people)	..	137	291	52	16
Passenger Cars (per 1,000 people)	29	94		22	16

Source: World Bank Development Indicators

TABLE 26: 2008 ACCESS TO IMPROVED WATER AND SANITATION (% OF HOUSEHOLDS)

	Improved Water Access			Improved Sanitation Access		
	Total	Urban	Rural	Total	Urban	Rural
Egypt	99	100	98	94	97	92
Iraq	79	91	55	73	76	66
Jordan	96	98	91	98	98	97
Lebanon	100	100	100	..	100	..
OPT	91	91	91	89	91	84
Syria	89	94	84	96	96	95

Source: WHO/UNICEF Joint Monitoring Program 2008

TABLE 27: WASTEWATER TREATMENT AND REUSE IN MASHREQ COUNTRIES

	Total Wastewater (m ³ /yr)	Treated Wastewater (m ³ /yr)	Reused treated Wastewater (m ³ /yr)	% Treated Wastewater Reused
Egypt	3,760 million (2001)	2,971 million (2001)	2,971 million (2000)	100%
Jordan		107.4 million (2005) % treated: 50% of total (nationwide) 245 million by 2020 (NWMP, 04)	83.5 million (2005) 175 million (2020, NWMP, 2004)	80%
Lebanon	310 million (2001) 165 million (1988)	4 million (2006) Potential for reuse: 100 million % Treated: <2%	2 million (2006)	50%
OPT		4 locations with WWTP in West Bank, none working properly; 3 in Gaza	10 million	
Syria	1,364 million (2002)	550 million (2002) mainly in Damascus, Aleppo, Homs, and Salamieh	100% (growth of 49% since 1993)	100%

Source: Wastewater Stats, FAO Water Report 34, 2009

TABLE 28: ENERGY CONSUMPTION

	Egypt	Jordan	Lebanon	OPT	Syria	MENA (developing)
Electricity Use (1997 kWh per cap)	824	1,261	2,219		905	931
Electricity Use (2007 kWh per cap)	1,384	1,970	2,153	640 (2005)	1,467	1,435
Electricity from fossil fuels (% of total)	88.30%	99.50%	92.50%		89.30%	91.10%
Electricity from hydropower (% of total)	11.20%	0.40%	7.50%	0%	10.70%	16.30%
Electricity from renewables (% of total)	4.20%	1% (2007)		9.9% (solar) 13.7% (fuel wood)		
Renewable energy target (% of total)	20% (2020)	10% (2020)	12% (2020)	..	5% of elect. (2025)	
Energy Use (2007 kg of oil equiv. per cap)	843	1,254	1,173	...	975	1,254
Energy Imports (net, % of total)	-49 (1997) -22 (2007)	94 (1997) 96 (2007)	96 (1996) 95 (2007)		-117 (1997) -24 (2007)	-150 (1997) -106 (2007)

Sources: World Bank Little Green Book 2009; REN21, "Renewables Global Status Report", 2007; Water and Energy Minister of Lebanon, 2010; West Bank and Gaza data derived from World Bank, West Bank and Gaza Energy Sector Review, 2007, and its 2003 data

TABLE 29: 2005 NATIONAL ANNUAL CARBON DIOXIDE EMISSIONS

	Egypt	Jordan	Lebanon	OPT	Syria	MENA (developing)	World
Total (kt of CO ₂)	163,220	21,317	17,532	2,741	72,481	1,082,569	29,205,744
Per Cap (t)	2.4	3.8	4.2	0.77	3.6	3.7	4.5
% Growth (1990-2005)	130	101	86	..	91	97	29

Source: World Bank Development Indicators

TABLE 30: MUNICIPAL SOLID WASTE COMPOSITION AND GENERATION

	Egypt (2000)	Jordan (2001)	Lebanon (2000)	Syria (2001)
MSW Generated (million tons)	14.9	1.46	1.38	3.65 - 5.48
Urban Per Capita MSW	0.6-1.0 kg/day	0.7-0.85 kg/day	0.5-0.7 kg/day	0.6 kg/day (2010)
Urban Collection Coverage	30-95%	95+%	100%	90% (2010)
MSW Generation Growth	3.2%/yr	3.0%/yr	7%/yr	2.5-3.5%
Material Composition of MSW				
Food/organic wastes	60%	56%	63%	65%
Paper	10%	16%	18%	10%
Plastic	12%	13%	7%	12%
Glass	3%	7%	5%	4%
Metal	2%	5%	3%	2%
Other	13%	3%	4%	7%
Treatment Method				
Composted	8%		8%	<5%
Recycled	2%		8%	<15%
Landfilled	2%	85%	46%	<25%
Open/other dumps	88%		37%	>60%

Sources: METAP 2004, Syrian Commission for Family Affairs, State of the Population of Syria 2008

TABLE 31: GOVERNMENT RESPONSIBILITY FOR URBAN SERVICES

Function	Macro Policy / Oversight			Financing			Provision		
	Egypt	OPT	World	Egypt	OPT	World	Egypt	OPT	World
Social Services									
Social Welfare	C	C	C	C	C	C	C	C	C,P,M
Hospitals	C	C	C	C	C	C,P,M	C	C	C,P,M
Public Health	C	C	C,P	C	C	C,P,M	C	C	C,P,M
Universities	C	C	C,P	C	C	C,P,M	C	C	C,P,M
Secondary Education	C	C	C,P	C	C	C,P,M	C	C	C,P,M
Primary Education	C	C	C,P	C	C	C,P,M	C	C	C,P,M
Housing	C	C	C,P	C	C	C,P,M	C	C	C,P,M
Transportation									
Urban Transport	C,P	C,P,M	C,P,M	C,P,M	C,P,M	C,P,M	C,P	C,P,M	C,P,M
Railroads	C	n/a	C,P	C	n/a	C,P	C	n/a	C,P,M
Airports	C	n/a	C,P	C	n/a	C,P	C	n/a	C,P,M
Ports & Waterways	C	n/a	C	C	n/a	C	C	n/a	C,P,M
Urban Highways	C,P	C,P,M	C,P,M	C,P,M	C,P,M	C,P,M	C,P	C,P,M	C,P,M
Interurban Highways	C,P	C,P,M	C,P	C,P	C,P,M	C,P	C,P	C,P,M	C,P,M
Utility Services									
Electricity	C	C	C,P,M	C	M	C,P,M	C	C	C,P,M
Waste Collection	M	M	M	M	M	M	M	M	M
Water & Sewerage	P,M	M	M	P,M	M	M	P,M	M	M
Other Services									
Fire Protection	M	C,P,M	M	M	C,P,M	M	M	C,P,M	M
Heating	n/a	n/a	M	n/a	n/a	M	n/a	n/a	M
Irrigation	C,P	C,P	M	C,P	C,P	M	C,P	C,P	M
Police	C	C	C,P,M	C	C	C,P,M	C	C	C,P,M

C = Central Government, P = Provincial Government, M = Municipal Government, n/a = Not Applicable; Source: Tosun and Yilmaz, 2008

TABLE 32: PARTICIPATION IN THE WORKFORCE AND NATIONAL POLITICS BY WOMEN/MEN IN THE MASHREQ

	Egypt		Iraq		Jordan		Lebanon		Palestine		Syria	
	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂
Literacy rate (% literate aged 15 and above, 2006-08)	58	75	69	86	89	95	86	93	91	97	77	90
Labour Force Participation Rate (% of those aged 15-64 employed, 2008)	24	76	14	72	25	78	24	75	17	72	22	82
% of Unemployment (2008)	19	6	13*	10*	24	10	..	..	24	26	21 [^]	8 [^]
% of parliament (single or lower house) female (2009)	2 (quota: 12)		26		6		3				12	
% of ministerial positions held by women (2005)	6		19		11		7				6	
% of overall legislators, senior officials and managers who are women (2007/2008)	11						8		10		10	

Source: World Bank Gender Statistics, UN Division of Statistics, UN HDR 2009; *2004 data; [^] 2003 data

TABLE 33: IMMIGRATION DATA BY COUNTRY

	# of International Migrants in Country (2010)	# of Refugees in Country (2008)	% Population Foreign Born (2010)	Average Annual Net Migration (2005-2010)
Egypt	245,000	97,900	0.3%	-68,000
Iraq	83,000	39,500	0.3%	-115,400
Jordan	2,973,000	2,452,000	45.9%	50,000
Lebanon	758,000	472,600	17.8%	-2,500
OPT	1,924,000	1,836,100	43.6%	-2,000
Syria	2,206,000	1,567,600	9.8%	160,000

Source: UN DESA International Migration Wall Chart 2009

TABLE 34: RECEIPT OF REMITTANCES BY COUNTRY

Country	2009 Net ODA and Official Aid Received (current US\$ million)	2009 Remittances Received (US\$ million)	Remittances (% of GDP- 2009)
Egypt	925	USD 7,150	3.8%
Jordan	761	USD 3,597	15.8%
Lebanon	641	USD 7,558	21.9%
Syria	245	USD 1,050	2.0%

Source: World Bank Development Indicators, 2010

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BOX ENDNOTES

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THE STATE OF MAGHREB CITIES



▲ Tripoli, Libya. Libya is the most urbanized country in the Maghreb with nearly 78 per cent of the population living in urban areas. ©Patrick Poendl/Shutterstock

The countries of the Maghreb – Algeria, Libya, Mauritania, Morocco and Tunisia – had a total 2009 population of 87.9 million.¹ They are all highly urbanized. By 2030, it is estimated that Libya's urban population will represent nearly 83 per cent of the total, while Morocco will have the lowest at 69.18 per cent. Algeria will have the largest total urban population with just over 34 million residents.

Total population growth rates are expected to decline to between 0.5 per cent and 1 per cent by 2030. Although the percentage of the population living in urban areas increased in the 2005 - 2010 period, urban growth rates slowed to 2.48 per cent in Algeria, 2.23 per cent in Libya, 2.27 per cent in Morocco and 1.56 per cent in Tunisia. Urban growth rates will likely decline further over the next two decades.²

Despite the decreasing rate of demand for urban land, policies to channel growth and limit informal development on the urban periphery will be critical to manage the region's cities. Only Morocco has instituted effective growth management policies by creating new towns near existing agglomerations.

Urban Concentrations and Growth

Most urban settlements are coastal cities. With the exception of Morocco, whose principal city is Casablanca and not the political capital Rabat, the region's capital cities are demographically and economically dominant.

However, the relative importance of primary cities has been declining as smaller cities have been expanding, with the exception of **Mauritania** where Nouakchott (0.8 million)

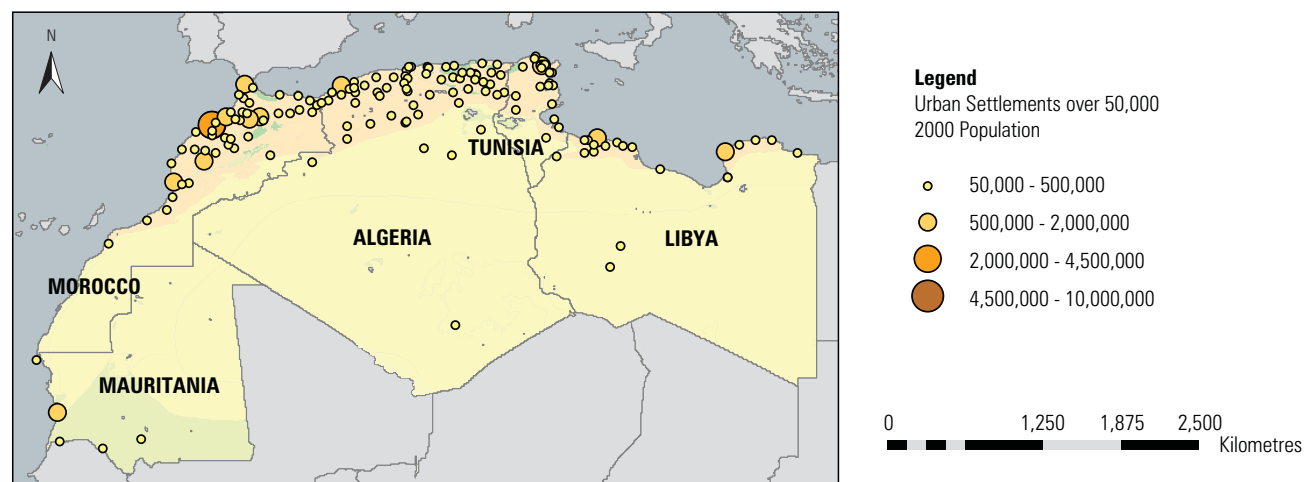
accounts for 25 per cent of the total population and 42 per cent of its urban population. Algeria's two largest cities, Algiers (2.8 million) and Oran (0.8 million) contain 10 per cent of its urban population. In Morocco, Casablanca (3.2 million), Rabat/Salé (1.8 million), Fes (1 million) and Marrakech (0.9 million) account for 38 per cent of the urban population. In Tunisia, Tunis and Sfax had a combined population of 1.1 million residents or 16 per cent of the urban population.³

Libya is the most urbanized country with nearly 78 per cent of the population living in urban areas. Thirty-seven per cent of the urban residents are concentrated in the two largest cities of Tripoli (1.1 million)⁴ and Benghazi (approximately 750,000).⁵ Over time, Tripoli's share of the urban population is expected to decline to approximately 20 per cent with Benghazi and Misurata likely to grow.⁶

In **Morocco**, most of the urban areas have been expanding relatively slowly at 1 to 3 per cent from 1994 to 2004, with the most rapid growth occurring near existing urban agglomerations and along the coast. The urbanized area around Casablanca has been growing rapidly at an average annual rate of over 15 per cent from 1994 to 2004. Other urban areas in the provinces of Assa-Zag, Skhirat-Temara and Nador along the coast and in Agadir and its suburbs (Ida Ou Tanan and Inezgane-Ait Melloul) have been expanding at an average annual rate of 4-5 per cent.⁷ Many of the rapidly expanding areas are located along prominent highway corridors.

In **Tunisia**, the fastest growing areas have been on the coast near Tunis and Sousse. The governorates of Ariana and Ben Arous have been expanding most rapidly at an average annual rate of 3 to 4 per cent and they are essentially suburbs of Tunis.⁸

FIGURE 25: URBAN SETTLEMENT AND GEOGRAPHY IN THE MAGHREB



Source: UN-DESA. 2009. *World Urbanization Prospects: The 2009 revision population database*. New York: United Nations.

In **Algeria**, much of the urban expansion has occurred as sprawl around Algiers, with many of the more affluent residents migrating to the periphery with increasing car ownership. From 1987 to 2008, the land area of the city increased by almost 4 per cent per year, while the population only grew by 1.5 per cent.⁹

Planned Urban Expansion

Urban management policies in Algeria, Morocco and Tunisia have emphasised the development of secondary cities to alleviate pressure on the primary agglomerations. As part of its 2011 National Plan, Algeria is placing a greater emphasis on the development of its secondary cities, extending, restructuring, improving and redeveloping the shanty towns created during the 1990s. In Algiers, the *Grand Plan Urbain* sought to create improved public transportation and new growth nodes to counterbalance the effects of sprawl.¹⁰

The General Planning Council in Libya has been developing national, regional, sub-regional and urban plans through to 2030. A national spatial strategy approved in 2006 emphasizes the protection of fragile ecosystems, a reduction of internal migration from the desert to the coast and from smaller to larger cities, the development new towns in the Tripoli and Benghazi regions, the revitalization and conservation

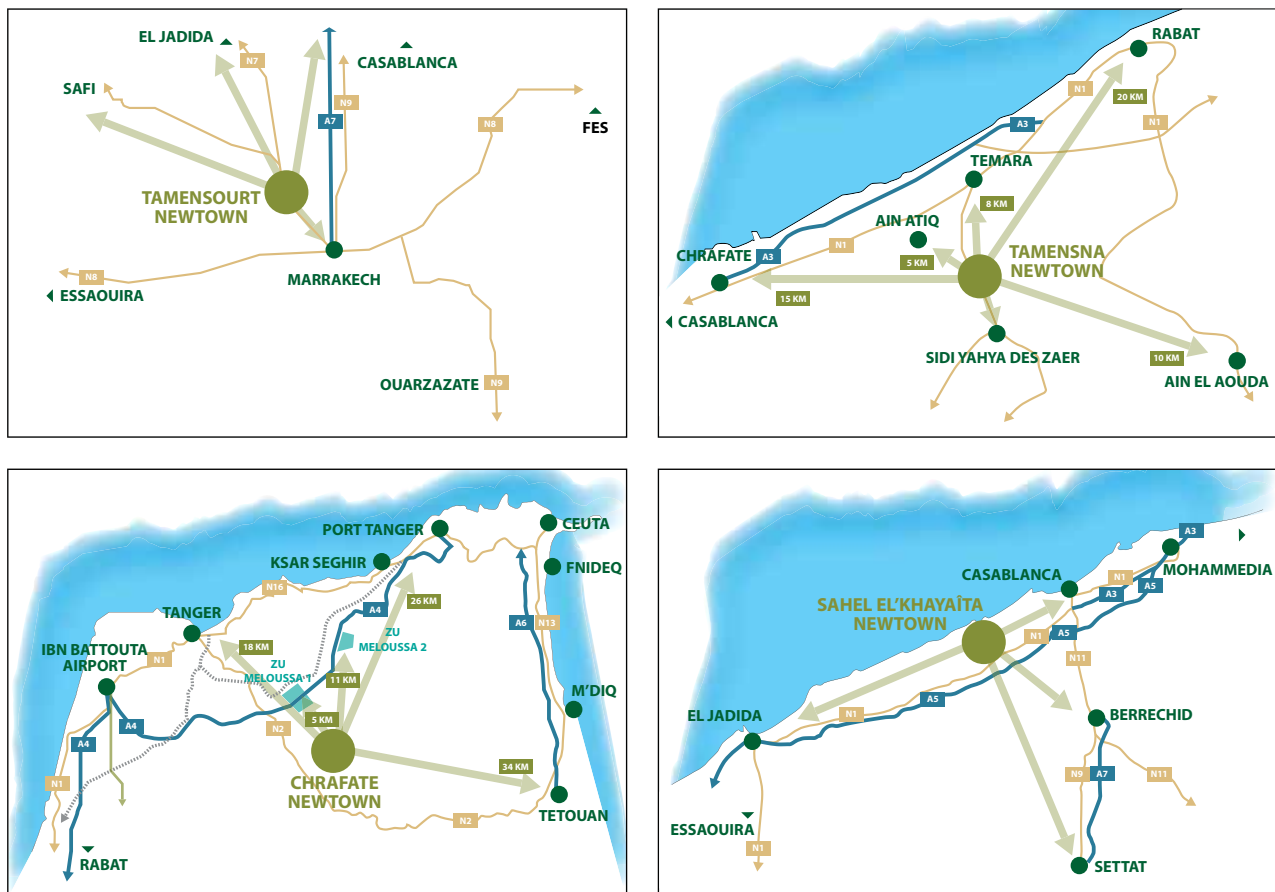
of the urban heritage and the promotion of economic diversification.¹¹ The implementation of these broad strategies has lagged as a result of the plans having not been adapted to account for the lack of local planning capacity as well as inadequate public participation.¹²

There is a critical need to coordinate national strategies with local interventions, as seen in Libya. Plans should be tailored to local conditions with participation from leaders and key stakeholders. There should be adequate capacity and financial resources to implement the strategies. In addition, there should be coordination among the centralized agencies.

In Morocco, the 2008 National Spatial Strategy emphasized the development of cities as competitive engines of economic growth, promoting urban social cohesion and the efficient use of natural resources. In addition, it proposed to improve urban management practices through a better-defined allocation of complementary responsibilities between central and local governments and the creation of an interdisciplinary urban observatory to document and analyse urban economic, social and energy issues.

Major interventions included national urban improvements focused on infrastructure and public space, rehousing slum dwellers through the Cities without Slums programme and the collection and treatment of solid and liquid waste.¹³ A key part of the urban strategy was to steer urban growth to

FIGURE 26: URBAN EXPANSION IN MOROCCO: THE CREATION OF NEW TOWNS NEAR RABAT-SALÉ, MARRAKECH, CASABLANCA AND TANGIERS





▲ Fes, Morocco. Morocco has managed to reduce the population of slum (*bidonville*) dwellers by 65 per cent between 1990 and 2010. ©Roberto Gennaro/iStockPhoto

new towns within 5 to 15 km of existing agglomerations. Four new towns near Rabat/Salé, Marrakech, Casablanca and Tangiers are under construction by Al Omrane, a publicly-owned holding company, to relocate residents of substandard housing areas and increase the supply of affordable housing.

Adopted in 1997, Tunisia's National Spatial Strategy has sought to improve the country's international competitiveness, promote the sustainable development of natural resources and ensure social cohesion and fairness.

Operationally, it intended to manage the densification of coastal cities through coordinated infrastructure improvements, relieve development pressures on environmentally sensitive areas, improve the management of scarce water resources, develop a national geographic information system accessible to stakeholders involved in urban management and promote a more efficient urban hierarchy. The improved hierarchy includes the development of secondary cities, improvement of urban infrastructures, augmentation of the contribution of urban activities to GDP and the creation of more efficient connections and relationships between urban and rural interests.

The 2008-2011 *Schéma Directeur d'Aménagement du Territoire* for Greater Tunis laid out a plan to spur growth in the west away from the lower lying coastal areas. It also described five urban development programmes for the city. As part of the 11th Economic Development Plan (2007-2011), the government planned to rehabilitate the medinas of Sfax, Sousse and Tunis upgrade parks and improve access to sanitation.¹⁴

Since 1995, the management of urban growth has been a national priority in Mauritania and USD 270 million have been invested in over 50 urban projects financed by multi- and bi-lateral funders as part of the CLSP (*Cadre Stratégique de Lutte contre la Pauvreté* – Strategic Framework to Fight Poverty): economic development; the improvement of urban infrastructure and services, with an emphasis on peri-urban informal areas; housing upgrading and the reinforcement of the urban institutional framework. Since 2003, USD 14.8 million has been invested in neighbourhood improvements in Nouakchott and Nouadhibou and another USD 5.6 million in the restructuring of informal settlements.



▲ Institut Supérieur des Sciences Humaines de Tunis (ISST), Tunisia. Tunisia's National Development Strategy focusses on creating centres for training and research with emphasis on the fields of science and technology. ©Rais67

While Algeria and Libya are heavily dependent on their natural resources (primarily oil), Morocco and Tunisia have shifted from agriculture to industry and services, particularly tourism, reinforcing the role of their cities as engines of the national economy. Most of the major economic activities of the region are concentrated in a few cities, particularly in urban areas along the coast.

Tunisian cities produced more than 80 per cent of the wealth. Tunis, the major economic and industrial pole, produced a quarter of the wealth in 2002 and had 69 per cent of the job opportunities, mainly in services.¹⁵ Since many of Tunisia's economic activities are located in coastal cities, the country has been trying to address this geographic imbalance by promoting inland economic development for local employment creation, especially in the traditionally labour-exporting governorates. As part of its 2006-2016 industrialization strategy, it has clustered export-oriented economic activities in specialized competitive poles in selected cities.

To this end, the government is upgrading the inland transportation and communication infrastructure besides providing fiscal incentives to private investors.¹⁶ Privately-held companies, with a public sector capital infusion, develop the poles. The private sector is responsible for the planning, construction and management of each pole and provides support for start-up industries.¹⁷

Tunisia's economy is dominated by services. It is the region's most integrated country in the world economy. Integration first occurred in the early 1970s, when it created an offshore programme that attracted foreign direct investment and spurred growth in new export industries, mainly textiles and clothing. In the 1990s, Tunisia entered new markets in manufacturing.²⁰ Exports now account for 47 per cent of GDP. By the beginning of 2010, the real national GDP growth rate had increased to 4.5 per cent, primarily due to rising exports for textiles and mechanical and electrical goods, while the agricultural and energy sectors contracted.²¹ Recently, the mining, energy and services sectors have been particularly dynamic.

TABLE 35: TUNISIA'S ECONOMY BY SECTOR

Sector	Per cent of GDP ¹⁸	Per cent of Employment ¹⁹
Services	53.7	49.3
Industry	35.3	33.0
Agriculture	11.0	17.7

The 11th National Development Strategy placed emphasis on developing the knowledge economy, upgrading the information and communication infrastructure, creating centres for training and research and placing more emphasis on the fields of science and technology.²² Investment to improve the infrastructure in selected urban and inter-urban areas is one of the key components of the Plan.²³

Most of **Morocco's** economic activities and wealth are concentrated in five urban agglomerations. Eighty per cent of economic activities in industry and services are located in Casablanca, Rabat-Salé and Tangiers, These activities account for 75 per cent of urban employment.²⁴ Although accounting for only 10 per cent of the population, Casablanca has 60 per cent of industrial workers and 55 per cent of the country's production units.²⁵ Morocco's economy declined slightly in 2009 and 2010, but it is expected to increase again in 2011.²⁶ The economy is dominated by services, representing 51.4 per cent of GDP while industry and agriculture represent 31.6 per cent and 17.1 per cent, respectively.²⁷ The public sector and industry each account for 20 per cent of urban jobs. Most of the urban population is employed in trade, construction and public works, social services, administration, the textile industry, personal and domestic services and other manufacturing.²⁸

In recent years, Morocco has become better integrated in the world economy through the impacts of bilateral and regional free trade agreements: Euro-Med, Greater Arab Free Trade Area (GAFTA), the U.S. Free Trade Agreement, the Agadir Agreement and the Turkey Free Trade Agreement.

With its limited exposure to the world economy, **Libya** has only been marginally affected by the economic crisis. Although real GDP growth declined in 2009 due to falling commodity demand and lower OPEC quotas, it rebounded to 7.4 per cent in 2010 and is expected to decline by 19 per cent in 2011 due to the negative economic impacts of the conflict. Oil production is expected to increase to 3 million barrels per day by 2012-2013.²⁹ Non-oil growth has remained at a very high 6 per cent in 2009 and is expected to increase further to 7-8 per cent.

Its economy is dominated by hydrocarbons, which represent 95 per cent of export earnings, 90 per cent of government revenues and 70 per cent of GDP. In order to diversify the economy and reduce unemployment, Libya has made an effort to reduce the economic importance of the public sector and promote private sector investments in construction, solar and wind power generation, sustainable agriculture and tourism.³⁰ From 2005 to 2008, foreign direct investment increased

fourfold.³¹ It has successfully sought public investments to expand and improve its infrastructure and housing stock.

Most of Libya's economic activities are concentrated in Benghazi and Tripoli. To attract private sector initiatives in the future, the government plans to reform the administrative and legal systems³² and invest in infrastructure (USD 123 billion over five years³³) to create better geographic economic balance. One of the top priorities, particularly in urban areas, is to provide 1.5 million additional jobs by 2030.³⁴

In **Algeria**, the economy is focused on oil production. Despite strong growth in the non-mineral sector, particularly in agriculture which grew by 17 per cent in 2009 due to the availability of credit free loans, good rainfall, the elimination of farm debt and new production contracts from the government³⁵, the economy declined by 0.2 per cent from 2.4 per cent in 2008 to 2.2 per cent 2009. This was primarily as the result of a 9 per cent decrease in oil production at the request of OPEC. To reduce dependence on oil, the government is also promoting fishing, tourism, services and industry.³⁶

As in other countries in the region, most Algerian economic activities are located in the capital city: 23 per cent of public servants, two major universities, four major industrial zones and 26 business parks.³⁷ To reduce the pressure on the central city, the government has created regional economic development plans to spur growth outside the capital.

At the end of 2010, a majority of the urban workforce was employed in services (62.4 per cent), followed by construction and public works (17.8 per cent), industry (15.3 per cent) and agriculture (4.5 per cent). In addition, the majority of the workforce was employed by a private or mixed entity (62 per cent) as compared to the public sector (38 per cent).³⁸ The 2010 activity rates varied significantly for males and females and from urban to rural.

In **Mauritania**, 80 per cent of construction employment, 60 per cent of manufacturing, and the majority of public sector jobs are located in Nouakchott.

City Marketing and Related Incentives

Many Maghreb countries are deemed to have unfriendly foreign investment environments due to high corporate tax rates, complicated legal environments and limited access to land, electricity and finance. Governments have instituted such reforms as reducing the corporate tax, establishing

TABLE 36: DIFFERENCES IN MALE-FEMALE LABOUR PARTICIPATION IN ALGERIA

Location	Male	Female
Urban	67.5%	16.3%
Rural	71.5%	9.9%

Source: Office National des Statistiques.



▲ In Tunisia the port of Sousse has been upgraded to help stimulate investment. ©Marcin Ciesielski/iStockPhoto

offshore programs that provide businesses with attractive incentives and fiscal advantages, better governance and improved infrastructures.

Morocco created the Social and Economic Development Program 2008-2012 to support access to education, health and housing and enhance growth, investment and export potentials, focusing on key sectors, and improving support infrastructure (transportation, information and communication technologies, energy) and more efficient governance.³⁹ To market its cities, Morocco advertises its skilled workforce and offers incentives to investors. In Tunisia, the city of Sousse has recently improved its port and created a technology centre⁴⁰ and Sfax has invested in improved infrastructure.

Unemployment

Despite the steady rise in per capita income, unemployment remains a major challenge in the region, primarily affecting youth, women and university graduates because employer demand and labour force skills do not match. In Morocco, urban unemployment (12.7 per cent in 2010) has been higher than rural unemployment (3.3 per cent in 2010).⁴¹ Urban unemployment has disproportionately affected the younger, more educated segments of the population.

In **Algeria** in 2010, the unemployment rate was 10.6 per cent in urban areas and 8.7 per cent in rural areas. Young

people accounted for the bulk of urban unemployment: 35 per cent of the active population under 20 years, 30 per cent of the 20-24 age group and 22 per cent of the 25-29 age group were looking for work in 2007. Taken together, those under 30 years of age account for 71 per cent of urban unemployment, with females accounting for 25.6 per cent.⁴² By the end of 2010, urban unemployment has also disproportionately affected those with higher degrees.⁴³

In **Tunisia**, urban unemployment rates of around 15 per cent have historically been lower than the rural rates of 15-18 per cent and higher for females than males.⁴⁴ Unemployment has remained high at 13 per cent in 2010⁴⁵ and primarily affects the young and the educated as most of the labour demand is for unskilled workers, while 57 per cent of new entrants into the labour market have university degrees. In spite of the government's strategy to promote knowledge-intensive sectors to provide employment opportunities for

TABLE 37: UNEMPLOYMENT RATES IN ALGERIA AT THE END OF 2010

Gender	Urban (%)	Rural (%)
Male	8.6	7.2
Female	18.8	20.1

Source: Office National des Statistiques-Algérie. (2011)



▲ Madrasah pupils in Mauritania where educational enrolment is the lowest in the region. ©Ferdinand Reus. Licensed under the Creative Commons Attribution-Share Alike 2.0 Generic license.

better educated and higher skilled workers, the development of the sector has lagged.⁴⁶

Despite of a positive growth trend in recent years, **Mauritania's** economy has not been able to generate sufficient employment to absorb new entrants, particularly those with a technical or professional degree and urban unemployment is estimated at 32 per cent of the labour force (39.1 per cent among the urban poor) and was concentrated among the young.⁴⁷ The public sector continues to be the country's major employer (32 per cent) followed by trade (24.6 per cent), agriculture and animal husbandry (24.5 per cent) and services (15 per cent).

High rates of unemployment, particularly for the younger and better-educated segments of society, contributed to the uprisings in late 2010 and 2011. The demands of the market and the skills of the labour force have not been congruent. This was further complicated as opportunities to enter Southern Europe had become more restrictive and higher-skilled workers who had typically found employment abroad were unable to migrate.

Education

With the exception of Mauritania, educational enrolment and attainment in the region is high, particularly in urban areas. In Morocco, national net primary school enrolment rates were 93.5 per cent in 2007. Enrolment rates for middle

school and upper secondary school were 43.4 per cent in 2007 and 17.5 per cent in 2007 for upper secondary school.⁴⁸ Literacy rates vary significantly from urban to rural areas.⁴⁹ In Morocco, literacy among urban residents age 10 and older was 71 per cent, as compared with 42 per cent in rural areas with better access to education in urban areas.⁵⁰

In Tunisia, the enrolment rate for primary school reached 97.4 per cent for both males and females in 2007/2008.⁵¹ In the same period, gross enrolment rate for secondary education was 88 per cent for males and 96 per cent for females and 27 per cent of males and 40 per cent of females for tertiary education.⁵² In Tunis, the schooling rate of the 6-14 population was 97.8 per cent and the higher education rate among the 19-24 population was 30.7 per cent.⁵³

In 2010, Libya achieved universal primary school enrolment and 94 per cent secondary enrolment. Tertiary educational enrolment rates reached over 56 per cent in 2009. The gains in education are primarily the result of the oil wealth accumulated in recent years.⁵⁴

In Algeria, the gross enrolment rate for primary education was 108 per cent in 2008 and, at 80-90 per cent, was relatively high at the secondary level. In urban areas, the enrolment rate was 96.7 per cent for children ages 6-14 and the literacy rate was 93.5 per cent.⁵⁵ For the population 10 years and older, it was 87.7 per cent in Algiers and 84.2 per cent in Oran.⁵⁶

In Mauritania, according to the 2008 poverty profile, literacy among the 15+ population rose from 57.5 per cent in

2004 to 61.5 per cent in 2008; it was higher for men (70.3 per cent) than for women (54.4 per cent) and greater for the those living in urban areas (73.3 per cent) than in rural (50.3 per cent)⁵⁷.

Health

A continuing, albeit diminishing, differential access to clean water sources and the concentration of health services in cities are reflected in differential rates of infant mortality between urban and rural areas. Most Maghreb countries have surfeits of doctors in urban areas and shortages of health care workers in rural and peri-urban areas.⁵⁸

In Tunisia and Morocco, infant mortality rates vary from 16 to 33 per 1,000 live births in cities to 30 to 55 per 1,000 live births in rural areas, respectively.⁵⁹ In Tunisia, five of the 11 hospitals, 14 of the 21 specialized institutes and centres and 49 of the 2,083 basic health centres are located in Tunis.

In Algeria, the proportion of births assisted by a qualified professional was higher than in rural areas. The prevalence of underweight children under-five was 3.1 per cent for cities and 4.4 per cent for rural areas and the percentage of children that experienced diarrhoea over a two-week period was 8.5 per cent in cities and 9.3 per cent in rural areas.⁶⁰

Tourism

Most of the governments in the Maghreb region have been promoting tourism, which is primarily concentrated in the coastal cities. In 2009, three Moroccan cities received 71 per cent of the tourists: Marrakech, Agadir and Casablanca. Morocco has recently undertaken a regional tourism development plan with the goal of increasing hotel occupancy rates to 58 per cent by 2015. Investments will improve infrastructure and rehabilitate the historic medinas and the most-visited sites.

Most of the tourism in Tunisia (75 per cent) is located along the coastline;⁶¹ an estimated 18 per cent of the coastline is dominated by tourist activities, primarily resorts and second homes.⁶² Foreign arrivals increased by about nine per cent from 2009 to 2010, mainly from France, Libya and Algeria. Although the number of night stays increased in 2010, the receipts for tourism declined.⁶³ Libya has been promoting tourism and, in 2007, announced the creation of a green sustainable development area between Benghazi and Tobruk to attract eco-tourists, protect the archaeological sites and prevent overdevelopment of its Mediterranean coast. The investment of USD 3 billion is expected to generate 70,000 new jobs.⁶⁴

In Algeria, the government launched in 2008 a 15-year plan for tourism development, which has focused on niche

tourism in the desert (Tamanrasset, Djanet, Chardaia and Timimoun), in coastal cities and in the cultural sites of Annaba, Algiers, Oran and Constantine. The government plans to create 280 new hotels and 14 tourism villages and has invested in a National School of Tourism as well as other training institutions.

Incentives to attract private investors include reduced land prices and infrastructure improvements such as the proposed southwest loop rail line and the development of new airports. Lower interest rate loans are available for tourism modernization projects as well as such fiscal incentives as reducing the value added tax from 17 per cent to 7 per cent and exempting companies from registration fees.⁶⁵ From 2000 to 2008, revenue from tourism increased by nearly 37 per cent.

Urban Poverty, Inequality and Vulnerable Groups

The poverty rate in Algeria, Mauritania, Morocco and Tunisia is two to three times higher in rural areas than in cities. In **Morocco**, nearly 70 per cent of poverty is rural and, in 2007, the urban poverty rate was only 4.8 per cent as compared to 14.5 per cent in rural areas.⁶⁶ From 2001 to 2007, both the urban and rural poverty rates fell: by 2.8 per cent in urban areas and 10.6 per cent in rural areas. However, it is estimated that over 26 per cent of the population is in poverty or vulnerable to it.⁶⁷

In **Tunisia**, poverty rates declined from 4.1 per cent in 1980 to 1.0 per cent in 2000.⁶⁸ In **Mauritania**, in spite of significant gains since 2000, the national incidence of extreme poverty was 25.9 per cent in 2008, 59.4 per cent in rural areas and 7.7 per cent in cities. In Nouakchott, the percentage of the population living below the poverty level dropped from 29.2 per cent in 2000 to 15.6 per cent in 2008, while the population living in extreme poverty dropped from 13.8 per cent to 4.8 per cent.⁶⁹

With the exception of Morocco, urban inequality has been relatively low with urban Gini coefficients ranging from 0.34 to 0.39. In recent years, unlike other countries in the region such as Tunisia, where inequality has been decreasing, inequality in both urban and rural areas has been increasing.⁷⁰ Inequality in Casablanca has been particularly high with a Gini coefficient of 0.52.

In Mauritania, whose Gini coefficient rose significantly from 0.34 in 1996 to 0.40 in 2008, according to 2008 survey data, 11.7 per cent of urban households 'always' and 20.3 per cent 'often' experience difficulties in satisfying their basic food needs. In Nouakchott, these figures are 12.6 and 17.2 per cent respectively.⁷¹

Securing affordable housing in the region continues to be a challenge and many residents obtain housing in the informal markets. To address this challenge, governments have upgraded existing informal and slum areas and constructed new units to provide more affordable options, which is critical given that housing affordability has been one of the contributing factors to the uprisings in the Arab world.

Informal Urbanization and Responses

Both Morocco and Tunisia have successfully addressed the challenge of informal urbanization through vigorous interventions including housing upgrading and the

construction of affordable housing.

Since the 1980s, Morocco reduced the number of *bidonvilles* (shantytowns) and upgraded slum areas by constructing new housing units and providing serviced land.

In 2003, the government gave the private sector more responsibility for the provision of affordable housing and provided credit to lower-income families who had not previously had access to credit. In 2005, the government launched the Cities without Slums programme that upgraded 250 neighbourhoods in 25 cities through a participatory process. It focused on areas with high unemployment, limited access to services and poor housing conditions. The holding company Al Omrane has played a major role in the Cities without Slums programme. (See Box 12 overleaf).



▲ Election time in Tunis, Tunisia. Tunisia, the first country in the Arab world to hold elections since the start of the Arab Spring, has made massive strides in eliminating urban slums. ©Nataliya Hora/Shutterstock

BOX 12: TUNISIA & MOROCCO - SLUM UPGRADING AND HOUSING DEVELOPMENT EXPERIENCES ARRU AND AL OMRANE MODELS



▲ Salé, Morocco. Al Omrane slum upgrading in Sidi Moussa. ©Bertramz. Licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license.

Since the early 1980s, Tunisia and Morocco have established programmes to reduce the number of slums, expand affordable housing opportunities and improve the provision of urban services. Today, Tunisia has essentially eliminated all *bidonvilles* (slums) through a programme managed by the public enterprise, *Agence de Réhabilitation et de Rénovation Urbaine* (ARRU).

ARRU was established under the Ministry of Equipment, Housing and Land Use Planning. Its mandate is to renovate and rehabilitate urban areas and promote real estate development. Since its inception, ARRU has acted to control urban sprawl, improve conditions in the older districts, regularise substandard fringe settlements, offer loans for housing construction and improvements and provide basic services including potable water, sanitation, schools and health facilities, especially to the urban poor.¹ From 2002 to 2009, ARRU spent over USD 72 million on urban projects that have improved living conditions for 1,140,000 people.

The success of these interventions can be attributed to ARRU's effective coordination of public authorities, specifically its willingness to cooperate and collaborate with local agencies. This is particularly important as decentralization has devolved functions and responsibilities to local authorities and given them a more prominent role in planning and management.

ARRU has also formed partnerships with the private sector to ensure effective and efficient implementation of programs and projects.

About 65 per cent of the funding for ARRU's projects targeting lower income families originates from the National Solidarity Fund. Through this fund, municipalities can borrow money to complete local infrastructure projects and community facilities as well as transfer funds to ARRU to undertake projects. The remaining support comes from the Housing Fund, government departments and the private sector.

Morocco has initiated a forceful intervention to resettle *bidonville* dwellers and managed to reduce the number of slums by 65 per cent from 1990 to 2010². Al Omrane, established in 2004, is a government-owned holding company that has integrated the functions previously held by three different government agencies (*Agence Nationale de Lutte Contre l'Habitat Insalubre*-ANHI, Attacharouk Co. and *Société Nationale d'équipement et de construction*-SNEC). It acts through 14 regional subsidiaries and its activities include four major programmes:

- Social housing production (MAD 140,000/housRehousing *bidonville* dwellers (cities without slums);
- Construction of housing in the southern provinces; and
- Development of new towns.

Through these projects, Al Omrane has rehoused families from makeshift dwellings, upgraded underserved neighbourhoods, regularised land tenure in informal settlements and developed new towns and urban expansion zones, with a significant portion of land dedicated to affordable housing.

From 2004 to 2009, Al Omrane completed 724,000 housing units which included rehousing of 143,000 families living in shacks, increasing the number of cities and towns without slums to 38. Through 2009, the cumulative cost of the programme was MAD 35.9 billion (USD 4.6 billion). In 2009, the holding company completed 176,843 housing units (114,459 for urban and rural upgrading activities commissioned by the national and local authorities, 9,627 produced in cooperation with the private sector and 52,757 for Al Omrane's own production). It re-housed 18,300 families living in shacks.

In 2010, Al Omrane programmed the construction of 107,400 units, of which 33,000 are earmarked for lower income residents (units at MAD 140,000 or USD 17,800), 37,200 for moderate-income households and 37,200 for sale at market rate. The market rate units will cross-subsidize the units allocated to the lower-income households.³ Al Omrane planned to rehouse 30,000 families living in shacks, adding another 24 cities and towns to the cities without slums list.

BOX 13: RETURNING TO THE COMPACT CITY?



▲ Returning to the compact city in Cairo: The fabric of Bab el Wazir, established 800 years ago (left), compared with that of Fostat Plateau (Ezbet Kheirallah), established informally in the 1980s (right)

Observers of traditional urban forms have frequently pointed to the medieval Arab city, from Fes to Aleppo, as supreme representations of the dense, compact, specialized, multi-functional and livable city. The medina remnants are as attractive and much appreciated today as they were in medieval times. However, starting in the late-19th and accelerating throughout the 20th century, this traditional and dense urban form became viewed as a backward and unacceptable holdover - the antithesis of modern living.

The creation and reproduction of the city under Modernist planning theory, based on urban functional segregation, private car-orientation and low-density spatial layouts became the norm almost worldwide, pushed further by imported concepts of zoning, satellite towns and mega-projects. With its rampant land speculation, convenient desert hinterlands and the resulting sprawl, today's Arab city has become a horizontal one, apparently without spatial expansion limits.

Starting in the 1990s, when faced with many unforeseen impacts of the Modernist city such as depopulated city centres, debilitating traffic congestion, urban air pollution and undesirably fragmented cities, Western planners and urban theorists 'discovered' the compact city as a viable alternative to the seemingly unstoppable trend towards ever more sprawling, regimented, suburban, amorphous and ultimately dysfunctional metropolises. There has even been talk of compactness as 'the new urban paradigm' since the concept dovetails well with notions of low-carbon, sustainable urban development and the inclusive/equitable city.

In 2003, the United Nations Global Compact Cities Programme was created to

translate the principles of compactness into everyday urban governance and management. Although considered a global trend, the main interest in and discussion of compactness was firmly rooted in evolving Western planning philosophies, especially in Australia, parts of Europe and the US where modern examples of urban compactness were few and far between.

But the compact city remains alien to most of today's Arab planners, businessmen and municipal officials, who continue to shape their cities towards ever more disbursed and sterile urban landscapes, dotted with shopping malls, gated communities, car show rooms, tract suburbs and mega urban highways. In Gulf cities, even the relatively dense downtown areas created in the 1950s and 1960s are now being pulled down with glee, to be replaced with glass towers planted in a sea of vacant lots and parking garages that are all void of human scale and any Arab identity.

In Egypt, a penchant for disbursed, distance-defying and function-segregated new towns in the desert started in the 1970s. This trend has not abated despite the fact that practically no one lives in them. The 2006 Census of Egypt revealed that, after 30 years of huge investments and national urban policy orientation, the combined population of all these new towns did not exceed 800,000 persons - less than six months of the country's average population increase. Likewise in Morocco, where the state developer Omrane is proceeding headlong with the creation of satellite dormitory towns miles and miles from existing cities.

Trends germinated in the West are taken to their extremes in many Arab countries. Thus we have Masdar in Abu Dhabi, a compact, clean, carbon-neutral town and, parenthetically, an outrageously expensive showcase of high

technology. Arab architects and designers talk about applying traditional Arab city design principles. Wind tower embellishments are all the vogue but these are mere tiny blips on the screen of the modern Arab cityscape.

It is ironic that, in some Arab countries, common citizens are quietly creating huge compact neighbourhoods themselves. These are dense, inclusive, vibrant, energy-efficient and multi-functional urban neighbourhoods where the street is the centre of life.

They are called 'informal settlements' and, considered overcrowded and illegal, they are rejected as urban managers' worst nightmare. Nevertheless, they are a defining feature of many and of even the most renowned Arab cities. There are already 12 million inhabitants of informal areas in Greater Cairo alone, and 75 per cent of the additions to Cairo's population are finding homes there.

This is not some aberration that can be wished away. It is the future of Cairo and many other Arab cities.

Does this mean that there is an ongoing return to the compact city in the Arab world? The answer is a definite 'Yes' despite the fact that informality is in many ways rejected out of hand, especially by elitist urban professionals.

One should not interpret this trend as a recommendation that urban informality is the desired future of the Arab city. Rather, we should read this as a clear message that the sterile Modernist city is being rejected by the urban dwellers as neither affordable nor the social habitat of choice. There are lessons to be learned from informal urban development. And given the rapidity with which Arab cities are growing today, we better learn fast and apply the implications of the lessons provided by our citizens.

Tunisia has also essentially eliminated urban slums through its *Société Nationale Immobilière Tunisienne* (SNIT) and its *Agence de Réhabilitation et de Rénovation Urbaine* (ARRU). Established in the 1980s, SNIT is a government-owned company whose production of affordable housing peaked at 15,000 units a year during the Sixth Plan (1982/86). Production had decreased to 1,000 from 1,500 units per year by 2002.

As of 2004, less than 1 per cent of the population was classified as living in substandard housing and the government's focus shifted to infrastructure improvements and upgrading. ARRU is the agency primarily responsible for the upgrading efforts. (See Box 12, p.98). In spite of the elimination of slums, informal settlements, particularly in Tunis, remain a challenge and it is estimated that around 30 per cent of housing production is informal.⁷²

Morocco views new towns as a key component of its urban strategy to relieve congestion in existing cities and shape urban growth in areas that are experiencing strong urbanisation pressures. Four new towns are currently under construction near Casablanca, Tangiers, Rabat-Salé and Marrakech.⁷³

Their purpose is to:

- Reinforce the economic attractiveness of growth poles;
- Rehouse *bidonville* dwellers as well as provide social housing to improve the living conditions of lower income families;
- Develop new urban settlements in coordination with large infrastructure projects; and
- Develop touristic areas, recreational areas and green spaces.

Lower-priced housing units are affordable through a combination of subsidies and low interest loans. Buyers of low-cost units are eligible for mortgages guaranteed by the *Fonds de Garantie pour les Revenus Irréguliers et Modestes* (FOGARIM), an agency created in 2004 to encourage banks to provide long-term credit to lower-income individuals. By mid-2009, the Fund had guaranteed 48,000 loans worth MAD 7 billion (USD 890 million).

Despite a growing housing shortage in **Libya**, the government has not generated a substantial amount of affordable housing units since the 1980s. Most of the new housing construction has been for high-income households, including for expatriates from Egypt and Sudan.⁷⁴

In **Algeria**, the Ministry of Housing and Urbanism launched a slum-reduction strategy in 1999 that focused on slum reduction through the rehabilitation of lower-income housing and provision of land to house marginalized groups. The government has upgraded infrastructure and regularized land registration in informal settlements. The policy has included 65 sites in 11 *wilaya*, with a total population of 172,057.⁷⁵

A parallel urban improvement plan demolished over 12,000 precarious housing units from 2006 to 2008. The government also has plans to build 1.2 million housing units, including 340,000 public rental units, to help eradicate the remaining 561,000 precarious housing units.⁷⁶

Mauritania's 2008 poverty profile uses two classifications for housing: standard and precarious (that is tents, shacks,

sheds, etc.); 32.5 per cent of the stock was classified as precarious in 2008; in Nouakchott alone, 38,800 households, or 24.3 per cent of the population, lived in precarious neighbourhoods on the urban fringe.⁷⁷

In spite of a growing government commitment to improving urban conditions – water distribution, sewage collection and treatment and solid waste management – scarce resources and the preponderance of substandard housing has limited progress. As of 2008, 70 per cent of urban households still bought water from private distributors and the daily per household water consumption in Nouakchott's low income neighbourhoods was only 18 litres.⁷⁸ Over 95 per cent of households were not connected to the sanitary system. Despite its limited impact, the most innovative programme developed in Mauritania simultaneously addressed housing improvements and poverty reduction (see Box 14).

Housing Supply and Affordability

The supply of affordable housing in the Maghreb is insufficient to meet the demand of lower-income households. Supply is primarily constrained by government ownership of land, complicated property registration systems and development regulations that discourage the construction of rental units.

In **Algeria**, formal private investment in housing has been impeded by the government's inability to release land to meet the growing demand of its cities and provide adequate financing.⁷⁹ A middle-income family in Algeria would have to save its household income for nine-12 years to afford an average dwelling⁸⁰ and meeting the demand for housing by low- and even middle-income families has been left to the informal sector.⁸¹

The current government provides an 80 per cent tax rebate on land sold for housing and a tax rebate that benefits higher- and middle-income residents. Only 14 per cent of the funding allocated to housing supports activities target the lowest quintile of the population.⁸²

In **Morocco**, in spite of the achievements of Al Omrane programmes, the urban housing deficit is still estimated at over a million units (one-third of the stock). In 2007, 610,000 households lived in shantytowns and 450,000 households in dilapidated dwellings or unserviced settlements.

The shortage of affordable housing has pushed lower-income households to the urban periphery. Over 30 per cent of urban housing construction starts are located on agricultural land in the urban fringe. In Greater Casablanca, for example, the average density was 71 households per hectare in the city and 21 in the urbanised periphery.

In **Tunisia**, affordable land development has been inadequate and although the total housing supply has been sufficient, there is an endemic shortage for low-income families.⁸³ Growth of informal settlements is continuing despite the near eradication of slums in Tunisia. As shown in Table 38, it is apparent that formal housing is unaffordable for lower-income residents.

BOX 14: MAURITANIA'S TWIZÉ PROGRAMME



▲ Nouakchott, Mauritania has needed to accommodate vast numbers of eco-migrants. ©Attila Jandi/Shutterstock

In the 1970s and 1980s, severe droughts and desertification in the Sahel region destroyed the nomadic way of life in Mauritania and spurred significant eco-migration to Nouakchott and Nouadhibou, the two largest cities. From 1977 to 2000, the population in Nouakchott increased from 134,700 to approximately 728,600, with an average annual growth rate of over 7 per cent. Nouadhibou almost quintupled from 21,900 in 1997 to 107,900 in 2000.⁴

The cities had to accommodate large influxes of nomadic people settling on the urban periphery.⁵ The Twizé programme was conceived to alleviate the hardships endured by the settlers and manage chaotic urban growth.

In 1998, *Groupe de Recherches et d'Échanges Technologiques* (GRET), a professional solidarity and international cooperation association, established the Twizé programme to improve access to affordable housing and living conditions for lower-income residents and poor eco-migrants. In 2003, the programme expanded with financial support from the World Bank and the government. GRET, in collaboration with the Mauritanian *Commissariat aux Droits de l'Homme, à la Lutte Contre la Pauvreté, et à l'Insertion*, the municipality of Nouakchott and non-governmental organizations (NGOs), prioritized regularization of land tenure, access to microcredit for housing improvements and the creation of microenterprises, training and capacity building initiatives for community members and infrastructure improvements.⁶

The initial pilot project demonstrated that marginalized settlements could be transformed into viable neighbourhoods. At the end of the first phase, the 130 families who participated in the pilot had managed to double the size of their homes and increase the value of the land and structure by a factor of four. Loan repayment rates were very high (close to 100 per cent).⁷

Following the termination of the World Bank funding (USD 15 million over five years), the project ended in 2008. Rising construction and infrastructure costs substantially increased the subsidies needed to cover the widening gap between the affordability of the target group and the cost of land and housing. The construction cost of the basic module quadrupled between 1998 and 2005 from MUR 110,000 (USD 390) to MUR 400,000 (USD 1,413.43). Despite the doubling of participants' contributions, the subsidies provided increased from 27 to 60 per cent of the total cost, eroding the programme's financial viability.⁸

Although the programme ended in 2008, it was not without its achievements. At the conclusion of the programme, 6,500 houses had been constructed. Residents indicated that they felt safer and more financially secure. They were also able to divert money saved on housing to start or expand income-generating activities and eventually purchase other assets. The programme enhanced the

skills of the masons constructing the dwellings and improved communication among the labourers, creditors and beneficiaries. It provided skills training for workers in a variety of fields, including craftsmanship and textiles as well as literacy training.⁹

The programme facilitated the mobilization and involvement of residents in the planning process.¹⁰ The property titles issued and the permanent construction and investments in the homes encouraged residents to settle in that location, reducing the repeated displacement of poor families further out to the urban periphery in a rapidly expanding urbanized area.¹¹

Twizé offered a model of partnership between national and local governments, communities, development organizations and NGOs, providing technical assistance and capacity building. In its early phases, it worked remarkably well. It underscored the link between organized settlements and poverty alleviation.

Rising costs far outstripped the affordability of residents and local authorities and undermined the sustainability of the programme's operational modalities, which were not adjusted to respond to the growing imbalance. However, the partnership concept to address the challenge of urban poverty alleviation and social inclusion by improving the lives of slum dwellers remains a valid and effective approach towards achieving the Millennium Development Goal Target 11.

TABLE 38: AVERAGE RENTS AND SALES PRICES

	Tunis	Marrakech	Casablanca
Average rent/m ²	USD 11 - 13	USD 10.49 - 12.89	USD 9.37 - 12.70
Average sales price/m ²	USD 2,100 - 4,100	USD 1,994 - 2,489	USD 1,710 - 3,072
National GDP per capita	USD 3,907	USD 2,748	USD 2,748

Source: Global Property Guide

Regionally, access to housing and affordability varies significantly by income category. The top 20 per cent of income earners secure housing on the private market. The second quintile require access to below market interest rates housing finance that is usually provided by governments to cooperatives and other groups willing to develop their own housing. Cooperatives are usually given priority in the allocation of state-owned land designated for urban residential development. The third and fourth quintiles access land either through government-subsidized programs offering housing units and serviced sites or on the informal land market. Households in the poorest 20 per cent are unable to enter the informal land markets and can only access land through the illegal occupancy of undesirable parcels of land with the hope of gaining eventual security through prescription rights or the regularization of their tenure. Undesirable sites such as steep slopes and flood prone lowlands are prime destinations. The alternative is renting one or two rooms in an informal area at inordinately high rents.

Young families have been particularly affected by high urban land prices, forcing them to live with their parents or in older,

more crowded sections of the city. In **Libya**, men are delaying marriage until they can find an adequate apartment.⁸⁴

A study of six cities in Morocco (Rabat/Salé, Casablanca, Marrakech, Fes, Benguerir and Azrou) showed that the lowest income quartile spent 24 per cent of total income on housing, more than the 20 per cent spent by the upper quartile.⁸⁵ Forty-three per cent of households had access to housing credit, both formal and informal. The largest source of funding for home improvements came from savings (approximately 60 per cent), followed by family help and a formal loan. Most residents wanted to invest in furniture and household appliances, followed by painting and fixing walls or the floor.⁸⁶

Mortgages have been available in Tunisia since the early 1980s and in Morocco since the mid-1980s and are becoming more readily available in Algeria. However, families who have not participated in the formal finance system and who lack guarantees do not have access to housing finance.

In Morocco, since 2002 there has been an effort to increase access to microfinance for housing improvements. As of 2004, 12 microfinance agencies served 403,950 clients,



▲ Algiers. In Algeria, the largest country in the Maghreb, access to housing finance is limited. ©Pichugin Dmitry/Shutterstock

BOX 15: ISLAMIC PRINCIPLES AND LAND: OPPORTUNITIES FOR ENGAGEMENT



Over 20 per cent of the world's population is influenced to varying degrees by Islamic principles and practices, either through official systems or informal practices. Among other areas, Islamic principles are impacting on land and property. Despite their wide geographical spread and relevance, they are often neither sufficiently documented nor aligning informal and statutory systems. These shortfalls can negatively impact on land management systems and security of tenure.

Land systems and tenure approaches across the globe rarely acknowledge that some Islamic principles can offer opportunities for enhancing property rights. Just as with customary and informal land rights, there is a need to better understand these approaches and get a more comprehensive picture on how land is managed in different contexts.

The elements inherent to Islamic principles and relevant to land can have many practical

applications. This is not to say that religious discourse should necessarily be preferred over universal or secular land approaches, but it rather suggests a pragmatic strategy where Islamic land principles may complement or offer authentic land solutions in some contexts.

There is no single unified and systematic field of Islamic land law. However, those working with Muslim communities recognize key features drawn from various Islamic sources relating to land. Protection of property rights is in general recognized under *Shari'a* as a priority and state policy must operate to promote it. Islamic law is therefore important for land tenure in Muslim societies. Whether or not their states 'officially' implement Islamic principles, land tenure regimes and concepts are generally constructed and realized with reference to the *Shari'a*. While Islamic countries share a common culture, they nevertheless demonstrate diversity in applying Islamic law

through different methods, mechanisms and legal practices. It is therefore important to note that Islamic principles relevant to land are not necessarily the same throughout the Muslim world and may vary, even within countries.

The Global Land Tool Network (GLTN), with its secretariat at UN-Habitat, has established innovative, pro-poor, scalable and gender-sensitive land management and land tenure tools (www.glt.net). It elaborates a range of activities such as promoting research and disseminating materials on land, supporting documentation of tools and best practices, developing innovative methodologies and approaches, organizing workshops and consultations, facilitating a wide range of stakeholder inputs and strengthening capacity through training. GLTN recognizes the demand for targeted tools, including culturally or religiously formatted tools, as there are many positions and approaches to conceptualizing and delivering secure tenure and access to land.

GLTN's work on Islamic dimensions of land began in 2004 with the commissioning of research leading to Sait and Lim's *Land, Law and Islam: Property and Human Rights in the Muslim World* (London: Zed Press/UN-Habitat, 2006) which was endorsed by leading Muslim and non-Muslim stakeholders including the seat of Islamic scholarship, the Al-Azhar in Egypt. Based on this research, a training course on Islamic Land, Property and Housing Rights in the Muslim World was produced in 2010 and piloted by GLTN in cooperation with the University of East London. In 2011 a short booklet to accompany these products was launched. The Network is now rolling-out the products based on demand.

most of whom were women (49-68 per cent depending on the organization). It is estimated that there are significant opportunities for growth, as about 50 per cent of the urban population are potential users of microfinance.⁸⁷

In **Algeria**, where the value of the housing deficit is equivalent to 25 per cent of GDP and loans account for only 1.5 per cent of GDP, the government is targeting low-income families and providing them with better access to credit.⁸⁸ However, housing finance remains limited.

As a result of public policies aimed at affordable rental housing through public ownership and rent controls, private owners of older buildings have delayed maintenance or kept

their properties vacant. Alternatively, they have diverted their investments to more profitable sub-markets, such as expatriates. In Libya, for example, there was a 36 per cent decrease in the number of available rentals in 2010,⁸⁹ while rising prices have made the rental market less accessible to lower-income residents.⁹⁰

Urban Land Markets, Tenure and Property Rights

Tenure systems in the Maghreb region, although rooted in *Shari'a* law, have been heavily influenced by the legal systems introduced under European colonial rule that increased

individual property rights and allowed foreigners to own real estate. After independence, several countries nationalized property formerly owned by foreigners, adding large areas to the public reserves. More information on the history of land tenure and the historic layers of the Maghreb cities is available in the 2010 *The State of African Cities 2010* report.⁹¹

Generally, the urban land market is divided between individual owners, the government and religious organizations. In historic centres, estates known as *waqf* or *habous* deeded for charitable, educational or religious purposes comprise as much as 20 to 40 per cent of properties and are managed by ministries of *awqaf*. Once designated as *waqf* land, properties cannot be changed to private ownership. Many organizations can no longer manage these properties or generate revenues from them, leading to the deterioration of the historic fabric.

Private land tenure is unevenly divided between freeholds, usufructs and leaseholds. Individual freehold is the predominant form of urban land tenure but much of the urban land is also held in joint ownership, as result of *Shari'a* inheritance laws.

Although this is more common in rural areas, urban land tenure also includes usufruct rights where someone other than the owner has the use of the property for an extended period of time. Urban residents can also secure land rights through long-term leaseholds that give the lessee full ownership rights to all of the improvements made to the property over a specific time period.⁹² They can also hold derivative rights, including the right of habitation in a dwelling and the right of use of commercial premises in a structure owned by other parties.

In the Maghreb region, the state owns all land not privately owned, including deserts, forests, wastelands and vacant unclaimed land, or roughly 20 to 30 per cent of the total land area.⁹³ In recent years, governments have been taking a more active role in directing urban growth to the state-owned lands, particularly on the urban peripheries in Morocco.

Property rights in some Maghreb countries are fairly limited. For an index where the greatest level of property rights is designated as 100, Morocco ranked 40, Algeria ranked 30 and Libya ranked 10, all far behind other countries in the region.⁹⁴ In Libya, the government abolished property rights in 1978, limiting private ownership to one dwelling per family, and redistributed the surplus. It was also illegal for persons to lease residential property and collect rent. The restriction on renting the dwelling was later relaxed as were other regulations when the country began to feel the effects of United Nations sanctions.⁹⁵

Titling and Registration

Titling and registration of property in the Maghreb region is a costly and cumbersome process that includes notarial and registration fees, land fees, and transfer taxes, among

others.⁹⁶ As a result, many housing transactions simply occur before a notary public and much of the urban land remains unregistered, making it very difficult to track ownership.

About 80 per cent of the urban land in Morocco is not formally registered, limiting the ability of owners to access the mortgage market as banks do not accept unregistered land as collateral.⁹⁷ In Algeria, only about one-third of all properties have been registered with the *L'Agence Nationale du Cadastre*.⁹⁸ The lack of full registration increases the challenge of effective urban planning. Simpler procedures and the introduction of a nationwide improved registration technology are expected to increase the percentage of registered properties.⁹⁹

Urban Land and Fiscal Policy

Land is the most rapidly appreciating asset in the Maghreb region, doubling every three years since 1970. The prevailing rates of appreciation of land values obviously encourage speculation. In an attempt to control speculative investments that drive up land values, governments are revising existing property taxes, instituting taxes on vacant land and repossessing allocated serviced land in new urban areas if not developed within two or three years.

Today, when both productive and beneficial uses of the property are taxed, the burden falls primarily on the formal real estate and business sectors. The urban expansion of recent years has not resulted in a commensurate increase in tax-producing assets because of the lag in property registration, particularly in informal settlements.

In **Morocco**, two taxes are levied on the appraised rental value: a flat 10 per cent tax, and another on increases in the property value. In **Tunisia**, the area of both occupied and unoccupied urban land parcels is taxed at 2 per cent of the assessed value. Vacant undeveloped land is now taxed at its potential capital value.

In **Mauritania**, the rapid urbanisation that followed the droughts of the 1970s outstripped the ability of government to manage urban growth and the regularisation of peri-urban informal developments has not kept up with their creation. Lack of cadastral information and cumbersome legal procedures have hampered the transfer of property titles to occupants while a lack of clarity of planning responsibilities and financial resources have prevented local authorities from developing and implementing growth management policies.

While all regional capitals were directed to adopt Simplified Master Plans (*Schémas Directeurs Simplifiés*) in 2008, none have been approved by the national authorities and only Nouakchott has an enforceable set of planning regulations. Property-based local revenues are minimal and further hamper the ability of local governments to provide basic infrastructure, particularly to the informal settlements on the urban fringe where most of the urban growth is concentrated.



▲ The Société Nationale des Chemins de Fer Tunisiens (SNCF) is the national railway of Tunisia, a country investing heavily in its rail network. ©Rais67. Licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license.

Mass Transportation

Given prevailing income levels, the Maghreb region's people have traditionally walked or taken public transit. In Algiers, two-thirds of all motorized trips are made by bus and rail, and less than a quarter by private car. In Casablanca, 50 per cent of motorized trips are by public transit and 30 per cent by car¹⁰⁰ Public investments in mass transit have not kept pace with urbanization. Vehicles are overcrowded, travel times are long and schedules uncertain. In Tunis, average bus speeds have fallen to 10 km/h due to congestion. Compared with Latin America, where there are over 1,000 buses per one million inhabitants, Casablanca only has 433, Rabat-Salé 361, Fes 239, Tangier 107 and Tunis 508 buses.¹⁰¹

Public transportation as a share of motorized transit in Tunis fell from 68 per cent in 1977 to 40 per cent in 2002.¹⁰²

By 2010, the bus and tram system accounted for 38 per cent of motorized trips while 58 per cent were made by car. Similarly, 60 per cent of motorized passenger trips are made by car in Tangier and the remainder by public and private buses and taxis.

In many cases, public transit is provided through privately-operated shared taxis, mini- or minibuses and vans. In Tangier and Algiers, taxis and minibuses serve a critical function in urban mobility, comprising 90 per cent of mass transit vehicles. At the same time, the large numbers of vehicles, many of which are over 10 years old, contribute to the problems of congestion and air pollution.

As with many public services, urban mobility management is highly centralized, with responsibilities split between ministries of urban transport, roads, and railroads. With

no single agency charged with mobility planning and management, and capacities constrained at both local and national levels, urban transportation has deteriorated.

Algeria, plagued by civil war from 1991 to 2002, was unable to implement long-term infrastructure plans, while in Libya, public transportation received little attention until recently since a culture of cheap fuel and private motorization prevails. Reforms have been implemented to create dedicated transport authorities in Morocco and Tunisia, under state supervision, but they are as yet incipient.

Public transportation has suffered from significant underinvestment because, as a result of subsidized fares, government-run transportation agencies have endemic operating budget deficits and are therefore unable to expand or renew their rolling stock. One study of 24 cities in Morocco in 2006 showed that they had invested an estimated 31 per cent of the funds needed for their transportation infrastructure.¹⁰³

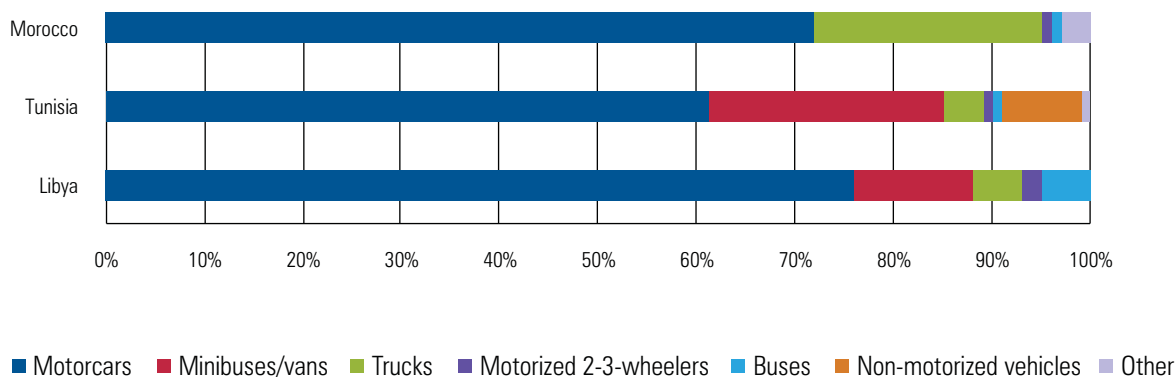
Governments are increasingly aware of the importance of urban mobility planning and have formulated plans to build new subways, light rail, trams, and high-speed rail. While these projects will bring important improvements, their cost and long gestation period diminish their ability to influence current spatial development trends.

Tunis was one of the first cities in the region to develop an urban transportation master plan, approved in 1999 and designed to strengthen the existing light rail metro systems and develop a new network of regional rail, some of it high-speed. The first component of the high-speed rail network obtained funding in 2010 but will take decades to complete. Its long time horizon and integration with the city's spatial plans allowed the government to purchase land for future projects at lower costs. Today, its light rail system, the first of its kind in Africa, comprises five lines and 47 stations over 32 kilometres.



▲ A common traffic sign in Moroccan cities: No entry for horse/donkey-pulled carts. ©Tonkie/Creative. Licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license.

FIGURE 27: PERCENTAGE OF REGISTERED MOTOR VEHICLES BY CATEGORY, 2007¹⁰⁶



Source: WHO "Global Status Report on Road Safety: Time for Action", 2009

Algiers will launch a metro system in 2012, the second of its kind in Africa after Egypt. The city is also constructing a 23 km tramway system that, although not connected with the subway, is envisaged to serve an estimated 185,000 people per day upon completion. Two other major rail projects are underway in Algeria, including an 8 km light rail line with 11 stations in Constantine and an 18 km tramway with 32 stations in Oran, both set to be launched in 2011 or 2012. Tripoli is also planning a 104 km subway system with 73 passenger stations, which is anticipated to be launched in 2016.

In 2011, Morocco launched its first tramway, at a cost of USD 450 million. The 31-station line connects Morocco's capital Rabat and the nearby city of Salé with a combined population of around 3 million people. Casablanca has developed an ambitious transportation plan with a time horizon of 2030 for a 160 km network based on four tram lines, a suburban rail line and a metro subway line. The first phase of the project, a 28 km tramway serving major universities, hospitals and business districts and built at a cost of around USD 750 million, will be launched in 2012.

Individual Mobility

While walking still remains the prevalent means of transportation, accounting for 50 per cent of the modal split in Tunis and 56 per cent in Algiers and Tangier, the rapid expansion of urbanized areas increasingly necessitates motorized mobility options. With the exception of Libya, the rate of motorization across the Maghreb is still relatively low compared with the world average, but is rapidly increasing. In Algiers, there were 100 private vehicles per 1,000 people in 2010, up from 69 in 1990; in Tunis, 102 in 2010, up from 64 in 1994.¹⁰⁴

The trend towards individualized transport has been spurred by the deterioration of public transport and national policies aimed at increasing private car ownership. The government of Tunisia, for instance, provided tax breaks and other credits to facilitate car ownership in the 1990s, while Algeria liberalized car imports to promote car ownership. In Algiers the number of private vehicles tripled from 1995 to 2009, while public transport vehicles increased by a mere 36 per cent.¹⁰⁵ In addition, Libyan and Algerian fuel costs are below the world average, while cheap automobiles for domestic consumption are manufactured in Tangier.

Extensive road networks across the Maghreb have also supported the demand for private cars. Together, Algeria, Libya, Morocco and Tunisia have over 268,000 km of roads, around 57 to 70 per cent of which is paved. Mauritania's surfaced road system is still embryonic and primarily concentrated in Nouakchott.

Road Safety

Road fatality rates in the Maghreb, as in the rest of Africa, are among the highest in the world. Regionally, more than 11,800 people died in traffic accidents in 2007 and almost 180,000 were injured. Libya has the third highest fatality rate in the world, with 40.5 people killed per 100,000 inhabitants; Tunisia (34.5), Morocco (28.3) and Algeria follow closely.¹⁰⁷ In comparison, the world average was 20.8 fatalities per 100,000, and 10.3 among high-income countries. While around 50 to 60 per cent of accidents involved motorised vehicles, 15 per cent of traffic fatalities in Libya, 28 per cent in Morocco and 32 per cent in Tunisia were pedestrians, highlighting the need to enhance the safety of sidewalks and crosswalks.¹⁰⁸



▲ Operational taxis in Nouakchott, Mauritania. ©Guido Potters

The Challenge of Water Scarcity

All Maghreb countries are water stressed, with Algeria, Libya and Tunisia each having total resources of less than 500 m³/capita, and Morocco less than 1,000 m³/capita. Algeria, Morocco and Tunisia already exploit 47 to 65 per cent of renewable water resources but Libya is withdrawing eight times more water than is renewed.¹⁰⁹

While both desalination of seawater and fossil aquifer water sources under the Sahara can be tapped, their development can be prohibitively expensive in countries where water tariffs are already among the highest in the Arab world. Today, in line with policies to ensure some measure of food security, 60 to 95 per cent of water in the Maghreb is used for agriculture.¹¹⁰ With the region's population growing at 1.0 to 1.8 per cent annually and expanding consumption in urban areas, all Maghreb countries face difficult tradeoffs between water security and food security.

Recognizing the importance of preserving agricultural productivity both for food security and to slow rural-urban migration, governments have developed diverse plans to promote irrigation efficiency, in addition to promoting urban water reuse and greater use efficiency.

In **Morocco**, the 2008 Green Plan proposes to make agriculture the country's main economic engine in the next ten to 15 years by increasing private investment in high-value agriculture for 400,000 farms, and providing public support to

600,000 to 800,000 small-holder farms to increase productivity and reduce water demands.¹¹¹ In **Algeria**, the national Plan for Hydrologic Management focuses on desalination, improving efficiency of use, reducing water losses and reusing water for irrigation during the 2009-2014 period.

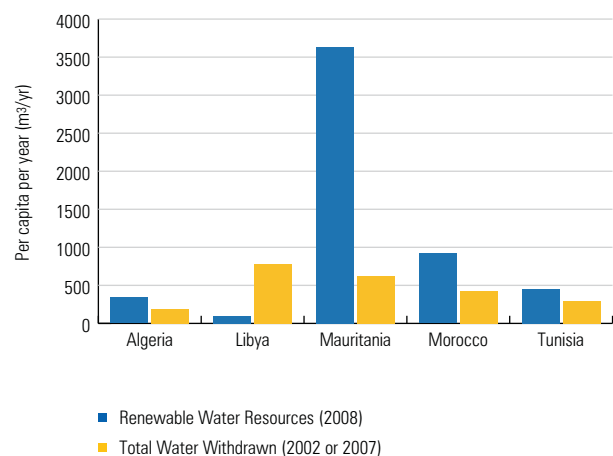
In the long term, Algeria aims to develop new reservoirs and transfer water from the High Plateaus. **Tunisia** has developed a strategy of increasing wastewater reuse to 50 per cent for irrigation, increasing agricultural efficiency, and reducing water allocations for agriculture by 1.3 per cent a year.¹¹² **Libya** has resolved its extreme water scarcity with an aqueduct to the Nubian Sandstone Aquifer, which it shares with Chad and Egypt. This supplies water to Tripoli, Benghazi, Sirt and other localities.

Urban Access to Domestic Water

Urban access to improved water and sanitation is relatively high in Maghreb countries and nearly universal in Morocco and Tunisia. Algeria, however, may miss its Millennium Development Goal target for water and sanitation as the result of a decline in the proportion of people with access to water and because the country is undergoing the region's highest absolute and relative increase in urban population.

Having reached relatively high levels of urban water service provision, Algeria, Morocco and Tunisia are now turning to diverse strategies to ensure future water supply and reduce

FIGURE 28: AVAILABLE AND WITHDRAWN WATER RESOURCES PER CAPITA



Source: FAO Aquastat 2008



▲ A man sells water from the back of a truck in Tripoli, Libya. Water has been cut off throughout the city. ©J. Weeks/Voice of America

TABLE 39: DOMESTIC WATER TARIFFS

	Casablanca	Rabat-Salé	Safi	Marrakech	Meknes	Algiers	Tunisia
Water Tariff (USD/m ³)	USD 1.03 ⁺	USD 0.21 ⁺	USD 0.54 [*]	USD 0.39 [*]	USD 0.20 [*]	USD 0.21 ⁺	USD 0.10 – 0.63 [^]

Sources: Global Water Intelligence, 2005 Water Tariffs Survey; ^{*}World Bank 2000 data; [^]Newspaper 2010

water pollution. In **Morocco**, the 2005 National Sanitation Master Plan aims to achieve an 80 per cent sewerage connection rate in urban areas, reduce wastewater pollution by 60 per cent, target 260 cities and consider wastewater reuse.¹¹³ By 2009, the latter is envisaged to increase treated wastewater nationwide to 15 per cent, up from 8 per cent in 2005.¹¹⁴ The treatment plants will provide water for reuse by farms and golf courses. **Tunisia** similarly has a goal of raising wastewater reuse in the Greater Tunis and coastal areas to 50 per cent by 2014, up from 30 per cent prior to 2009.¹¹⁵ In **Algeria**, the government has prioritized limiting aquifer abstraction and increased desalination, with as many as 13 desalination plants to open by 2011.

High systemic water losses in Algeria – 43 per cent in Oran and 51 per cent in Algiers as compared with 18 per cent in Tunis, 25 per cent in Rabat/Salé and Casablanca, and 7 to 20 per cent in European and U.S. cities – indicate the need for better maintenance of distribution networks.¹¹⁶

Residential water use per capita ranges around 100 litres per day in the Maghreb,¹¹⁷ although use varies significantly between countries. On the low end, daily water consumption in **Mauritania** varies between 18 litres/capita in unserviced areas to 40 litres/capita in the serviced areas of Nouakchott. In **Libya**, per capita water use is two to three times the regional average, although it has the least domestic water resources of the Maghreb. Water tariffs in Casablanca are among the highest in the region at USD 1.03 per cubic metre, followed by other Moroccan cities, while the lowest tiers of Tunisia's

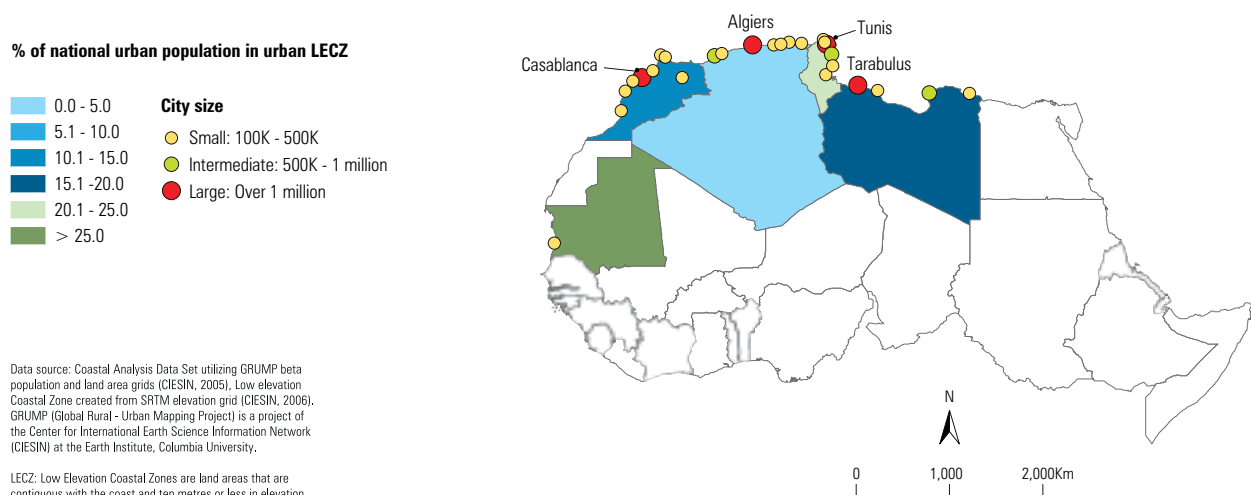
national tariff blocks have some of the region's cheapest water tariffs.¹¹⁸ In Casablanca and Rabat/Salé, revenues cover operating costs, including depreciation, while in Oran and Tunisia they cover only 90 per cent of operating costs and the government subsidizes the remainder.¹¹⁹

Climate Change

Climate change in Northern Africa is predicted to shift the Westerly winds, resulting in as much as a 12 per cent reduction in median annual precipitation by 2030¹²⁰ and the temperate climate that characterizes coastal Maghreb will become more extreme. Already, droughts in the region are increasingly frequent and severe, while floods have destroyed major crops in Morocco and Tunisia.

The overall trend in reduced precipitation, coupled with higher temperatures and rates of evaporation, will reduce agricultural and pastoral productivity by 10 per cent although some studies suggest it could be as much as 40 per cent in Morocco.¹²¹ A rise in sea levels is also predicted to impact major cities in Northern Africa, particularly Alexandria, Algiers, Casablanca, Tunis and Tarabulus.

Since the 1970s, despite the limitations of arable land and water, the Maghreb countries have sought to strengthen food security by promoting domestic agricultural production. Agriculture accounts for 16 per cent of GDP in Morocco, 11 per cent in Tunisia, 8 per cent in Algeria but only 1.7 per cent in Libya, which imports 75 per cent of its food.¹²²

FIGURE 29: PER CENT OF NATIONAL URBAN POPULATION IN A LOW-ELEVATION COASTAL ZONE (LECZ)¹²³

With growing demand for water, especially in cities, as well as growing shortages due to prolonged droughts, water will increasingly be allocated away from agricultural areas, causing rural hardship and accelerating migration to cities and abroad. Projected changes in climate will further exacerbate existing urban challenges of providing adequate infrastructure, housing, employment and social services, heightening the potential for social, political and economic conflicts.

Food Security

As evidenced in the riots across the Arab world in 2008 and early-2011, food security has the potential to destabilize governments. With only five countries exporting 73 per cent of the world's traded cereal, and only 18 per cent of all wheat and 6 per cent of all rice produced for export, the global cereals market is highly susceptible to shifts in supply and demand.¹²⁴ Between June and December 2010, FAO documented a 57 per cent increase in the cereals price index, 56 per cent increase in the oils index, and 77 per cent increase in the sugar index. As net food importers, Maghreb countries have been affected to varying degrees by rising world food prices.

Traditionally, countries in the Maghreb have relied on reduced taxes on grains and food subsidies to ensure food affordability; Morocco spends 0.7 per cent of its GDP on food subsidies and Algeria 0.03 per cent. As an oil exporting nation, Algeria's fiscal surplus allows it to subsidize food costs while countries with fiscal deficits, such as Morocco, are less able to subsidize basic food prices. Food subsidies can be blunt market instruments that ultimately benefit the non-poor, detract public funds from more productive uses and further drive up costs of grains. The Algerian government's move in January 2010 to buy 800,000 tons of wheat, for instance, resulted in a further rise in market prices.

Under a changing climate, future food price spikes will be more frequent and more drastic. To more effectively respond to future food crises, Maghreb nations will need to implement broad reforms to agriculture, water and food trade and more narrowly target social welfare nets.

Energy and Air Pollution

By 2005, 99 per cent of the population in Tunisia, 98 per cent of Algeria, 97 per cent in Libya and 85 per cent in Morocco had access to electricity.¹²⁵ Between 1997 and 2007, the consumption of electricity in Algeria, Morocco and Tunisia grew by 44 to 48 per cent. In tandem with increasing

energy consumption, carbon emissions have grown from 49 to 79 per cent during the 1990 to 2005 period, although emissions per capita have remained stable.¹²⁶ While Morocco and Tunisia, both energy importers, consume low amounts of energy per capita, and Algeria is on par with the world average, Libyans consume more than twice the world average. The cost of meeting energy needs in the region will increase as 2006 consumption is estimated to more than double by 2030.¹²⁷

The region has one of the highest potentials for renewable energies in the world, and major initiatives to build solar and wind facilities are underway for transmission to Europe, where governments are required to increase their use of renewable energy. The ongoing World Bank Concentrated Solar Scale-up Programme (CSP) aims to build 20GW around the Mediterranean by 2020, most of it in Maghreb and Mashreq countries.

The proposed multi-billion dollar DESERTEC initiative, implemented by a consortium of European and Algerian companies led by Munich Re, aims to build a network of solar and wind facilities throughout the Middle East and North Africa (MENA) region, with large-scale plans to be established by 2012 and pilots beginning in Morocco. Algeria has committed to build 220MW in Megahir, Naama and Hassi R'Mel II; Tunisia has committed to build over 200MW and Morocco's Solar Plan aims to build 2,000MW by 2020, starting with a 500MW project in Ouarzazate that may be commissioned by 2015.¹²⁸

In addition, Morocco aims to add 1GW of wind energy by 2012, including proposals for a 300MW project in Tarfaya and Tangier, and Tunisia 300MW of wind energy by 2011, including proposals for 120MW in the Bizerte. While CSP-based energy is generally too expensive for sale in the producer countries, the projects will have a positive impact on the local and national economies.

Several Maghreb countries have also established their own renewable energy targets. Building on past initiatives to electrify rural areas through renewable energy, Tunisia set a target of 500,000 square metres of solar hot water generation by 2009, and Morocco aims to add 400,000 square metres by 2015. By 2010, Morocco aimed to source 10 per cent of its energy from renewable sources, up from 4.3 per cent in 2006, and 20 per cent of all electricity by 2012, suggesting an increase of 1GW in renewable capacity for domestic consumption.¹²⁹

Air quality in the Maghreb, already at risk from the region's aridity and periodic sand storms, continues to deteriorate.

TABLE 40: WIND AND SOLAR POWER POTENTIAL IN THE MAGHREB

	Algeria	Libya	Morocco	Tunisia
Wind Power Potential (GW)	20	8	9	4
Solar Potential (GW)	62,600	51,700	7,800	3,900

Source: Booz Allen Report, 2009



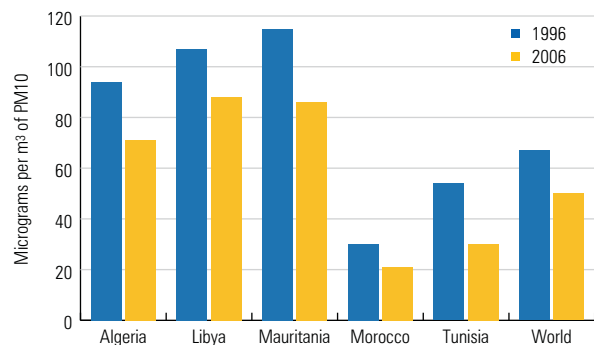
▲ Isofoton photovoltaic micro-plants in Morocco. The region has one of the highest potentials for renewable energy in the world. ©Isofoton.es. Licensed under the Creative Commons Attribution 3.0 Unported license.

FIGURE 30: PROPOSED INFRASTRUCTURE MAP FOR DESERTEC



¹⁷⁹Benabderrazik, H. "Opportunities for Logistical Improvements through Maghreb Integration." Chapter 11 in Hufbauer, G. and C. Brunel, eds. *Maghreb Regional and Global Integration: a Dream to be Fulfilled*. Washington, D.C.: Peterson Institute for International Economics, 2008. Source: DESERTEC

FIGURE 31: PARTICULATE MATTER (PM10) AS A WEIGHTED AVERAGE OF THE URBAN POPULATION



Source: World Bank Development Indicators

While per capita trends in some types of air pollution are stable or declining, the increase in urban population has caused an overall increase in levels of pollution. The largest and fastest-growing contributors to air pollution include transport, industry and power plants. In addition, low building energy efficiency and a high proportion of old vehicles contribute to air pollution.

Following worldwide trends, all Maghreb countries have reduced their per capita emissions of particulate matter (PM10). However, Algeria and Libya are still above the world average of 50 micrograms per cubic metre of PM10, and Algeria, Libya and Tunisia are above the WHO standard of 20 micrograms per cubic metre. Morocco and Tunisia finally phased out leaded gasoline in 2009 but Algeria is one of 12 remaining countries in the world that continues to use leaded petrol.¹³⁰ For the latest data on other national air pollution emissions, refer to *The State of African Cities 2008* Report.

Traffic also contributes to noise pollution. In Greater Tunis, a study commissioned by the Ministry of Environment and Sustainable Development found that noise levels in residential areas near major nodes of transportation and light industry ranged between 56 and 76 dB(A), compared with the regulatory threshold of 45 to 60 dB(A).¹³¹ In Algeria, the regulatory threshold for noise in residential areas is 70 dB (A) during the day and 45 dB (A) at night, standards that are typically exceeded at all times of day.

Solid Waste Management

Improper waste disposal and widespread littering cause environmental degradation and foregone economic opportunities in the Maghreb countries: 0.5 per cent of GDP in Morocco, 0.3 per cent of GDP in Algeria and 0.2 per cent of GDP in Tunisia.¹³² Recognizing the challenge, Algeria, Morocco and Tunisia have established national solid waste management frameworks. Libya lags in solid waste management, but is developing a national strategy.

While urban solid waste collection has steadily risen, Algeria disposes 58 per cent and Morocco 95 per cent of waste in open dumps rather than sanitary landfills.¹³³ The environmental challenge is severe in Morocco, where a study of 150 sites found that 80 per cent were situated on vulnerable soils.

Solid waste management is implemented by local governments in Algeria, Libya, and Morocco, while a national agency is responsible in Tunisia. Morocco outsources most of the collection services to private companies, Tunisia contracts landfills to private management, and Algeria is working to grow private participation. In 2007, solid waste management consumed 10.5 per cent of total municipal budgets. Cost-recovery is limited – in Tunisia, the national government recoups only 15 per cent of the total cost of collecting, transferring and disposing the waste.¹³⁴

In the mid-2000s Tunisia took the regional lead in improving waste management by constructing nine new sanitary landfills in Bizerte, Gabès, Jerba, Kairouan, Medenine, Monastir, Nabeul, Sfax and Sousse as well as increasing the capacity of the country's largest landfill in Tunis. With World Bank funding, the government will construct biogas collection and flaring systems at all landfills and sell carbon reduction credits to help fund operation and maintenance costs.¹³⁵

Following suit, the Government of Morocco launched the National Municipal Solid Waste Management Programme in 2008, setting new standards and goals for urban areas, and aiming to raise collection coverage to 90 per cent by 2021, introduce sanitary landfills for all major urban areas, close or rehabilitate 300 existing open dumps, and promote recycling, waste reduction and reuse.¹³⁶ Financing the programme will draw on short-term subsidies, accessing international carbon market funds, exploring new local revenue such as a solid waste fee or an eco-tax on packaging and improving cost-effectiveness through inter-city facility sharing and greater transparency in contract bidding and procedures.

Algeria has also begun to rehabilitate open dumps, with projects in Algiers, Bouira and 18 municipalities in the western Mascara region. Libya plans to build sanitary landfills for a list of coastal cities and expand its network of composting facilities that transform organic solid waste into fertilizers.¹³⁷

Liveability and Quality of Life

When international companies attempt to rank the liveability of cities based on indicators on safety, education, hygiene, health care, culture, environment, recreation, stability, and public transport, less-developed countries typically have a low ranking. In the Mercer 2010 survey, 19 out of the 25 lowest ranked cities are in Africa. In 2007, Algiers was last out of 132 cities, trailing Tunis in 78th place and Casablanca in 119th.¹³⁸ Although the Maghreb cities can improve their liveability ranking, it is important to note that the indicators used are subjective and do not account for difference in cultural context, community life, and actual quality of life as perceived by residents.

National Urban Policy

Throughout the Maghreb, urban policy is formulated at the ministerial level and most countries have taken a sectoral approach to urban investments. **Tunisia's** central government plays a key role in developing urban improvement projects, including the eradication of slums and the construction of affordable housing. The main agencies involved are the public companies responsible for the planning, construction operation and maintenance of urban utilities; the Ministry of Public Facilities, Housing and Regional Planning and the Ministry of Economic Development and International Cooperation, which acts as a channel for bi- and multi-lateral funds.¹³⁹

In **Libya**, the Urban Planning Agency prepares the national physical plan and the urban development strategy and national consultancy offices prepare plans for provinces and municipalities. The extent to which local authorities adhere to the plans is not well known. In **Morocco**, the Ministry of Housing, Equipment and Environment is responsible for undertaking important local programmes and projects. Implementation is delegated to Al Omrane, which unified three national agencies involved in urban development activities in 2004. In **Algeria**, the Ministry of Planning and the Environment prepare national physical plans as well as plans for the country's four major cities.

Mauritania's national policy has focused on an integrated poverty reduction strategy to improve the quality of urban life. The Ministry of Equipment and Transportation is responsible for regional and urban planning, project development and land management. The Directorate of Buildings, Housing and Urbanization (DBHU) drafts the plans, formulates and enforces building regulations and regularizes informal settlements. It is also in charge of the distribution of state land to individual citizens.

The inability of most municipalities to finance urban projects has led to reliance on specialized national agencies, such as Al Omrane in Morocco, to implement economic and social projects. In Tunisia, ARRU implements projects to improve older, deteriorating areas, preserve and revitalize historic city centres and upgrade informal settlements by combining central funding and contractual agreements with municipalities for the delegation of project execution authority. In Mauritania, the national executive agency for public projects AMEXTIP implements projects for which funding can be secured.

Decentralization and Local Government Systems

The Maghreb countries share common features in the structure of local governance that reflect the legacy of the

Ottoman and French colonial administrations. The countries are divided into provinces or governorates (*wilayas*), headed by an appointed governor (*wali*). This is in practice the dominant level of local governance. The presence of de-concentrated offices of central ministries that provide important public services, including health, education and housing, reinforce their dominance.¹⁴⁰

Provinces are further divided into districts and sometimes sub-districts headed by appointed officials. Provinces and municipalities have elected councils that are legally vested with powers commensurate with their status as legal representatives of the people, including approval of plans, development projects, regulatory controls and local budgets. In practice, *walis* and mayors wield more authority. Mayors are usually elected by the municipal council from among its members.

Since the 1980s, decentralization laws have combined varying degrees of political and administrative autonomy with central control over finances. The mismatch between functional devolution and fiscal centralization constrains local governments. Central transfers continue to be the main source of local finance and the share of local expenditures in the GDP is still low, rarely exceeding 30 per cent.

Tunisia's 24 provinces have a regional assembly (*Conseil Regional*) headed by the province's governor. The assembly groups ex-officio representatives of urban and rural jurisdictions (municipal mayors and rural council presidents) with elected members from each district within the province. They operate under the umbrella of the Ministry of Interior. The 262 municipalities have elected councils and mayors.

Non-urbanized jurisdictions have rural councils appointed by the Ministry. The councils have only a consultative role and the jurisdictions are administered by the province. City mayors are ex officio members of the regional assemblies, which are responsible for the preparation of regional plans and the management of the province's affairs. City mayors also sit on the development councils established in 1994 and their role is primarily advisory.¹⁴¹

Algeria's 48 provinces are subdivided into districts and communes. The 1,541 communes are municipalities headed by elected councils and mayors. They are under the authority of the provinces, which are headed by appointed *walis*.

Morocco's provincial administrations headed by *walis* appointed by the King have authority over all areas that lie outside municipal jurisdictions. Municipal governance is complex, with administrative responsibilities split between an appointed prefect who holds police powers and an elected communal council whose president acts as mayor and manages all other municipal functions, including local plans and projects, the issuance of building permits, inspection services and the budget. They all report to the Directorate General of Local Communities (DGLC) in the Ministry of Interior.

Morocco's decentralization strategy, prepared in 2009 with UNDP's technical assistance, aims to foster participation and accountability in local governance through participatory planning, development of human resources, decentralization of monitoring and evaluation, improved management of public services and local resource mobilization. The strategy also promotes fiscal decentralization and changes in the legal framework to give local authorities greater autonomy with appropriate central technical and managerial support.

UNDP is also supporting the computerization of civil registry records and the UNDP-ART (Articulating Territorial and Thematic Networks for Human Development) programme fosters partnerships between municipalities in Europe and in the south and eastern Mediterranean countries to promote achievement of the Goals.

In **Algeria, Morocco** and **Tunisia**, when the expansion of major cities spills over adjoining jurisdictions, another level of governance, the urban agglomeration is established with its own elected council and mayor. The degree to which the urban agglomeration can exercise authority over constituent municipalities is unclear. Cooperation among all the actors at the different levels of governance is needed to implement local development programs and promote sustainable urbanization.

In **Mauritania**, provinces are headed by appointed governors and act as offices of the central administration. Municipalities deal directly with the state and rely on central ministries to discharge key functions and services.

Libya has provincial, district and municipal levels of administration, with a variety of specialized commissions and councils. Municipalities have elected city councils. The structure of the system of local governance that will emerge in the aftermath of the civil war is unclear. The geography of the country and the tribal structure of society will be reflected in the legal and institutional framework. The boundaries of provinces and local jurisdictions may be re-demarcated. It can be assumed that at all levels of local governance, elected councils will be the norm.

Local Government Finance

Throughout the Maghreb region, municipalities run perennial operational deficits. The various local taxes, fees and permits that constitute the bulk of local revenues cover only a portion of the budget. Central transfers and shared taxes collected by the treasury contribute the balance.

The inability to keep up with rapid urban growth and the resultant informal urbanization undermine potential revenue while the inefficiency of billing and collection systems result in low collection rates and varying degrees of inequity and corruption, as well as the perpetuation of reliance on central transfers to cover local deficits and finance capital projects. Funding local initiatives and projects is a pervasive problem. The bulk of the municipal budget goes to salaries and operating

expenditures for municipal services such as maintenance of the road system and public spaces, solid waste collection and some community facilities.

Capital improvements are financed in large part by the central government. Foreign-funded programmes channel funds to localities through the Ministry of Finance. In some countries, municipalities are authorized to borrow from municipal development funds. Morocco's *Fonds d'Equipement Communal* (FEC) and Tunisia's *Caisse des Prêts et de Soutien des Collectivités Locales* provide municipalities with long-term, low-interest credit to finance revenue producing projects.

The Role of Civil Society

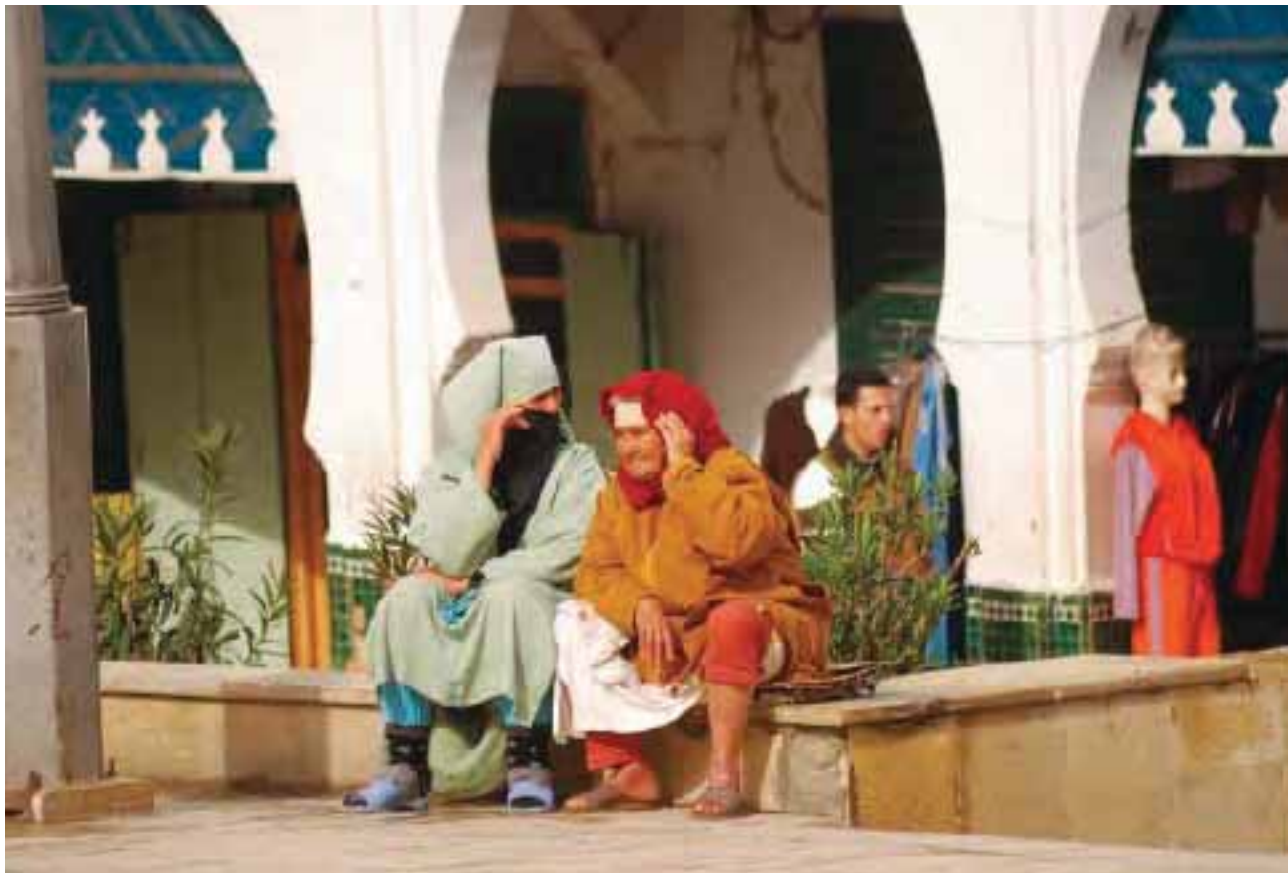
Morocco has the most open policy towards civil society organizations (CSOs) in the Maghreb. Since 1996, these have grown from 8,000 to an estimated 30,000 organizations in 2009.¹⁴² The oldest CSOs comprise Islamic charity groups, which have long provided basic services to poor communities and have developed grassroots healthcare networks without external assistance. Since the 2000s, the government has promoted non-religious CSOs for healthcare, education, and poverty alleviation. They are largely funded by international donor groups and have close relationships with the state authorities.

Morocco has also adopted reforms affecting the rights of women, the Berber community, and human rights, including the creation of the Arab region's first Truth Commission to address civil rights abuses. During the current Arab region's wave of civil unrest, associations have demanded social justice, better living conditions, jobs for the unemployed and greater political freedoms.¹⁴³ The Moroccan King has promised to devolve some of his prerogatives to the Council of Ministers and to Parliament.

In **Tunisia, Algeria** and **Libya**, civil society was much more restricted and constraints on local and foreign funding made it difficult for organisations to operate independently of the government.¹⁴⁴ Considered progressive and developed in many spheres, **Tunisia** had restrictions on the activities of civil society, human rights groups and freedom of expression. This repression, coupled with corruption, lack of employment opportunities and frustrated expectations, led the youth to protest the regime in January 2011.

In **Algeria**, civil society had mushroomed to an estimated 70,000 diverse voluntary associations for sports, education, health, trade and students by 2008.¹⁴⁵ The protests in January 2011 served as a rallying cry for many of these CSOs, who joined to create a National Coordination Committee for Democratic Change to lift the 19-year state of emergency.

In **Libya**, a tribal society, non-governmental organizations were illegal. Rather, quasi-governmental organisations provided services to the people.¹⁴⁶ The upheaval of 2011 fractured the population along tribal lines, resulting in a destructive civil war and foreign involvement.



▲ Local woman in the medina of the holy city of Moulay Idriss. Morocco has adopted positive reforms affecting both human rights and the rights of women. ©Attila Jandi/Shutterstock

Women in Politics and Governance

Between 1959 and 1964, all Maghreb countries granted women the right to vote and to stand in elections. Until the past ten years, however, women's participation in politics was minimal. While women's participation is increasing in numbers, they rarely assume significant executive positions or policymaking roles in national assemblies, local councils, or political parties.

In **Algeria**, **Libya** and **Morocco**, women comprise 8 to 11 per cent of the lower parliamentary house, compared to a world average of 15 per cent. In upper houses, women hold 1 per cent of the seats in Morocco, 3 per cent in Algeria, and none in Libya's General People's Council and General People's Congress. The main exception in the region is Tunisia, where women comprise 28 per cent of the lower house and 13 per cent of the upper house. In Algeria, Morocco and Tunisia, the highest position women have attained is that of vice-speaker of assemblies.¹⁴⁷

In 2002, **Morocco** established a parliamentary quota system that ensures 30 seats for women, up from two elected women in the 1997 elections. The current government has an unprecedented seven female ministers. Partly at the urging of

women politicians, the government also established a quota system for local council elections in 2009, ensuring that 12 per cent of seats are held by women, up from 0.55 per cent in 2003. It has dedicated MAD 10 million (USD 1.28 million) in 2009 for political parties and CSOs that aim to increase women's participation in politics.¹⁴⁸

Family codes are a set of regulations common in Arab countries that govern the rights of women in marriage, divorce and child custody. In 2005 **Algeria** revised the 1984 family code, giving important rights and protection to women. In 2008, the government further amended the Algerian constitution to officially recognize women's political role. Still, women occupy only 5 per cent of seats in local popular assemblies.¹⁴⁹ In **Libya**, the government promoted gender equality, running counter to the country's more conservative traditions. Thus, while women were encouraged to participate, particularly in local assemblies and debates, cultural traditions discouraged women speaking in public constrained meaningful participation.¹⁵⁰ Throughout the Maghreb region, women fully participated in the protests and demonstrations that marked the 2011 civil unrest.



▲ Moroccan vegetable pickers working in the fields beside the Polaris World La Torre Golf Resort in Murcia, Spain. ©Steve Forrest/Panos Pictures

Migrants and Refugees

With high unemployment rates, countries in the Maghreb (with the exception of Libya until recently) have for several decades been net exporters of labour to France as well as Belgium, the Netherlands and Germany. As immigration policies were tightened in these countries in the 1990s and 2000s, migrant flows shifted to destinations to Spain and Italy. Increasingly, migrants – particularly better-educated migrants – are also

travelling to the Canada and United States. Algeria, Morocco and Tunisia have 1 to 3 million residents abroad, 90 per cent of them in Europe.

The example of **Tunisia** typifies their experience. Despite significant developmental progress, Tunisia has some of the highest rates of unemployment in the region (22 per cent), particularly among the better educated. According to a survey by the Ministry of Youth, the percentage of people aged 15 to

29 wishing to emigrate rose from 22 per cent in 1996 to 76 per cent in 2005. Of those emigrating in 2005, 62 per cent had a secondary degree or higher and 76 per cent of male migrants left in search of employment, as compared to 30 per cent of females.¹⁵¹

National efforts, along with United Nations and international support, have established pilot projects in the migration-prone governorates of Le Kef, Gafsa and parts of Tunis to create higher-skilled jobs, upgrade informal enterprises and promote youth training.¹⁵² Nevertheless, as seen in the protests leading to the ouster of President Ben Ali in 2011, unemployment remains a critical issue in Tunisia. In the power vacuum that followed, over 4,000 Tunisians fled to the Italian island of Lampedusa.

Following 30 years of prohibiting emigration, **Algeria** has once again opened its borders in line with the country's economic reforms that started in the 2000s. The remittances of migrants have become increasingly important to the economy.

In the wake of the civil war in **Libya**, over 652,000 non-Libyans and 40,000 Libyan refugees have fled the country.¹⁵³ International organizations are facilitating the repatriation of non-Libyans, although many are staying for the time being in Egypt, Tunisia and, to a lesser extent, Algeria.

Since the 1990s, the Maghreb has also become a transit point for migrants from sub-Saharan Africa and Asia seeking to enter Europe and the Americas. An estimated 65,000 to 120,000 sub-Saharan Africans cross the Maghreb countries every year, most of them on their way to Europe. In recent years, Northern Africa has also received temporary labourers from Bangladesh, China, India, Pakistan, and the Philippines, who work in construction, trade, and services.¹⁵⁴

In some cases, the modern-day trans-Saharan migration routes have helped revitalize the old trade routes and oases in Abéché (Chad), Agadez (Niger), Gao (Mali), Kufra and Sebha (Libya), Nouadhibou (Mauritania) and Tamanrasset (Algeria).¹⁵⁵ The tightening of European borders has led to increasing pressure from European countries for the Maghreb countries to control their own borders or risk losing important sources of donor aid, foreign investment and other benefits. As a result, the Maghreb has become a migration destination by default for people from sub-Saharan Africa countries who failed to enter or were expelled from Europe and stayed in the region. Algeria hosts an estimated 240,000 foreign residents, predominantly from Arab countries but including 100,000 sub-Saharan Africans; the latter reside mostly in Oran and Algiers. It issued 23,000 work permits in 2007, up from 1,100 permits in 2001, 41 per cent of which were for workers from China.¹⁵⁶

As a consequence of the United Nations-imposed air and arms embargo on Libya from 1992 to 2000, the country launched a pan-Africa policy that resulted in a massive inflow of sub-Saharan migrants to work in the oilfields in the south

or in Tripoli and Benghazi. As of 2006, an estimated 1 to 1.5 million sub-Saharan migrants lived in the country. Domestic backlash against immigrants has led to a hardening of visa restrictions and the deportations of hundreds of thousands of workers.

Maghreb countries have also absorbed important refugee populations displaced by natural disasters and conflict in surrounding countries. Tindouf, Algeria, hosts 90,000 Saharawi refugees fleeing the conflict between the Western Sahara Polisario Front and Morocco. They live in abject poverty, with 18 per cent suffering from acute malnutrition.¹⁵⁷ The line between refugees fleeing persecution and economic refugees is often blurred and, in the face of high domestic unemployment and prejudices, the Maghreb countries have repatriated many people perceived as economic migrants, regardless of their actual status.

Remittances

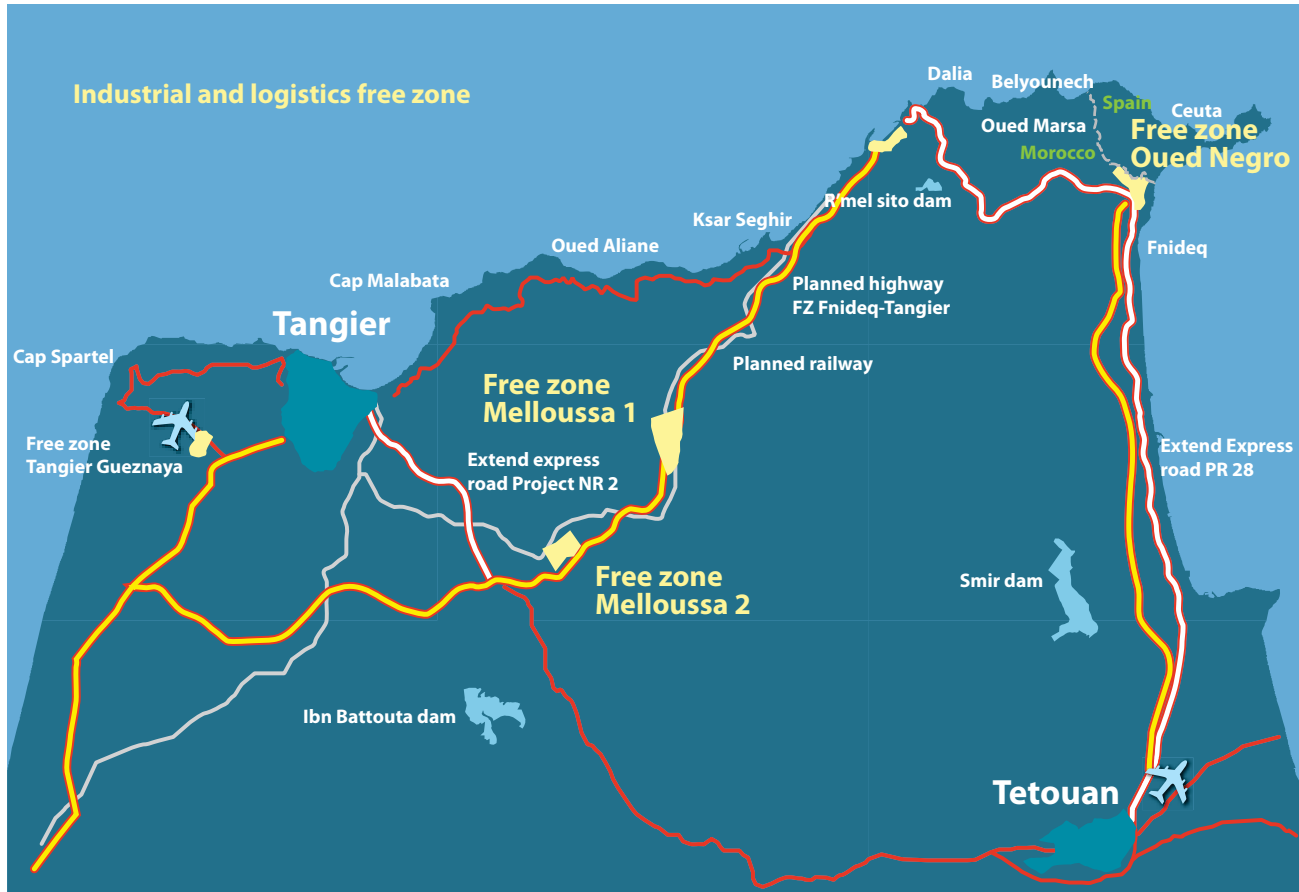
Remittances play a significant role in the economies of Morocco and Tunisia, where they account for 7 and 5 per cent of GDP, respectively. In Algeria, Morocco and Tunisia, remittances total three to seven times net international and bilateral development assistance. The impact of remittances on the national economy is negligible in Libya, where immigration is higher than emigration.

The global recession has reduced remittances, tourism revenues, exports and real estate-related construction, particularly in Egypt and Morocco, while the fall in oil prices in 2009 stressed oil exporting countries such as Algeria and Libya. These changes reduced both household and government capacity to cope with rising food and housing prices.

Remittances have provided important funds for local development and investment. In Morocco, they have been the source of financing for small- and medium-sized enterprises in villages and small towns, first in the Rif Mountains and now nationwide. By one estimate, 600,000 households in Morocco would fall under the poverty line without remittances.¹⁵⁸ According to one study of remittances sent by Moroccans living in the Netherlands, which accounts for 4 per cent of Morocco's total in this area, 23 per cent of the remittances are used for food, 16 per cent for healthcare and 15 per cent for housing. While most recipients had other sources of income, nearly 30 per cent of them depend entirely on remittances and the largest receiving areas were the Rif and Greater Casablanca.¹⁵⁹

The flow of remittances has helped expand the country's banking sector and the availability of microcredit loans. Nevertheless, there is still a lack of established institutional frameworks throughout the Maghreb to leverage remittances for savings and investment purposes, as compared with such Asian countries as the Philippines, South Korea and Thailand.¹⁶⁰

FIGURE 32: TANGER-MED DEVELOPMENT



Source: Posted in an unsourced blog, 2010.

The Tanger Extended Metropolitan Region

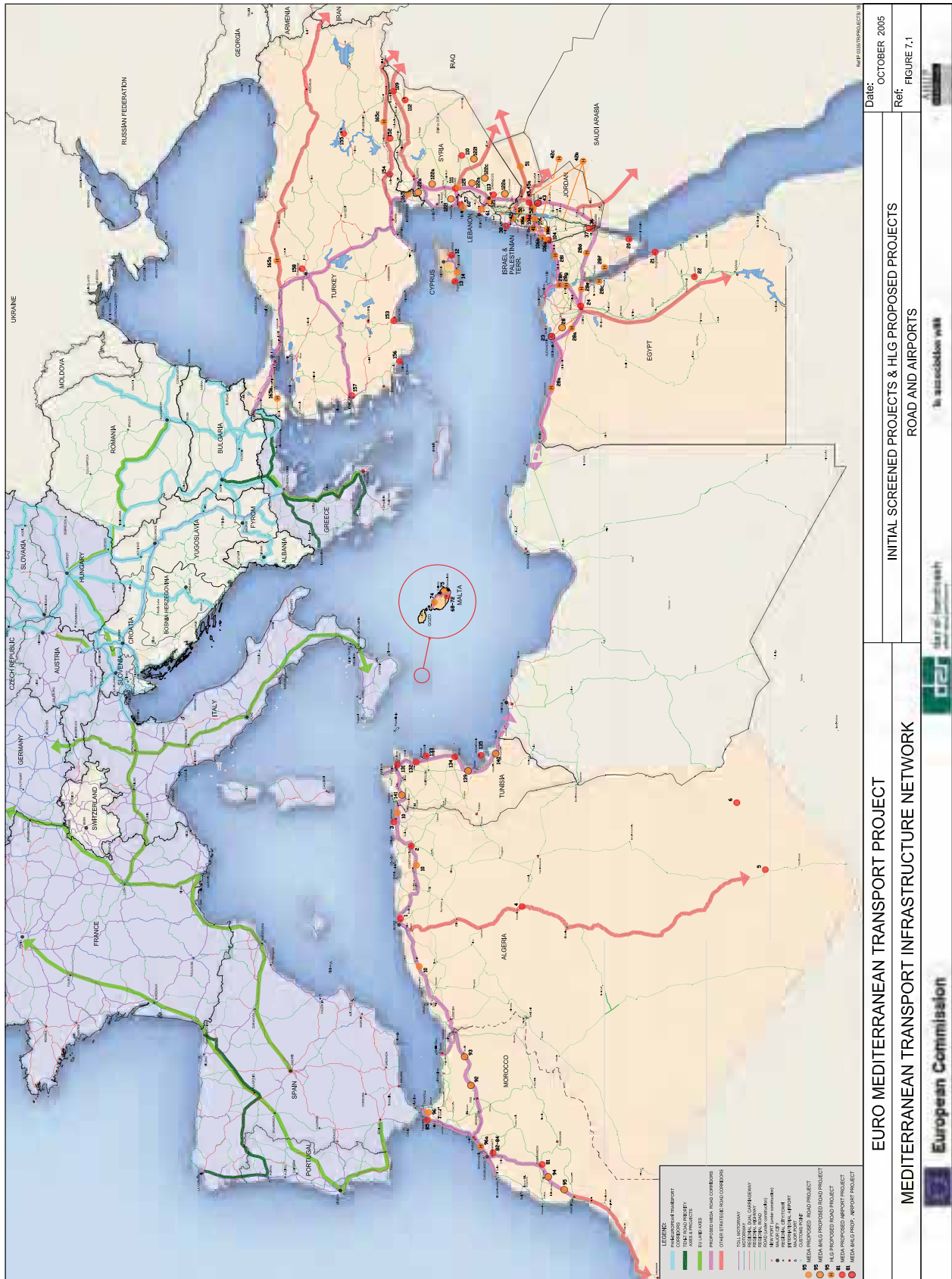
Two major urban corridors exist in the Maghreb: the first from Kenitra to El Jadida on Morocco's Atlantic coast and the second along the Mediterranean Coast. The Kenitra-El Jadida Corridor includes the cities of Casablanca and Rabat, Morocco's economic and administrative capitals which is home to 7.5 million people and produces half the country's GDP. The coastal zone was important in Roman times and has revived significantly since the 1960s, driven by the development of oil, industries and tourism.

The Union for the Mediterranean, which was established in 2008 to implement the Barcelona Declaration, has made integrated rail and highway networks between Morocco and Tunisia a key goal and is considering proposals for urban development and transport in the region. The successful development of these projects will strengthen the Maghreb's internal ties as well as external integration with Europe. *The*

State of African Cities 2008 and 2010 reports' North Africa chapters discussed these two corridors, respectively, in greater detail (available as free downloads from www.unhabitat.org).¹⁶¹

Taking advantage of its location at the intersection of these east-west and north-south corridors, a new extended metropolitan region (EMR) is growing around Tangier, which has become North Africa's largest container port. The port at *Tanger-Med* launched a new passenger terminal in 2009 that can handle 7 million persons per year, 700,000 trucks and 2 million cars. In addition, *Tanger-Med* features a dry port, a general cargo terminal, a 250 ha logistics zone, a 1,000 ha industrial free zone at Melloussa-Joamaa, and a 345 ha Tangier Free Zone where 400 businesses have located, employing 40,000 people.¹⁶² *Tanger-Med* has attracted a EUR 600 (USD 866) million Renault car factory that will assemble 200,000 cars per year by 2010. The public port authority is planning a second phase that will more than double the port's existing capacity by 2015.

FIGURE 33: EURO-MED TRANSPORT PROJECT



Source: EuroMed Aviation, 2005

Download a pdf of this map from: http://p23680.mittwaldserver.info/fileadmin/images/MapsAndData/Projects/PROJ_ROAD_AIR_web.pdf

To connect the port with the country's other economic centres, Morocco built a new Tangier-Casablanca highway in 2008, followed by a 45 km rail link to the national network in 2009. A new high-speed railway is expected to open in 2014 linking the port to Casablanca, thereby extending the coastal corridor from El Jadida to Tangier.¹⁶³ Tangier's population tripled from 1982 to 2008 and the construction of the new port has further consolidated its position as the economic centre of the north.¹⁶⁴

By 2015 the government plans to upgrade the port of Nador, 350 km east of Tangier, with new infrastructure focusing on the storage and export of hydrocarbons. Nador will also be connected through new highways to Taourirt, Fes and Oujda.

Regional Competition and the Challenge of Cooperation

Despite the signing of a number of regional trade agreements and the establishment of the Euro-Mediterranean Partnership and the Union for the Mediterranean, intra-regional trade accounted for less than 3 per cent of the sub-region's total trade in 2007.¹⁶⁵ Instead, Maghreb countries have oriented themselves to the European Union, with each country building its own port infrastructure to link its markets to Europe. Despite the increasing strength of outward trade and cooperative agreements, a number of studies demonstrate the potential for increased intra-regional trade by opening borders and integrating infrastructural networks.

Maghreb countries lag behind other regions in trade liberalization, with certain sectors closed to foreign participation and high cost of service provision. Stronger regional cooperation and trade reforms would help strengthen Maghreb efforts to integrate trade internationally.¹⁶⁶ In addition, revitalizing a hub-and-spoke system of infrastructure would reduce logistics costs and enhance Maghreb countries' business competitiveness.¹⁶⁷

Efforts to integrate the region's economies are particularly important given the growth of the trans-boundary corridor along the southern Mediterranean coast, and the planned expansion of the region's renewable energy production.

The closure of the border between Morocco and Algeria in 1994, due to the conflict over the Western Sahara, has prevented cargo and passenger movement. Existing train lines are inoperable and the Maghreb east-west highway stops at Oujda in Morocco and Tlemcen and Maghnia in Algeria. As a result, Morocco developed a port at Nador while, 120 km to the east, Algeria built a port at Ghazaouet. The closure of the border also forces cities such as Oujda, located close to Ghazaouet to use the more distant facility at Nador.¹⁶⁸

Nador's new hydrocarbons port would be strengthened if it were accessible to Algeria's petroleum and fossil fuels industry. Similarly, Tanger-Med's position would be consolidated if connected by sea, rail and highways to other North African countries and, from there, to the Mashreq.

Trade in energy resources poses another regional challenge. Morocco imports 10.6 per cent of its petroleum product needs from Algeria and the rest from outside of the Maghreb despite significant regional resources. Electric interconnections exist between Morocco and Algeria (at Ghazaouet/Oujda and Tlemcen/Oujda), between Algeria and Tunisia (at Djebel Onk/Métlaoui, El Aouinet/Tajerouine, and El Kala/Fernana) and between Tunisia and Libya (Medenine/Abukamash). However, these connections are only used for emergency backup purposes and provide less than 1 per cent of total electricity consumption in these countries.

The World Bank and DESERTEC renewable energy initiatives will require new transport infrastructure and electricity transmission lines. These projects will have important implications for the development of cities along the transmission lines' rights of way.

TABLE 41: TOTAL AND URBAN POPULATION ('000S) AND PERCENTAGE POPULATION URBAN

	1990	1995	2000	2005	2010	2015	2020	2025	2030
Total Population ('000s)									
Algeria	25,283	28,292	30,506	32,888	35,423	37,954	40,630	42,043	44,726
Libya	4,365	4,775	5,346	5,770	6,546	6,606	7,699	7,465	8,519
Mauritania	1,988	2,292	2,604	3,047	3,366	3,869	4,091	4,742	4,791
Morocco	24,808	26,929	28,827	30,392	32,381	33,570	36,200	36,406	39,259
Tunisia	8,215	8,936	9,452	9,912	10,374	11,026	11,366	11,921	12,127
Urban Population ('000s)									
Algeria	13,168	15,828	18,246	20,804	23,555	26,409	29,194	31,779	34,097
Libya	3,305	3,674	4,083	4,561	5,098	5,654	6,181	6,647	7,060
Mauritania	789	904	1,041	1,206	1,395	1,609	1,859	2,152	2,478
Morocco	12,005	13,931	15,375	16,835	18,859	20,999	23,158	25,235	27,157
Tunisia	4,760	5,493	5,996	6,455	6,980	7,537	8,096	8,636	9,115
Per cent Population Urban (%)									
Algeria	52.1	56.00	59.81	63.32	66.50	69.34	71.85	74.11	76.23
Libya	75.7	75.99	76.37	77.01	77.89	78.99	80.29	81.62	82.88
Mauritania	39.7	39.83	40.0	40.40	41.4	43.11	45.4	48.45	51.7
Morocco	48.4	51.69	53.34	55.21	58.24	61.17	63.97	66.65	69.18
Tunisia	57.9	61.47	63.43	65.35	67.28	69.25	71.23	73.21	75.17

Source: UN-DESA, WPP 2008 and WUP 2009

TABLE 42: NATIONAL AND URBAN GROWTH RATES

	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025	2025-2030
Urban Growth Rates								
Algeria	3.68	2.84	2.62	2.48	2.29	2.01	1.70	1.41
Libya	2.12	2.11	2.21	2.23	2.07	1.78	1.45	1.21
Mauritania	2.73	2.83	2.94	2.91	2.86	2.89	2.93	2.81
Morocco	2.98	1.97	1.81	2.27	2.15	1.96	1.72	1.47
Tunisia	2.86	1.75	1.48	1.56	1.54	1.43	1.29	1.08
National Population Growth Rates								
Algeria	2.23	1.53	1.48	1.51	1.45	1.29	1.08	0.84
Libya	2.04	2.01	2.05	2.00	1.79	1.46	1.12	0.90
Mauritania	2.65	2.75	2.73	2.40	2.07	1.84	1.65	1.51
Morocco	1.66	1.35	1.12	1.20	1.17	1.06	0.90	0.72
Tunisia	1.68	1.13	0.88	0.98	0.96	0.87	0.74	0.55

Source: UN-DESA, WPP 2008 and WUP 2009

TABLE 43: AVERAGE ANNUAL GROWTH RATES OF URBAN AGGLOMERATIONS WITH 750K+ PEOPLE IN 2009 (PER CENT)

City	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025
Agadir	5.70	2.58	2.57	2.44	2.07	1.75	1.46
Algiers	2.17	2.17	2.17	2.17	2.03	1.68	1.29
Oran	0.86	0.86	0.86	0.9	1.43	1.73	1.47
Casablanca	1.91	0.62	0.62	0.91	1.49	1.52	1.26
Fes	2.72	2.04	2.04	2.02	1.92	1.7	1.42
Marrakech	3.26	2.07	2.07	2.06	1.95	1.72	1.44
Nouakchott	..	..	2.80	2.77	2.68	2.64	2.86
Rabat	3.22	1.77	1.77	1.8	1.81	1.62	1.35
Tangier	3.73	2.98	2.98	2.75	2.16	1.75	1.46
Tripoli	2.64	0.77	0.71	0.89	1.48	1.51	1.17
Tunis	1.16	0.84	0.63	0.87	1.21	1.19	1.04

Source: UN-DESA, 2009

TABLE 44: UNEMPLOYMENT RATES BY AGE AND LOCATION IN MOROCCO, SECOND TRIMESTER 2010

Age Group	Urban (%)	Rural (%)	Total (%)
15-24 years	31.0	7.0	16.3
25-34 years	17.1	3.8	11.4
35-44 years	6.9	1.4	4.7
45 and older	3.1	1.1	2.1

Source: National Employment Survey, Haut Commissariat au Plan

TABLE 45: UNEMPLOYMENT RATES BY AGE AND EDUCATION IN MOROCCO

Age Group	No Degree	Intermediate Degree	Upper Level Degree
15-24 years	19.1%	36.2%	56.6%
25-34 years	9.6%	21.3%	32.2%
35-44 years	6.0%	7.9%	7.7%
44 and older	3.1%	3.7%	1.4%

Source: National employment survey, Haut Commissariat au Plan

TABLE 46: URBAN/RURAL HEALTH INDICATORS FOR MOROCCO

Indicator	Urban	Rural	National
Crude mortality rate	4.8	6.6	5.5
Infant mortality rate (per 1,000)	33	55	40
Under-five mortality rate (per 1,000)	38	69	47
Neonatal mortality rate (per 1,000)	24	33	27
Post-neonatal mortality rate (per 1,000)	9	22	14
Maternal mortality rate (per 100,000)	187	267	227
Life expectancy at birth (years)	75.5	67	72.2
Child delivery assistance*	85.3	39.5	..
Pregnant women receiving prenatal care*	84.9	47.9	..
Fully vaccinated children*	93.5	84.1	..

Sources: The World Bank. (2009). Country Strategy for the Kingdom of Morocco for the Period FY 10-13. Washington D.C.: The World Bank. Direction de la Statistique. (2009). "Moroccan Social Indicators 2008." Haut commissariat du plan.

TABLE 47: LEVEL OF MOTORIZATION IN MAGHREB COUNTRIES

	Algeria	Libya	Mauritania	Morocco	Tunisia
Roads (km)	108,302	83,200	11,066	57,799	19,232
% roads paved	70	57	27	62	66
Road Density (km of roads per 100 km ² land area)	4.5	4.7	1	13	12
Motor Vehicles (per 1,000 people)	91	291	..	72	103
Passenger Cars (per 1,000 people)	58	225	..	53	73

Source: World Bank Development Indicators; 2007 data except for kilometres of roads and % of roads paved, where the data is the latest available from 2000 to 2007

TABLE 48: WATER AVAILABILITY AND USAGE

Country	Annual Availability			Per Capita Renewable Availability (m ³)			Annual Water Usage		% Use by Sector		
	Natural Renewable Resource Bm ³ /yr	Desalinated End Water Bm ³ /yr	Waste-water Reuse Bm ³ /yr	2006	2015 (AFED)	2025 (AFED)	Bm ³	As a % of total water resources	Domestic	Industry	Agriculture
Algeria	11.50	0.07	Neg.	350	297	261	4.59	40	25	15	60
Libya	0.80	0.03	-	99	80	67	3.89	469	9	4	87
Morocco	20.00	0.02	0.07	940	620	558	16.84	84	5	-	95
Tunisia	3.35	0.00	0.14	450	405	373	2.53	72	12	4	84

Source: AFED 2010 Report

TABLE 49: 2008 ACCESS TO IMPROVED WATER AND SANITATION (% OF HOUSEHOLDS)

	Improved Water Access			Improved Sanitation Access		
	Total	Urban	Rural	Total	Urban	Rural
Algeria	83	85	79	95	98	88
Libya*	71	72	68	97	97	96
Mauritania	49	52	47	26	50	9
Morocco	81	98	60	69	83	52
Tunisia	94	99	84	85	96	64

Source: WHO/GHO Database; *Libya water data is from 2000

TABLE 50: 2007 ENERGY CONSUMPTION

	Algeria	Libya	Morocco	Tunisia	MENA
Energy Use (kg of oil equiv. per cap)	1,100	2,943	458	863	1,254
Electricity Use (kWh per cap)	870	3,688	685	1,221	1,435
Electricity from fossil fuels (% of total)	99	100	92	99	91
Electricity from hydropower (% of total)	0.6	0	6.9	0.7	16
Energy Imports (net, % of energy use)	-346	-470	95	11	-105

Sources: World Bank Little Green Book 2009; WDI; REN21, "Renewables Global Status Report", 2007

TABLE 51: MUNICIPAL SOLID WASTE (MSW) COMPOSITION AND GENERATION

	Algeria	Mauritania*	Morocco	Tunisia
MSW Generated (million tons)	8.5	0.45	6.5	1.8
Urban Per Capita MSW (kg/day)	0.9-1.0	0.5	0.75	0.8
Urban Collection Coverage	92%	30%	70% (2009)	95%
MSW Generation Growth per year	2%	6%	3%	3%
Material Composition of MSW				
Food/organic wastes	67-73%	5%	67%	68%
Paper	7-12%	6%	19%	9%
Plastic	2.5-7%	20%	2.6%	11%
Glass	1%	4%	0.4%	2%
Metal	2%	4%	1.4%	4%
Other	11-13%	61%	9.6%	6%
Treatment Method				
Composted	1%	0%	1%	0.5%
Recycled	2%	8%	2%	5%
Landfilled	0.2%	37.3%	1%	50%
Uncontrolled public dumping	40%			
Open Dumping	58%	54.7%	95%	44.5%

Sources: METAP, most data from 2002; Mauritania 2009

TABLE 52: PARTICIPATION IN THE WORKFORCE AND NATIONAL POLITICS BY WOMEN VERSUS MEN

	Algeria		Libya		Mauritania		Morocco		Tunisia	
	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂
Literacy rate of Women/Men (% literate aged 15+, 2006-08)	64	81	81	95	63	70*	44	69	70	86
Labour Force Participation Rate by Women / Men (% of those aged 15-64 employed, 2008)	38	83	25	81	..	..	29	84	28	74
% of Unemployment of Women/Men (2004-08)	18	13	..	..	..	..	10	10	17	13
Year Women Received Right to Vote and Stand for Election	1962		1964		..		1963		1959	
Year First Woman Elected (E) or Appointed (A) to Parliament	1962 A		..		..		1993 E		1959 E	
% Parliament (single or lower house) seats female (2010)	7.7		7.7		22.1		10.5		27.6	
% Parliament (upper house or senate) seats female (2007)	3.1		0		..		1.1		13.4	
% of ministerial positions held by women (2005)	10.5		..		..		5.9		7.1	

Source: World Bank Gender Statistics, UN HDR 2007/08, MDG Indicators Database

TABLE 53: IMMIGRATION DATA BY COUNTRY

	# of International Migrants in Country (2010)	# of Refugees in Country (2008)	% Population Foreign Born (2010)	Average Annual Net Migration (2005-2010)	Emigration Rate of Tertiary Educated (2010)
Algeria	242,000	94,100	1%	-28,000	6%
Libya	682,000	6,700	11%	4,000	4%*
Mauritania	99,000	27,000		2,000	
Morocco	49,000	800	0.2%	-85,000	10%
Tunisia	34,000	100	0.3%	-4,000	10%

Source: UN DESA International Migration Wall Chart 2009; Emigration Rate of Tertiary Educated from IOM 2010, except * from World Bank Development Indicators Database, 2005

TABLE 54: DESTINATIONS OF EMIGRANTS BY PERCENTAGES

	# of Citizens Abroad	% of Pop. Abroad	Europe			Arab Nations	USA & Canada	Africa	
			Total	France	Spain				Italy
Algeria (2008)	895,250	3	90.9	75.8	6.3	2.7	3.3	5.1	--
Libya (2010)	110,000	2	Top destinations: Israel, UK, Chad, USA, Jordan, Egypt, Germany, Turkey, Canada, Italy						
Mauritania			20 per cent of Mauritians living abroad in 2008 resided in another Arab country, primarily Saudi Arabia (30,000 persons), Libya (30,000) and the UAE (5,000)						
Morocco (2007)	3,300,000	10	86.2	43.9	4.3	5.9	8.6	4.8	--
Tunisia (2008)	1,058,700	7	82.6	54.6		13.4	14.5	8.4	--

Source: CARIM Country Profiles 2009, 2010; Libya data from World Bank Migration and Remittances Factbook, 2011

TABLE 55: RECEIPT OF OFFICIAL DEVELOPMENT ASSISTANCE (ODA) AND REMITTANCES

	Net ODA Received (current USD million)		Remittance Inflows (USD million)		Remittances (% of GDP)	
	2008	1999	2009	1999	2009	1999
Algeria	316	138	2,193	790	1.6%	1.6%
Libya	60	5	16	--	0.03%	0.03% (2000)
Mauritania	311	219	2	2	0.07%	0.2%
Morocco	1,217	678	6,271	1,938	7%	5%
Tunisia	479	252	1,966	761	5%	4%

Source: World Bank Development Indicators Database

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THE STATE OF GCC CITIES

▲ Mecca, Saudi Arabia. Saudi Arabia is home to 67 per cent of GCC residents and the holiest city in the religion of Islam. ©Ahmad Faizal Yahya/Stockphoto



The Gulf Cooperation Council (GCC), comprised of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates, is home to a population of over 39 million residents, of whom nearly 67 per cent reside in Saudi Arabia.¹ With the exception of Qatar, total population growth has been relatively slow and declining.

The GCC is one of the most urbanized areas in the world, with over 70 per cent of the population living in urban areas and with Kuwait and Qatar almost 100 per cent urbanized. Urban expansion in the region has been fuelled by both internal migration and the influx of expatriate workers attracted by the region's economic prosperity and employment opportunities.

Recent urban growth rates, however, have been relatively moderate and, in the next two decades, are expected to slow further to approximately 1 to 2 per cent in all countries of this sub-region.² Despite these slowing urban growth rates, the urban populations in all countries will continue to grow more rapidly than the total populations, implying continued urbanization. Therefore, it will be important to manage this urban growth to prevent unplanned and chaotic informal development.

Demographic Characteristics and Urban Concentrations

A significant portion of the residents of GCC countries are young male expatriate workers, many from Asia, attracted by the region's employment opportunities. In Oman, for instance,

approximately 600,000 or 28 per cent of the urban population are guest workers from Bangladesh, Egypt, India, Jordan, Pakistan and the Philippines. As a result, the ratio of males to females is high in all cities, reaching 5.42 males for every female in Doha, for instance.³ The population is also very young with nearly 50 per cent of the total population under the age of 24 in Saudi Arabia and Kuwait. In most countries in the Arab world, the urban population is concentrated in a few primary cities, mostly along the coast.

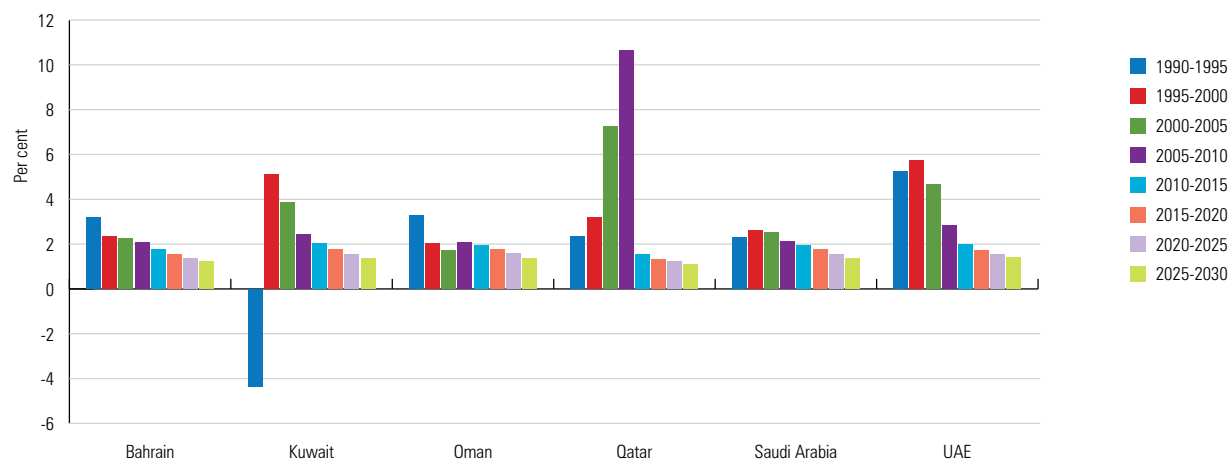
In the UAE, the majority of the population lives in Abu Dhabi City, Dubai and Sharjah. In Oman, most live in Muscat and Al-Batinah along the northern coast, with a smaller concentration in the southern Dhofar region. Other important cities include Muttrah, a historic trade centre and the country's main commercial port, and Bawahar where a number of government offices are located.⁴ In Qatar, 90 per cent of the population lives in the Greater Doha Metropolitan Area, the coastal capital city.⁵ The population of Bahrain is concentrated most in the north and the Muharraq governorates in the northeast. Bahrain has among the highest population densities in the world, reaching from 3,000 to 4,000 people/km² in the capital, Manama.⁶ In Kuwait, most of the population lives in and around Kuwait City (76.8 per cent of the urban population and 75.6 per cent of the total population).⁷ In Saudi Arabia, most of the population is concentrated in the capital Riyadh, the secondary cities Jeddah and Dammam, and the holy cities of Mecca and Medina.

TABLE 56: CITY POPULATIONS FOR SAUDI ARABIA (IN THOUSANDS)

City	Riyadh	Jeddah	Mecca	Medina	Dammam
Population	4,848	3,234	1,484	1,104	902

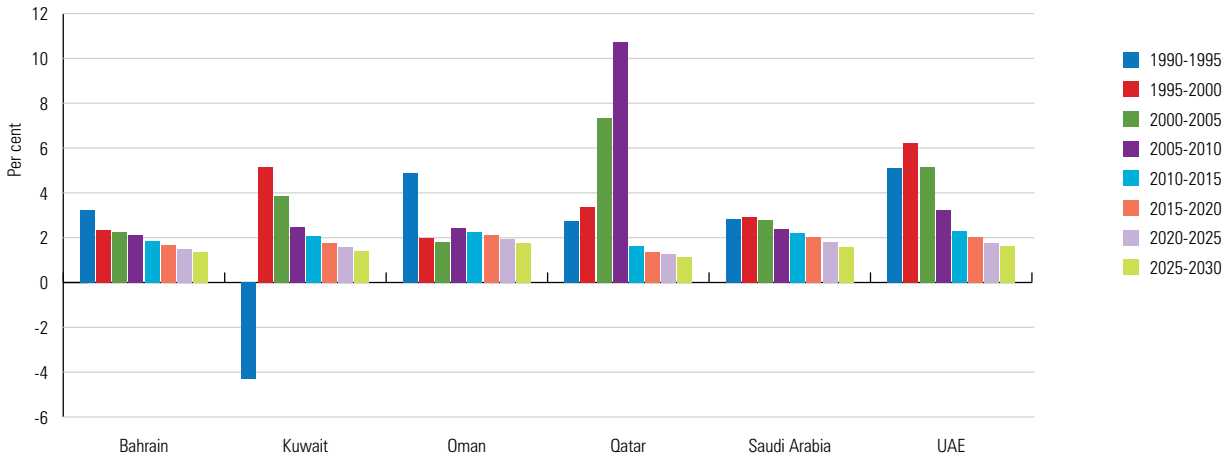
Source: UN-DESA, 2009.

FIGURE 34: TOTAL POPULATION GROWTH RATES



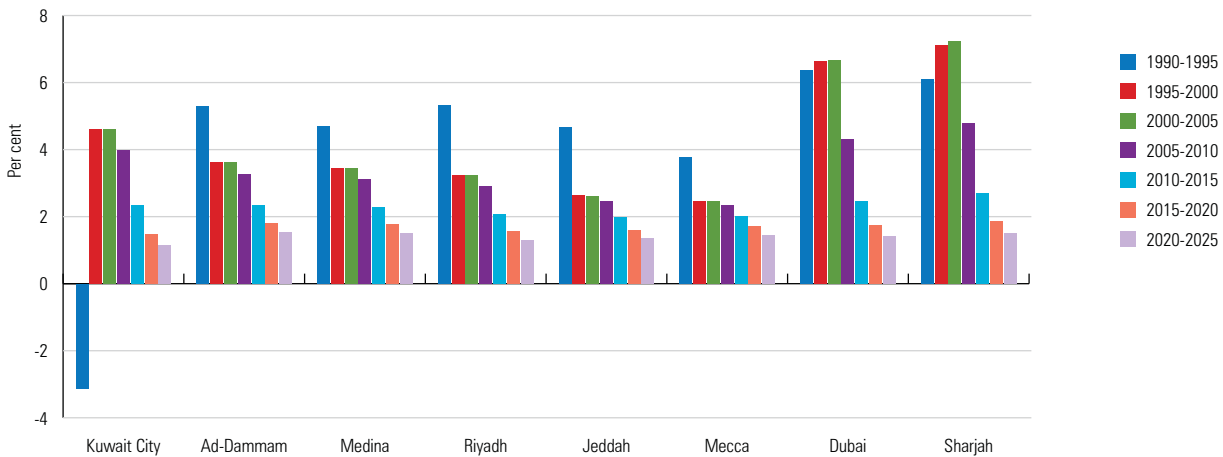
Source: UN-DESA, 2008.

FIGURE 35: URBAN GROWTH RATES



Source: UN-DESA, 2009.

FIGURE 36: GROWTH RATES FOR THE LARGEST CITIES



Source: UN-DESA, 2009.

Development Strategies and Plans

With the exception of Qatar, all countries in the region have adopted spatial development strategies to manage growth and, given the dominance of primary cities, most countries are now making an effort to shift growth to secondary cities.

The government of **Oman** launched its National Spatial Strategy in 2010, a 30-year development plan designed to promote geographically balanced and sustainable growth in line with its 2020 vision.⁸ It focuses on developing both urban and rural areas through land planning, economic development, infrastructure, social services, heritage conservation and environmental protection.⁹ As part of the National Population Strategy, the government will also address such issues as increasing the number of national

FIGURE 37: GCC COUNTRIES AND MAJOR CITIES



FIGURE 38: THE DIYAR AL MUHARRAQ PROJECT, BAHRAIN



Source: Diyar al Muharraq.

workers in the labour force, creating the incentives to limit migration from rural to urban areas and narrowing the economic gap between towns and villages.¹⁰

In **Bahrain**, whose limited land resources and high population density limits opportunities for expansion, the 2008 National Planning Development Strategy includes land reclamation projects around the coves and islands surrounding the mainland.¹¹

One of the largest projects in the country is the construction of Diyar al Muharraq which will reportedly house 100,000 residents on reclaimed land off the northern coast.¹² The strategy also addresses employment generation, housing shortages, infrastructure shortfalls, inadequate access to education, and the protection of natural resources.

It also includes a national planning framework to expand Bahrain's access to global markets, preserve its environmental resources, develop an integrated transport network, build new communities, accentuate the waterfront, protect its heritage, 'green' the country and build a sustainable future.¹³ The government has also recently embarked on developing a new national master plan for the creation of new towns and industrial areas, balancing economic development with well designed spatial planning.¹⁴

In **Kuwait**, the government has commissioned the development of a plan for Kuwait City's expansion in conjunction with the national Kuwait 2030 initiative. The national plan will accommodate growth by creating three new urban regions in the northern, southern and western parts of the country and an expanded metropolitan area in Kuwait City.

In the north, the government plans to create a development corridor, which will include a deep sea port, agricultural development, support for industrial and touristic activities and infrastructure upgrades for road, rail and air transport. In the south, the government will create a development pole by supporting agriculture, industry and tourism and generating new housing developments. In the west, the government plans to add residential areas and major road networks. The metropolitan area will also accommodate additional growth with new towns and settlements outside the area.¹⁵

The aims of the city plan are to transform the capital into a major financial and commercial centre and to prepare for population expansion through 2030.¹⁶ The plan also includes transportation upgrades, further development of commercial and entertainment activities, creating a pedestrian network, preserving historic buildings and improving the downtown area.¹⁷

In 2000, the government of Saudi Arabia launched its National Spatial Strategy in anticipation of the country's rising population and rapid urbanization. In particular, the strategy aimed to reduce urban sprawl, promoting spatially-balanced development and protecting the environment.¹⁸ It focuses on creating (eastern, central and western) development corridors and targeted investment to less-developed regions, designating small- and medium-sized cities as regional growth centres.

Saudi Arabia's 9th National Development Plan (2010-14) has five major themes: improving the quality of life, particularly through resource conservation and environmental protection; increasing national participation rates in the labour

market, especially among the young to reduce the country's dependence on expatriate workers; creating balanced regional development; promoting diversified economic development through greater private sector involvement and the creation of a knowledge economy and increasing the competitiveness of the national economy in the global market.¹⁹

In the **UAE**, both Abu Dhabi and Dubai have strategic plans. Abu Dhabi's Vision 2030 sets key targets for the emirate's development over the next 20 years, with a central focus on investment, urban development and infrastructure.²⁰ The plan places particular emphasis on the development of an environmentally sustainable framework. It posits as a central aim that Abu Dhabi should be a healthy, socially cohesive contemporary Arab City whose development reflects its stature as the capital of the UAE.

Abu Dhabi promotes measured economic growth, the construction of affordable housing, mixed use neighbourhoods, walkable streets and a publicly accessible waterfront.²¹ It proposes the creation of twin city centres (one in downtown, the other in the newly created Capital District) to facilitate traffic flows and to ease congestion with an integrated public transport system.

Abu Dhabi includes an Open Space Framework plan with pedestrian paths providing access across the city. The city's precinct system promotes distinct local identities, with high

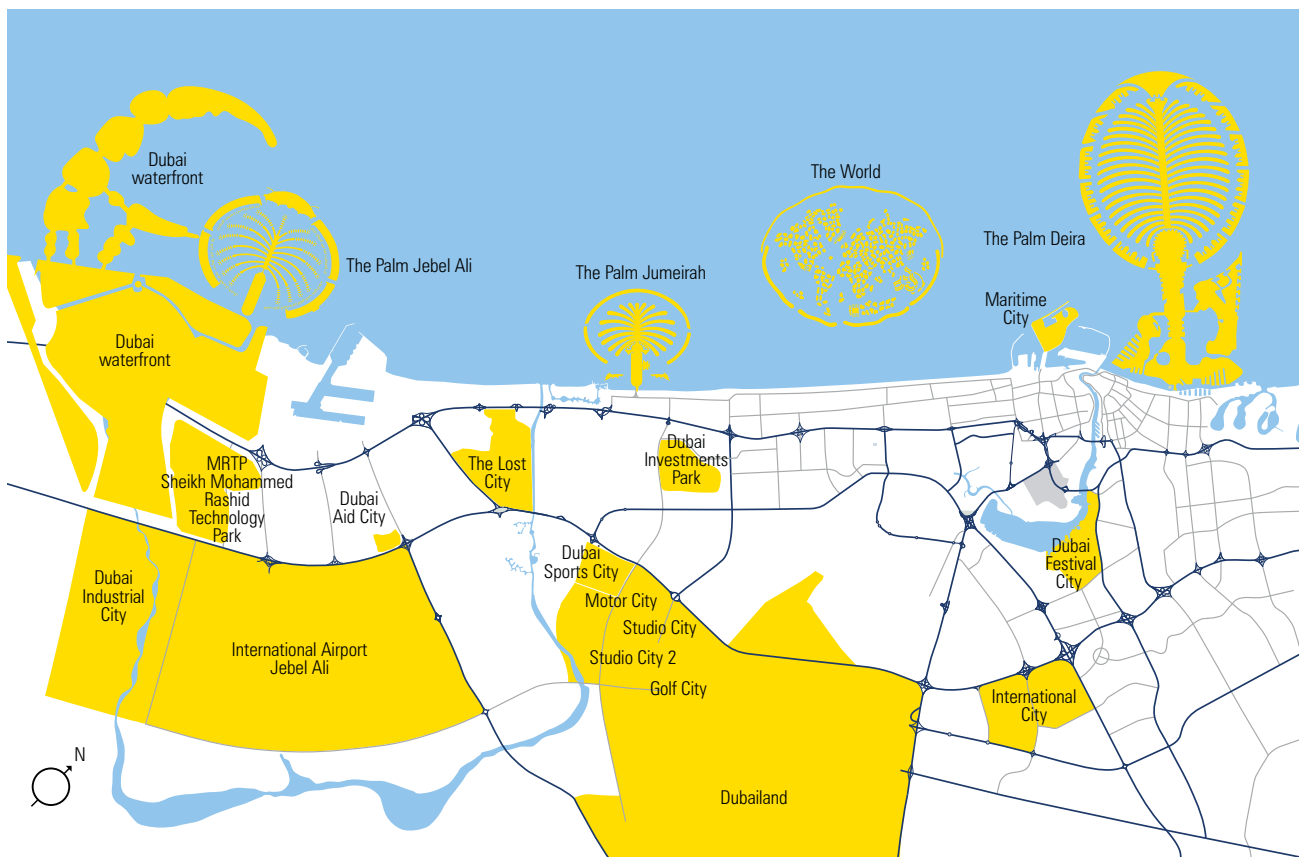
density in selected areas.²² It proposes to mitigate excessive commercial development and prevent a surplus of high density housing for expatriates.²³

In addition to government buildings, the new Capital District on Al Suwwah Island, on the eastern side of the city, will be developed for knowledge-based employment and to define the growth limits of the city to prevent uncontrolled sprawl.²⁴ Abu Dhabi's 'capital city framework' also envisions iconic and monumental planning and architecture to highlight the status of the capital city.²⁵

The Dubai Strategic Plan 2015 emphasizes optimal land use through careful urban planning, efficient resource use and a sustainable environment. The plan focuses on increased low- and middle-income housing, updated labour housing policies and an integrated transport system. It also aims to sustain a real GDP growth of 11 per cent per annum over the next ten years and enhance labour productivity.²⁶

Although **Qatar** does not currently have a national planning strategy, legislative framework or single planning agency, the government is working to develop a hierarchy of plans and stronger regulations, foster cooperation among all of the administrative entities and provide resources to increase the capacity of local agencies to plan and implement programmes.²⁷

FIGURE 39: DUBAI'S MASTER PLAN SHOWING NEW PROJECTS AND MAIN ICONIC DEVELOPMENTS (INCLUDING PALM ISLANDS 1, 2 & 3)



Source: Dubai Municipality.



▲ The Yas Marina Formula 1 Grand Prix Circuit in Abu Dhabi, UAE. ©Hainaultphoto/Shutterstock

Historically, most countries in the GCC region were modest fishing and trading settlements. The discovery of oil has increased wealth and spurred significant development and economic expansion. The GCC countries now have among the highest economic GDP per capita in the world.

There is a need to reduce reliance on their oil and gas reserves. Most of the GCC countries are becoming more integrated into the world economy and are diversifying their economies, including the development of knowledge-based activities. Many are also shifting the concentration of economic activities from the primary cities to secondary locations.

To reduce its dependence on oil, the **UAE** has launched a diversification and liberalization programme to transform the conventional labour-intensive economy to one based on knowledge, technology and skilled labour. The government has invested heavily in aluminium production, tourism, aviation, re-export commerce and telecommunications.

The impact of diversification is apparent: the contribution of the non-oil sector rose from 46 per cent of GDP in 1975 to 90 per cent in 2000 and 95 per cent in 2005. The largest share

gains were in the trade, construction and real estate sectors which, between 2000 and 2005, grew by 6.7, 4.1 and 2.3 per cent respectively.

Most of the UAE economic activities are concentrated in Abu Dhabi and Dubai. In Abu Dhabi, the 2030 Economic Vision aims to develop a sustainable knowledge economy, a thriving private sector, transparent regulations, strong international relationships, high quality national education and health care, domestic and international security, and social and cultural integrity. It seeks to enhance these areas through economic development, social and human capital development, infrastructure and environmental sustainability, and enhanced government operations.²⁸ The focus will be on energy, petrochemicals, aviation, armaments, pharmaceuticals, transportation and telecommunications.²⁹ The plan also aims to transform Abu Dhabi into a financial and trade hub and places an emphasis on tourism and environmental projects.³⁰ In Dubai, the plan will focus on tourism, financial services, transport, trade and construction.³¹

Despite the impacts of the global financial crisis, the UAE economy remains robust, shielded by significant overseas

BOX 16: QATAR, SAUDI ARABIA AND BAHRAIN: THE POST-OIL KNOWLEDGE ECONOMY

Oil-wealthy states in the Middle East have used their hydrocarbon endowments to rapidly develop their economies. But, given the looming post-global and post-oil paradigm, oil-producing states need to broaden their economic horizons. The United Arab Emirates and Bahrain were the first to start this difficult, yet inevitable economic reorientation. Although Dubai has now successfully accomplished the transition, its economy continues to evolve and, given recent developments, it is clear that their model of development will need to be comprehensively reevaluated to assure sustainability.

Arab states with economies overwhelmingly dependent on mineral extraction perceive the knowledge and services sectors as the most appropriate future direction and the huge investment flows that over the past five years financed iconic real estate developments are now being shifted towards the planning and financing of knowledge centers. Urban-based knowledge zones are increasingly being established in Abu Dhabi, Doha, Dubai, Manama, Riyadh and other cities.

Knowledge and creative economies are structured around the value of people. The challenge is to create the ideal environments to encourage knowledge transfer and production, while nurturing creativity.

Dubai's Internet City is a unique development established in the Dubai Technology and Media Free Zone - a tax-free commercial site supporting the development of the knowledge, media and education sectors. Over the past three years, Dubai Internet City has provided business and community infrastructures for ICT companies and is now home to some 1,200 companies with more than 10,000 employees.

Doha: A Budding Gulf Knowledge City

Whereas Doha was originally a small fishing and pearl diving town, today the city is home to more than 90 per cent of the country's 1.6 million inhabitants - the majority of whom are expatriates. Although Qatar has been on a USD 75 billion spending spree to acquire assets across the globe, the country acknowledges the importance of development of Doha is set to change immeasurably over the coming years.

Already a successful example of incorporating knowledge within the city, Doha

will need to develop its social infrastructures further, especially focusing on educational institutions and environments that foster the very innovation on which knowledge economies are based. Qatar's experience so far provides a positive example with its mega knowledge economy projects - the Science and Technology Oasis and the Education City - establishing interactive centres for knowledge production and transfer.

The Qatar Foundation's Education City - a dynamically expanding intellectual polis for the 21st Century - is set to become a self-contained community designed to the highest standards. The third master plan for Education City, unveiled in early 2004, envisaged major new developments by 2009. It has grown from 500,000 to some 10 million m² to be expanded further with a Science and Technology Park. By the end of 2007, the first phase of Qatar's Science and Technology Park was opened and now accommodates commercial giants like ExxonMobil and the European Aeronautic Defense and Space Company.

The Qatar Foundation is headquartered in Education City, a 10,000 m² campus on the outskirts of Doha which hosts branch campuses of some of the world's leading universities as well as numerous other educational and research institutions. Education City is envisioned to serve Qatar's citizenry from early childhood education to post-graduate studies and to become a hub for new knowledge with world-class research facilities and a pool of well-trained graduates.

Saudi Arabia: King Abdullah Economic City

With a development area of 173 km², the USD 86 billion King Abdullah Economic City is located along the coast of the Red Sea, some 100 km north of Jeddah, the commercial hub of the kingdom. Together with five other cities, King Abdullah Economic City is a part of an ambitious program to place Saudi Arabia among the world's top competitive investment destinations. The first stage of the city was completed in 2010, while the completion of the whole city is envisaged for 2020. With 40 per cent of Saudi Arabia's population under the age of 15 years, the King Abdullah Economic City is expected to create up to one million jobs for the kingdom's youthful population.

The city provides six main employment components: a 63 km² industrial zone with 4,400 ha dedicated to industrial and light manufacturing, estimated to create 330,000 jobs; a research and development zone providing 150,000 jobs; a business and office zone creating 200,000 work places; 115,000 jobs in services; 60,000 jobs in the hospitality industry and education and community services providing work to an estimates 145,000 persons.

The KAEC seaport is estimated to cover 13.8 km² and be the largest in the region with facilities to handle cargo and dry bulk and be capable of receiving the world's largest vessels. The port will also have a custom-built Hajj Terminal with a daily capacity of up to 300,000 pilgrims on their way to the holy Muslim cities. A residential area with extensive parks and green spaces will provide 260,000 apartments and 56,000 villas for an estimated half a million residents. Additionally, a sea resort with 120 hotels and 25,000 rooms, a yacht club, equestrian facilities and a golf course will be constructed to draw both local and international tourists.

The Educational Zone of the King Abdullah Economic City is part of a plan to bring Saudi Arabia's capabilities and aspirations in technology to globally competitive levels. The Educational Zone will comprise an 18,000-student, 7,500-faculty staff, multi-university campus combined with R&D parks. A central business district (CBD) will offer 3.8 km² office space, hotels and mixed-use commercial space. The Financial Island within the CBD will cover 14 ha of land and will be the largest financial centre in the region, catering for the world's leading banks, investment houses and insurance groups. A 1,600 metre-high Kingdom Tower has been designed by Adrian Smith.

Bahrain' Science and Technology Park

The Kuwait Finance House (KFH) announced the launch of a USD 1 billion Science and Technology Park plan in Bahrain, which will be the first in this part of the GCC. The proposed world-class park will host small, medium and large technology companies in niche markets and should attract global science and technology companies.

This initiative will boost and encourage innovation in technology and scientific

research, while providing a solid infrastructure for the development of the technology sector in Bahrain. As a first step, the Bahrain Economic Development Board (EDB) acts as facilitator to ensure scientific research expertise to bring greater diversity to Bahrain's economy.

The first phase of the project will focus

on infrastructure, while the second and third phases will see development of science laboratories, educational partnerships and lifestyle aspects. The Bahrain Science and Technology Park is in partnership with world-renowned institutions and universities to build a dedicated international R&D platform,

while an additional partnership with a leading European university is expected soon. The private sector will be called upon to take the initiative for establishing specialised science and technology clusters and reinforce Bahrain-based expertise in clean technology, renewable energy and ICT.



- A** Sea Port (17,800,000 sqm)
 - B** Industrial Zone (64,800,000 sqm)
 - C** Central Business District (13,700,000 sqm)
 - D** Educational Zone (3,500,000 sqm)
 - E** Resorts (16,700,000 sqm)
 - F** Residential Areas (46,800,000 sqm)
- Main Roads
 - MRT line
 - Road System
 - City Entrance
- 1** MRT Station
 - 2** Mecca-Medina Railway
 - 3** Football Stadium
 - 4** Marinas





▲ Colonnade in Muttrah, Oman. Before the discovery of oil, Muttrah was the center of commerce in Oman. It is home to Muttrah Souq, one of the oldest marketplaces in the Arab world and a popular tourist destination. ©Philip Lange/Shutterstock

financial assets secured during the era of high oil revenues. Although it experienced a moderate GDP growth at 2.4 per cent in 2010, growth is expected to increase to 3.2 per cent in 2011. The growth of Dubai's economy, the hardest hit by the recession in the late 2000s, fell from 18 per cent in 2007, to 3.2 per cent in 2008 and -2.4 per cent in 2009, in constant prices, but has been gradually recovering since.³²

As in the UAE, **Oman** has been diversifying its economy as the country's significant oil reserves are not expected to last beyond the next 20 years. While the petroleum sector currently contributes about 40 per cent of Oman's GDP, down from 70 per cent in the 1980s, the goal is to reduce oil to 9 per cent of GDP and gas to 10 per cent by 2020. In order to do so, the government's Vision 2020 plans to promote economic and financial stability through greater private sector participation, the diversification of the economic base and sources of national income and the development of the skills of the Omani workforce.

A series of five-year plans proposed a rational exploitation of oil, gas and other mineral resources, the development of an industrial base, the promotion of ecologically-sustainable tourism, and investment in education, health and spatial development. The 7th Five Year Plan emphasizes tourism, information communication technologies and research and development. Education, health and employment are also listed as priorities.³³

To support these new activities, current policies aim to liberalize the economy and promote long-term economic growth through extensive investments in the environment, education and the tourism industries. The government has also invested heavily in infrastructures for information communication technologies and telecommunications, roads, and export-related facilities at seaports and airports.

Most of Oman's economic activities are concentrated in Muscat and Al-Batinah. Other cities which contribute include Muttrah, a historic trade centre with the country's main commercial port, and Bawahar, where there are a number of government offices. The government is also developing other cities: Duqm is an emerging industrial settlement with an industrial park, a free trade zone and a large petrochemical complex. Medina A'Zarqa (the Blue City) is under construction on the coast outside Muscat City, with hospitals and educational facilities that will generate opportunities and investment.

In **Muscat**, the government has developed an information, communication and technology complex – Knowledge Oasis Muscat – which is beginning to attract private investment in knowledge-based industries.

In spite of efforts to reduce its dependence on oil through private and foreign investment in non-energy sectors, oil and gas still account for more than 50 per cent of **Qatar's** GDP, roughly 85 per cent of export earnings and 70 per cent of

BOX 17: IMPACTS OF THE GLOBAL FINANCIAL CRISIS ON REAL ESTATE DEVELOPMENT IN THE UNITED ARAB EMIRATES


▲ On-going construction in UAE's capital, Abu Dhabi. ©Zubair Khan/Shutterstock

The construction industry has played a critical role in the UAE's rapid economic diversification. The Global Competitive Report 2010-2011 suggests that the UAE has in place the underlying fundamentals for a competitive economy with innovation-driven factors and the report's Index ranked it 25th in the world for competitiveness and one of the leading economies in the Middle East and North Africa region. The country's overall competitiveness reflects recent investments in infrastructure, where it ranks an excellent third, the penetration rate of new technologies, where it ranks 14th, and highly efficient goods markets, where it ranks sixth.

The combination of Dubai becoming an international destination and the wealth emanating from the region, as crude oil

revenues (constituting 37 per cent of the UAE economy in 2008) surged in recent years, has allowed it to build a strong real estate market. Dubai's property prices have risen in the past decade for all types of real estate in a rapidly-growing market where demand has not been met by supply. As a result, large-scale investment projects by public and private real estate developers were begun to take advantage of a seemingly endless boom. However, the global economic slowdown that took hold towards the end of 2008 brought an abrupt end to the UAE's construction boom. Since then, many building projects have been cancelled or delayed and there has been little in the way of new projects.

Although the UAE is still the largest construction market in the GCC, Abu Dhabi's

developments now drive the market rather than Dubai. Abu Dhabi's real estate market never became as flooded as others in the region and it has held up well against the global downturn. Moreover, its reputation for a more sustainable style of development has bolstered investor confidence.

Following a challenging period, construction developers in the UAE are expecting a more promising 2012 and beyond. Firms are branching into new markets, switching focus from private to public sector schemes and forming new alliances in a bid to win work in an increasingly competitive environment. This trend is expected to continue in the short term with the UAE government's drive to stimulate the economy by spending heavily on infrastructural projects, particularly in Abu Dhabi.

government revenues. Oil reserves of 15 billion barrels should sustain output at current levels for 37 years while reserves of natural gas in excess of 25 trillion cubic meters, about 14 per cent of the world's total, are the third largest in the world.

However, Qatar's 2030 Vision emphasizes the need to diversify from hydrocarbons to a knowledge-based economy through diversification, financial growth and education. The Vision aims to balance modernization with tradition, control chaotic growth, protect the environment and expand economic and social development.³⁴ The 2010-2015 National Strategy will define the mechanisms to shift toward the knowledge economy.³⁵

The government is supporting education, science and research as part of its policy to develop the knowledge economy. The education city is seen as a hub providing researchers with world-class facilities, well-trained graduates, opportunities for collaboration and the possibility to transfer ideas into real-world applications.

Qatar also plans to make Doha, the capital city where most economic activities are concentrated, a vibrant science and technology hub that will attract and retain highly-skilled nationals at a Science and Technology Park close to the top universities in the education city. The park will incubate innovations, support scientific research and provide facilities to transform ideas into applied projects. Qatar is also developing the arts in Doha by establishing partnerships between educational institutions and its museums within an overall cultural vision of the country.

Bahrain has one of the most diversified economies in the region with oil accounting for only 13 per cent of its GDP. It has undertaken a series of reforms in the past decade, including the privatisation of many government enterprises and the dismantling of barriers to foreign investment, significantly increasing the production of goods and services as well as employment opportunities.³⁶

One of the stated aims of Bahrain's Economic Vision 2030 is to reorient the economy towards greater productivity, global competitiveness and encourage the participation of the private sector in tourism, manufacturing and business services. It also plans to raise living standards, wages and employment opportunities and provide a better quality of life to its citizens.³⁷

Currently, most economic activities are concentrated in the capital city of Manama. In an effort to increase manufacturing activities outside the capital, Bahrain has invested in several new urban areas: the industrial area of Mina Salman, located next to the port of Bahrain; North Sitra, an area that provides all of the necessary services and amenities in close proximity to a deep marine channel and a service pier. The city is close to the Bahrain International Airport and King Fahd Causeway to Saudi Arabia, with another causeway to Qatar also planned. As of January 2010, the city had already attracted USD 3.5 billion of inward investment and is anticipated to reach USD 7.6 billion once the projects are complete.³⁸

Oil is still the main source of export revenue in **Kuwait** (94 per cent in 2007).³⁹ However, plans are under way to undertake

a variety of projects to diversify the economy including the Kuwait University City, a complex consisting of 16 colleges on three campuses, a hotel and a sports complex, among other facilities. The schools will accommodate an additional 40,000 students. Silk City, to be located in Subiya, northern Kuwait, will include 30 smaller specialised complexes such as Finance City, Leisure City, Ecological City and Education and Culture City, providing both employment and housing. This project is expected to generate about 450,000 new jobs. The government also has plans to invest in infrastructure and services, a metro and railway system and a major container harbour.

Saudi Arabia is the world's largest exporter of oil: it accounts for 45 per cent of GDP, 80 per cent of public revenue and 90 per cent of export earnings.⁴⁰ Saudi Arabia is currently attempting to diversify its economy and encourage private investors to provide more employment opportunities to Saudi nationals, particularly its substantial youth population⁴¹.

While diversification remains a challenge, Saudi Arabia has managed to raise its non-oil sector's share of GDP to 55 per cent.⁴² The 9th Development Plan (2010-2014) has the ambitious aims to achieve a real GDP annual growth of 5.2 per cent with targets of 11.8 per cent for the private sector and 10.0 per cent for non-oil exports.⁴³

The Plan also aims to diversify the economy through "industries which utilise the national economy's comparative advantage by transforming them into competitive advantages" with an emphasis on petrochemicals and energy-intensive industries, tourism, export-oriented manufacturing, high-value added agriculture,⁴⁴ aluminium (12 per cent of global output), steel (6 per cent of global output), fertilizers (16 per cent of global production),⁴⁵ capital goods products such as machinery and electronics, and high-tech, capital intensive industries such as pharmaceuticals.⁴⁶ It is anticipated that construction, real estate development, public administration, defence and social security will be the most important generators of employment.⁴⁷

Riyadh is the country's financial, political and commercial centre. It has successfully created prominent financial and industrial sectors with two large industrial parks with the support of the Saudi Industrial Development Fund.⁴⁸

Jeddah, the largest port and gateway to Mecca, has also developed rapidly. It is now preparing a strategic plan to guide its development through extensive infrastructure improvement, enhance its liveability, exploit its potential as a hub in the globalised market and maintain its competitiveness with other emerging 'economic cities' in the country.⁴⁹ Jeddah has diversified its economy to tourism, transport, logistics, education, healthcare, finance and retail and wholesale trade.⁵⁰

Economic activities are also concentrated in other cities. Dammam is located close to the country's oil fields and this has boosted its development. Mecca attracts millions of pilgrims annually, while Medina (Al Madinah) also hosts large numbers of pilgrims and is developing a 'Knowledge Economic City'.⁵¹

In an effort to shift economic growth to the secondary cities, Saudi Arabia is improving the infrastructure of Asir, Hail,

FIGURE 40: DEVELOPMENT OF SECONDARY CITIES IN SAUDI ARABIA



Hofuf, Medina, Tabuk, and Taif.⁵² It is also investing in the development of new towns. The Knowledge Economic City in Medina (completion 2016-18) will focus on developing commercial expertise, supported by a range of commercial and cultural complexes. In 2012, a renewable energy city in Riyadh, will be completed. The King Abdullah Economic City, north of Jeddah, will be a modern world-class seaport and industrial district, with an educational zone, resorts and residential areas as well as the KAUST-centre for Science and Technology. Jizan Economic City will focus on heavy industries, biotech and pharmaceuticals. In Ha'il, the Prince Abdul Aziz Bin Mousaed Economic City will become a transport and logistics hub. Both are scheduled to be completed in 2016. Plans for two other Economic Cities, in Tabuk and in the Eastern Provinces, are currently under development.⁵³

Marketing

To attract more investment, some countries have opened their economies and provided support for potential investments. The UAE has opened its borders and created a stable environment for investment opportunities. In the most recent Global Enabling Trade report, it ranked among the top 15 countries in the world for domestic and foreign market access, efficiency of import/export procedures, efficiency of customs administrators, availability and quality of transport infrastructure, availability and use of technology

and telecommunications, regulatory environment and physical security. Furthermore, the UAE leads e-commerce penetration among the Arab states, an achievement that has been driven by the openness of its foreign trade policy.

Bahrain does not tax private companies and levies little indirect taxes on enterprises and individuals. It allows foreigners to fully own businesses and real estate in most sectors and plans to open up its market even more fully to promote greater private sector activity.⁵⁴

In an effort to increase investments, **Qatar** has earmarked a significant part of its budget for infrastructure development including a new port in Doha, the new Doha International Airport and the upgrades and expansion of rail linkages, including the Doha Metro, and railways to Bahrain and Saudi Arabia.⁵⁵

Poverty and Inequality

The distribution of wealth is unequal in the GCC countries, in spite of their high GDP per capita, with concentrations of poverty among expatriate migrants. In **Kuwait**, the residents of such slum areas as Jebel Al-Shuyoukh, mainly migrant workers, face overcrowding, poor housing and crime.⁵⁶ In **Qatar**, housing assistance, health care and other services from the government are limited to Qataris.⁵⁷ Of the 1,056 non-Bahraini households surveyed in 2005-2006, two-thirds earned less than BHD 9,600 (USD 25,500) annually while



▲ Doha, Qatar. Asian labourers at work on the drainage system in front of Qatar's national "Orry the Oryx" mascot, originally created for the 2006 Asian Games. Qatar's impressive infrastructure is being created by a vast army of cheap labourers drawn from across Asia.
©Paul Cowan/iStockphoto

only 42 per cent of the 2,192 Bahraini households surveyed earned below this income level.⁵⁸

In **Saudi Arabia**, according to one estimate, 1.6 per cent of Saudi families live in extreme poverty (<SAR 1,700 (USD 450) per month) and another 20 per cent live on less than SAR 3,800 (USD 1,000) per month.⁵⁹ Migrants from less urbanised parts of the Kingdom, as well as foreign workers, face high rates of poverty and are unable to secure adequate housing.⁶⁰ The government has committed to reducing poverty to 2.2 per cent by 2020.⁶¹

Employment and Unemployment

Expatriate males comprise a significant portion of the labour force in the entire GCC region; they are mostly employed in the private sector while nationals work for the public sector at higher wages than expatriates. In **Qatar**, 94.4 per cent of those employed are non-national⁶² and in the **UAE**, expatriates make up 96.1 per cent of the workforce.⁶³ Non-national workers tend to hold lower-skilled jobs. For instance, non-Qataris primarily work in crafts or as machine operators.⁶⁴ In **Saudi Arabia**, most of the non-nationals work in construction, agriculture and industry; female expatriate workers tend to work in domestic services.⁶⁵

Young people make up a large segment of the unemployed. For example, youths aged 15-24 account for 70.4 per cent of the unemployed in Qatar.⁶⁶ Although the unemployment rates in the UAE tend to be high for foreign youths aged 15-19 (36.1 per cent), the rate for national youths aged 15-19 has been even higher at 50.8 per cent.⁶⁷

In all countries, the male labour force participation rate is higher than the female rate. For instance, in **Oman**, the labour force participation rate for males was 77 per cent in 2008, while it was only 25 per cent for females,⁶⁸ and in Saudi Arabia, labour force participation rates for males are 83 per cent and 17 per cent for females.⁶⁹

The absence of strong and sustainable economic bases has resulted in a disproportionate importance of the public sector as an employer of their nationals. In **Kuwait**, more than three-quarters of the 350,000 employed nationals work for the public sector.⁷⁰ In 2010 the government enacted a privatisation bill to build economic efficiency and a market economy. The bill aims at opening to the private sector those that were traditionally publicly-owned and managed, excluding oil production, health and education. Qatar, Oman and UAE are also trying to diversify into offshore banking and other tertiary economic sectors and promote the entry of women into the workforce.

In **Bahrain**, the percentage of citizens in the work force decreased from 37 per cent in 2007 to 26 per cent in 2009 mostly due to a contraction in public sector employment. Although Oman's expatriate population continues to grow, particularly in the private sector, the government's policy is to increase employment opportunities for its citizens by improving their training to allow them to participate effectively in the labour market. Despite the increasing number of

immigrant labourers, the Saudi participation rate in the labour force has been growing: it rose from 32.6 per cent in 1997 to 44.2 per cent in 2000, an increase partly attributable to the greater engagement of women in the labour force.⁷¹

In the UAE, the urban employment rate was 76 per cent for non-nationals and 41 per cent for nationals in 2009.⁷²

In Qatar, 94.4 per cent of those employed were non-Qataris in 2010 and 49.3 per cent of Qataris were inactive compared to 9 per cent of non-Qataris.⁷³ Most Qataris are employed in government and mining followed by professional and clerical occupations whereas non-Qataris primarily work in crafts or as elementary and machine operators.⁷⁴ As in other countries, the percentage of Qataris in the private sector is very small (0.6 per cent).⁷⁵

Many of the GCC countries are working to increase the national share of the labour force. In the UAE, a country with diverse demographic challenges, 'Emiratization' is a crucial item on the government agenda. The federal and local authorities are continuously generating and implementing initiatives to support the policy of expanding participation of the country's citizens in the workforce. Among these are the establishment of the National Human Resource Development and Employment Authority, the Abu Dhabi Emiratization Council, the Dubai-based Emirates National Development Programme and the Department for Human Resources Development in Sharjah. These organisations help develop the capabilities and skills of nationals in order to create a better balance in the labour market.

As a result of market conditions, as well as the availability of expatriate labour, many UAE citizens have been unable to find suitable work. Over 89,000 UAE citizens registered for prospective jobs with the above mentioned organizations in June 2009.

In **Saudi Arabia**, the 2005 Labour Law requires that at least 75 per cent of the staff of private companies are Saudis.⁷⁶ The government has also limited foreign labour with more stringent visa and temporary working license requirements.⁷⁷ The 9th Development Plan also aims to increase the national share of the labour force.⁷⁸

Although **Oman's** expatriate population continues to grow, particularly in the private sector, the government is trying to increase participation in the labour force for its citizens by improving their training.

Health

Basic health indicators – life expectancy and infant and child mortality rates – have improved significantly in

the GCC region. However, as is the case in the advanced economies, there has been an increase in diabetes and cardiovascular disease.

Health care is universal in the UAE and life expectancy is on par with that of most advanced economies. However, diabetes affects 20 per cent of the population (the second highest rate in the world)⁷⁹ and cardiovascular disease accounts for 28 per cent of all deaths.

Oman has undertaken major healthcare reforms to reduce mortality, increase access to health services and eradicate infectious diseases. There has been a reduction in infant and child mortality rates in Muscat and other cities. Nevertheless, cardiovascular diseases, obesity and diabetes still remain major concerns, particularly in urban areas where 21.2 per cent of the population was obese in 2004 as opposed to 13.1 per cent in rural areas.⁸⁰ (See Box 18.)

In Qatar, WHO indicated that 59.5 per cent of males 15 years and older are 'overweight' and 18.7 per cent are 'obese', while 65.9 per cent of females are 'overweight' and 31.6 per cent are obese.⁸¹ In Bahrain, the city of Manama was recognized as part of the World Health Organization's 1000 Cities-1000 Lives programme for its effort to promote healthy behaviours among its residents.⁸²

Education

With the oil wealth, many countries have invested heavily in education and all of the region's countries have high literacy rates and relatively high enrolment rates for primary and secondary school. For instance, in Doha, the literacy rate is 96.3 per cent.⁸³ In Riyadh and Jeddah, the literacy rates were 92⁸⁴ and 90 per cent⁸⁵ respectively.

The UAE has put emphasis on higher education including training in engineering and information technology. Primary, secondary and tertiary education is offered to all citizens. Literacy rates have increased to approximately 87 per cent.

In Oman, human resources development is a major component of the Vision 2020 as well as the Fifth Five-Year Plan. The reform of the educational system includes modernizing basic education and emphasizing technical and vocational training.

Tourism

Many of the countries in the region have attempted to increase tourism's contribution to GDP, placing an emphasis on the preservation of existing historical sites and the creation of new tourist resorts.

TABLE 57: PERCENTAGE ADULT LITERACY RATES 15+

Country	UAE 2005	Bahrain 2008	Saudi Arabia 2009	Oman 2008	Qatar 2007	Kuwait 2007
Adult Literacy Rates 15+	90.0	90.8	85.5	86.7	93.1	94.5

Source: UNESCO Institute for Statistics.

BOX 18: YOUTH, WEALTH AND HEALTH IN THE GCC: A LIGHT REVIEW OF A HEAVY PROBLEM


▲
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Since the discovery of oil in the Arabian Gulf region, the GCC countries have experienced sustained growth in per capita income and wealth that has contributed to rapid urbanization and the associated urban life styles. The horizontal urban sprawl created car-dependent and pedestrian-unfriendly cities where almost all mobility is motorized. With a relative lack of open spaces and outdoor recreational facilities, many children in the GCC region have sedentary lifestyles and socialize in air-conditioned shopping malls with their easy access to fast food. Moreover, traditional food in the Gulf countries relies on rice and red meats with little vegetables or fruits.

This has contributed to nutritional health problems and related diseases often referred to as the 'nutrition transition'. A phenomenon first noted in developed countries but which quickly spread to emerging economies and developing nations. While these are recognized problems in the Gulf region, there is need to better understand the trends and

who might be particularly vulnerable so that appropriate preventative measures and treatment can be targeted.

Nationally representative overweight and obesity prevalence estimates among adolescents show that Saudi Arabian, Bahraini and Kuwaiti adolescent girls have higher combined overweight and obesity rates compared with adolescent boys but slightly lower rates in Qatar and UAE. Rates are persistently high among both sexes in Kuwait.

Worldwide, one in ten schoolgoing children is obese. Although Qatar and Saudi Arabia compare reasonably well with this high global average, adolescent obesity is far too common in the Gulf region - particularly among preschoolers and adolescent girls in Kuwait, Qatar and UAE.

Rates are now also rising among Bahraini boys. Gender differences in these prevalence rates suggest that there might be biological and socio-cultural factors that need to be better understood.

There is a need to track children's growth and the incidence of overweight and obesity over time, because overweight and obese adolescents are significantly more likely to become obese adults and develop health problems. With those below 20 years representing more than 50 per cent of the Gulf population, the estimates below do not bode well for the future health and well-being of this population section.

It is accepted that cardiovascular diseases (CVD), coronary heart disease, diabetes mellitus, hypertension, metabolic syndrome, steato-hepatitis and certain cancers have become problems in the Gulf region. These

diseases, which have been highly associated with overweight and obesity, can develop even at young ages because childhood and adolescent obesity elevate CVD risks and all-cause mortality.

Studies have found associations with frequent snacking, fast-food and soft-drink consumption, low fruit and vegetable intake and a rise in available calories, particularly from fat. The food environment for the schoolgoing population and the growth of fast food restaurants, supermarkets and hypermarkets are also possible reasons for this trend.

Due to increasingly urbanized life styles, too many children in the Gulf are physically inactive, rarely participate in sports and spend their leisure time in sedentary activities. The hot climate and lack of awareness about sports and active outdoor life reduce children's exposure to healthy life styles. Females have especially low physical activity levels, partly due to conservative socio-cultural norms that create obstacles for sport involvement in sports attire and lack of role models.

Schools are the most effective place to reach young people and encourage more healthy lifestyles. GCC education and health ministers should allocate more resources for coordinated school programs to address the unhealthy aspects of urban life styles by promoting: physical fitness through rhythm and dance and individual and team sports; access to appealing and nutritious meals; education on the risks of unhealthy habits and behaviour; school environments free from heat, excessive noise or poor lighting; health screening of students and management of chronic disease and counseling and psychological services.

Country and Study Year	Age	Overweight only (%)		Obese (%)		Overweight & Obese (%)	
		♂	♀	♂	♀	♂	♀
Saudi Arabia 1998	12-18	14.5	15.6	5.8	6.9	20.3	22.5
Bahrain 2008	15-18	15.8	17.4	13.7	19.4	29.5	36.8
UAE 2005	10-19	21.2	21.7	13.2	11.0	34.4	32.7
Qatar 2004	10-18	27.5	20.0	7.1	3.9	34.6	23.9
Kuwait 2006	10-14	29.3	32.1	14.9	14.2	44.2	46.3

Sources: Ng, S. et al, *The prevalence and trends of overweight, obesity and nutrition-related non-communicable diseases in the Arabian Gulf States*, in *Obesity Reviews*, 12:1-13; Buente, M. et al, *GCC School Health Programs: Health and Wellness Through Early Intervention*.



▲ The wind tower of Sheikh Isa bin Ali house, located in Muharraq, the old capital of Bahrain. Muharraq hopes to promote its rich pearling legacy as a UNESCO World Heritage Site.
©Dr Ajay Kumar Singh/Shutterstock

Cultural tourism in **UAE** has become an integral part of both the domestic hospitality service sector and the economy as a whole. In 2007 tourism contributed 18 per cent of Dubai's direct GDP and 29 per cent of its indirect GDP.⁸⁶ In Abu Dhabi, the Vision 2030 plan aims to invest in tourism related hotels, resorts and business and leisure activities. The Abu Dhabi Tourism Authority is also overseeing the development of Saadiyat Island as a cultural and leisure district.⁸⁷

In **Qatar**, the government is investing USD 17 billion over the next five years in the construction of luxury hotels resorts and leisure facilities. The government will also invest in tourism sites, particularly the Museum of Islamic Art, the Suq Waqif area, the Doha National Museum, the Arab Modern Art Museum and the National Library.⁸⁸

The natural and cultural assets of **Oman** are great opportunities for tourism development. Recently, the sultanate has emphasized tourism, particularly cultural tourism, with the goal of significantly increasing its contribution to GDP over the next ten years. Twelve five-star hotels will be constructed over the next four years. In

Bahrain, tourism contributes 10 per cent to GDP⁸⁹ and the government is investing in hotels and tourist facilities in Durrat Al Bahrain and Al Areen.⁹⁰ It has proposed Muharraq for UNESCO's world heritage list.⁹¹

In **Saudi Arabia**, religious pilgrimages are a major source of tourism. The number of pilgrims attending the *Hajj* has grown steadily from 1.86 million in 1995 to 2.79 million in 2010.⁹² In 2006, 11 million foreign visitors came to Saudi Arabia for religious reasons.⁹³ In September 2010, the Ministry of Hajj announced that more than 3.8 million pilgrims had arrived in Saudi Arabia for *umrah* in the past six months.⁹⁴ Although most tourists fly into Jeddah, others travel directly to Mecca or Medina.

The Saudi government has recently invested a significant amount of money to restore and preserve the historic buildings and sections of Jeddah, create a historic department in the city, develop a tourism corridor linking to Al Balad and obtain world heritage status for Al Balad, among other initiatives. The government is also investing in initiatives to train local workers in the tourism sector and collaborating with educational institutions to offer vocational training.⁹⁵



▲ The Jumeriah Palm development. Dubai, UAE - the ultimate gated community. ©Haider/Shutterstock

The Growth Patterns of GCC Cities

Historically, life in the Arabian Peninsula was nomadic, with pearling and fishing on the coasts, where most of the oldest towns first developed. To the east, the medinas of Doha and Sharjah developed around fishing ports and the pearl trade with India. To the west, in the Hejaz, Mecca and Medina were the oldest and largest cities. In the interior, the Riyadh oasis supported a relatively large population by the early 1900s due to abundant groundwater and fertile soils.

The discovery of oil in the 1960s caused a population boom and exponential economic development that transformed the mud-walled towns into commercial capitals integrated

into the global economy. The immediate impact on urban settlement was the application of Western modernist planning theories popular at that time, leading to the abandonment of the traditional medina in favour of the urban grid, functional spacial segregation, private vehicle reliance and extensive highway networks. Modern villas and developments on the outskirts replaced traditional courtyard-based housing as the preferred lifestyle. In Manama and Muharraq, for instance, 80 per cent of the original population in the old city left for suburban areas, leaving behind a deteriorating housing stock.⁹⁶

Today, cities in the GCC aim to embody the image of the global city, with skyscrapers in central business districts,

multi-story residential buildings, large shopping malls and wide urban boulevards. Due to the harsh desert interior, 80 per cent of the population lives in coastal cities, with all GCC countries except for Saudi Arabia functioning as city-states.

Wealthy nationals and expatriates live in the cosmopolitan city centres and suburban compounds. Across the region, highly paid expatriates live in gated communities that include villas, recreational services, high walls, and 24-hour surveillance that convey exclusivity and security. But, parallel realities exist in these cities, with housing according to class, social power, ethnicity and nationality. Low-paid expatriate workers, rural migrants and refugees from the Horn of Africa reside in the older parts of the city, in temporary housing on construction sites and in informal or slum settlements on the urban periphery.

Among the challenges posed by a wholesale adoption of Western planning and architecture has been the loss of local architectural tradition. A survey of architects in Kuwait found that 88 per cent believed there was no Kuwaiti architectural identity and 94 per cent believed there was a need to create such an identity.⁹⁷

To develop a balance between the global and local aspects, municipalities in the UAE have adopted policies to convey a tradition of Arab-Islamic architectural design, particularly arched windows, gates and decorative stucco. Cities are also taking efforts to preserve their urban heritage through the renovation of old forts, palaces, suqs and mosques.

The Challenge of Affordable Housing

Housing affordability and availability varies across the Gulf and has been driven by high rates of population growth in the 1980s and 1990s. With the exception of Qatar, whose population grew by 7 to 11 per cent annually in the 2000s, population growth has stabilized and is expected to increase by only 1 to 2 per cent annually for the next two decades, with Qatar expected to reach this rate by 2030.

Nevertheless, the acute specific age structure of the population is expected to continue to drive the demand for housing. In GCC countries, 52 to 64 per cent of the national population is under 25 years of age.⁹⁸ In Riyadh, 34 per cent of citizens are under 15 and 50 per cent are under age 20. The annual rate of household formation was 3,000 a year in

FIGURE 41: POPULATION AGE STRUCTURE OF KUWAITIS VS. NON-KUWAITIS IN THE COUNTRY (2005)¹⁰⁴

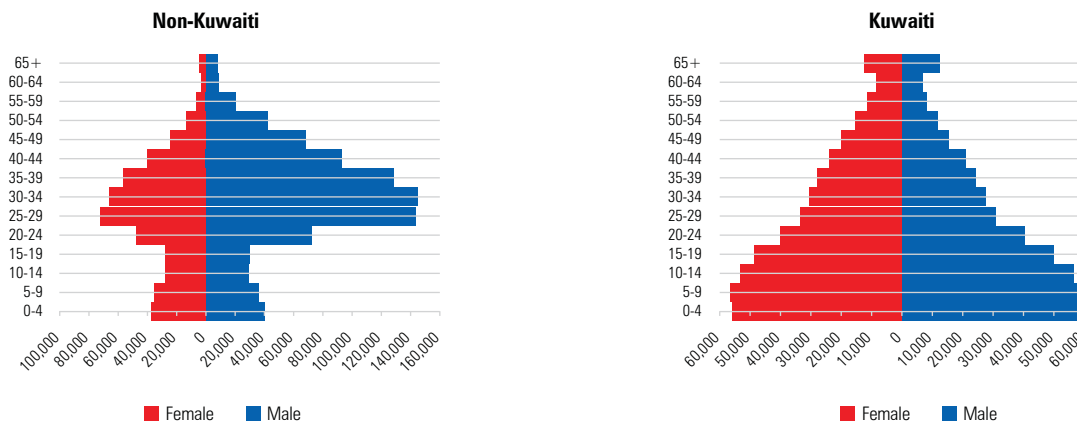
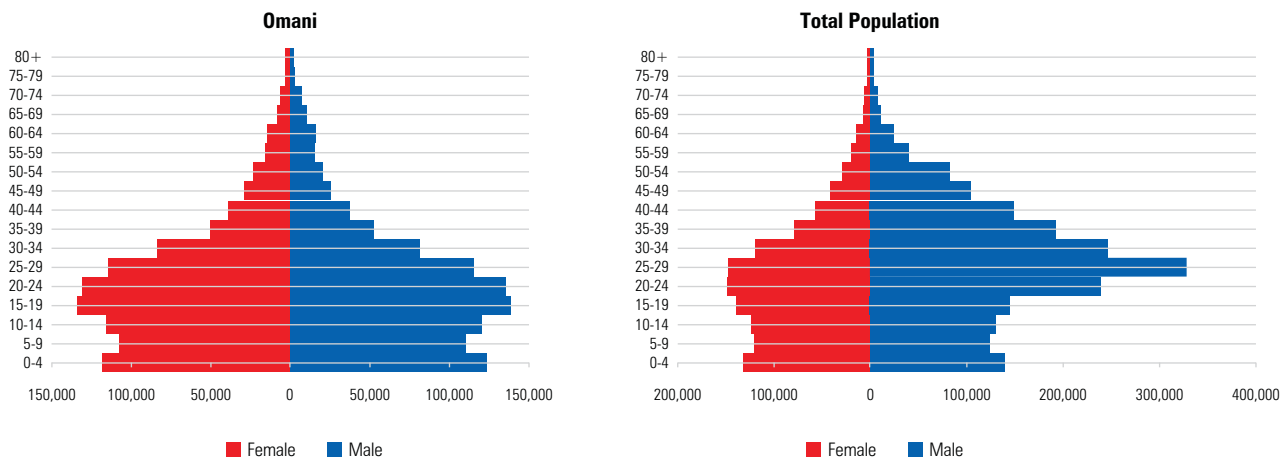


FIGURE 42: POPULATION AGE STRUCTURE OF OMANI VS. TOTAL POPULATION IN OMAN (2009)¹⁰⁵



Bahrain and 14,700 in Kuwait in 2008;⁹⁹ 25,600 in Oman in 2009;¹⁰⁰ 2,900 in Qatar¹⁰¹ and 4,400 in Dubai in 2010¹⁰² and 130,500 in Saudi Arabia in 2007.¹⁰³

The constitutions of GCC countries require the governments to provide their citizens with homes, land or interest-free home construction loans, a benefit limited in some countries to adult males or citizens earning below set income levels.

Saudi municipalities are required to provide 625m² of land – and as much as 900m² for royal grants – free of charge to any adult male Saudi that requests it.

In theory, the unlimited supply of housing would allow adequate housing for all nationals. However, rising populations, escalating land speculation, and changing housing preferences are making it harder for the government to provide loans to meet housing demand among low and middle-income households. With the high reliance on oil revenues for government budgets, fluctuations in oil prices can dramatically affect the ability of government to provide affordable housing.

In **Kuwait**, the waiting list for a government housing grant can be up to 15 years.¹⁰⁶ In **Qatar**, population growth in Doha – as much as 40 per cent in 2008 – has placed significant pressure on the residential property market. By 2012, Abu Dhabi will require an additional 120,000 units to fill unmet demand. Due to the real estate crash in 2008, developers have placed a number of projects on hold that may prolong the housing shortage. The emirate's Urban Planning Council has repeated its call for more affordable housing, which may now be of greater interest to developers given the softening of the market for luxury housing.¹⁰⁷

Bahrain is experiencing a particularly acute housing shortage due to rapid population growth and a mismatch between housing demand and supply. Out of 138,000 employed Bahrainis, 60,000 earn less than BHD 399 (USD 1,060) per month; 60,000 earn BHD 399 to 1,199 (USD 3,200) and 16,000 earn more than BHD 1,200 (USD 3,200).

The government provides social housing for those in the first category, but the present waiting list is 53,000 households to which another 3,000 to 4,000 households are added each year. Those in the second income tier are eligible for government subsidized mortgages of BHD 40,000 (USD 106,000).

Culturally, Bahrainis prefer to live in villas or townhouses that can accommodate an extended family. However, the cost of

serviced land zoned as low-density residential has risen rapidly and a 225m² plot costs BHD 50,000 (USD 133,000). Given these prices, the government's subsidized mortgages do not cover even the cost of land, much less construction, which relies entirely on expensive imported materials.

Given the affordability gap, developers do not produce units for this middle-income group, and around two-thirds of Bahraini nationals cannot afford the typical two-bedroom house even though three-fifths have received government housing support.¹¹⁰ Affordable housing shortages continue to dominate the Bahraini press and grievances over lack of access to affordable and adequate housing was a key issue in the country's 2011 protests.

In 2011-2012, the government anticipates spending an estimated BHD 240 million (USD 640 million) on housing projects and BHD 116 million (USD 308 million) on housing services,¹¹¹ with the aim of reducing the average wait for a loan to three years by 2012, down from five to 15 years in the past.¹¹²

Saudi Arabia also has serious housing shortages. With an existing stock of 4.2 million units in 2007, estimates project that 1.5 million housing units will be needed by 2015, and 5 million by 2020, requiring an investment of USD 640 billion.^{113,114} Twenty-five per cent of the existing units have been financed by loans from the government's Real Estate Development Fund.¹¹⁵

The 9th Development Plan (2010-14) allocates SAR100 billion (USD 27 billion) for municipal and housing services, around 7 per cent of the five-year budget. These allocations aim to establish 60 new municipalities and 40 new urban centres, one million housing units (roughly 80 per cent of anticipated demand during the period), and 266 million square meters of land for private and public housing projects.¹¹⁶ In addition, legislative reforms including the mortgage law, housing finance terms and rent-to-lease laws are needed to resolve fundamental barriers to market equilibrium.¹¹⁷

About one-fifth of Saudi Arabia's growth will take place in Jeddah, which has an oversupply of high-end retail space and luxury housing¹¹⁸ but a shortage of 200,000 middle-income units and 80,000 low-income units.¹¹⁹ Overall, 52 per cent of households rent their home, 41 per cent own, 6 per cent receive housing from their employer, and 1 per cent cited other arrangements. Sixty per cent live in apartments, 24 per cent in traditional housing, 9 per cent in villas and 4 per cent occupy one floor of a house.¹²⁰

TABLE 58: FORMAL HOUSING MARKET PERFORMANCE INDICATORS

	Mecca	Medina	Jeddah	Riyadh	Doha	Dubai	Abu Dhabi
Average Rent (USD /m ² /month)	USD 48	USD 38	USD 81	USD 66	USD 255	USD 310	USD 520
Average Sales Price (USD /m ²)	USD 643	USD 670	USD 850	USD 730	USD 4,520	USD 3,480	USD 5,277
Vacancy Rate	..	..	..	6%	3%	7%	3%

Source: Jeddah¹⁰⁸, Riyadh¹⁰⁹, Abu Dhabi/Dubai: Colliers International 2009.



▲ Low cost migrant housing in Deirah, Dubai, UAE. ©Tanuki Photography/iStockphoto

One in eight units is vacant, although an estimated 250,000 people are living in overcrowded units and are in need of better housing.¹²¹ To anticipate the 2029 population of 5.7 million, Jeddah's Strategic Plan calls for the construction of 950,500 housing units, with 685,000 units affordable to lower- and middle-income groups.¹²²

Riyadh has also experienced a construction boom with 28 per cent of all building permits issued countrywide in 2005.¹²³ Much of the construction has been speculative, with inadequate provision for middle-income housing. An estimated 495,000 units will be needed by 2024. Given average rents at USD 66 per square metre, providing affordable housing is a challenge with a median family income of USD 1,600 per month.

In **Oman**, a growing population with a high purchasing power and a large expatriate population have caused a rise in property prices. After the 2008 financial crisis, Muscat rental rates have returned to 2007 levels, except for luxury villas which remain down by as much as 40 per cent from peak levels.

In contrast, the one- to three-bedroom apartment market has seen minimal change, reflecting an acute supply shortage and burgeoning demand for smaller accommodation. The government has recently designated areas of Muscat where developers may build complexes of up to 12 stories as a way to increase the supply of affordable housing.

Housing for Migrant Workers

With migrant labourers comprising 88, 70 and 69 per cent of the total population in Qatar, the UAE and Kuwait, their housing conditions and rights require special attention.¹²⁴ Although their housing conditions are poor in comparison to the standard of living in the GCC, they are not unlike those of migrants worldwide who try to maximize their remittances.

Governments have been reluctant to assume responsibility for privately-sponsored workers but, under pressure, have begun to consider regulatory reform that would increase oversight of labour importation and a commitment to international labour standards. These reforms are a positive first step to addressing a complex issue.

While little information is available on specific migrant labour living conditions, they tend to live in housing built by their employers, low-cost units in the old city or on the premises where they are employed.

Kuwait provides a clear example of the situation across the GCC. Expatriates cannot own property and, in many cases, the wages of sponsored workers are such that they cannot afford market rate rental housing. In 2009, following repeated strikes and protests, the government established KWD 40 (USD 144) per month as the minimum wage

BOX 19: KUWAIT EXPATRIATE HOUSING

Expatriates represent more than 50 per cent of the total population of 3.2 million, according to 2011 statistics. In 2010, out of more than 1.2 million expatriates living in Kuwait, more than 60 per cent are categorized as low-income foreign single workers in marginal and service activities, according to a Kuwait civil information organization.

Expatriates are not allowed to own houses in Kuwait as only citizens of Gulf cooperation council countries enjoy such privilege. Expatriates can access housing through the rental market but this can only be provided by their employer or paid for by the worker himself depending on the terms of employment contract.

Kuwait's rental housing market has diversified and provides a variety of housing categories for expatriate workers that suit income, living style and family circumstances. The variety ranges from high-end villas and luxurious multi-storey apartment units in prime locations suitable for white collar executives, to single-room apartment buildings and dormitories for low-skilled labour and marginal single workers. Kuwaiti families often have single rooms attached to their houses to accommodate their domestic workers (maids, drivers, gardeners or cooks).

The new Kuwaiti Labour law no. 6 of 2010 has designated an article which ensures the right to adequate housing (article 34): "employers handling government projects and those whose employees stay in the outskirts to provide suitable accommodation and transport without any deduction from the employees' entitlements. The employer should also pay housing allowance in case he does not provide

suitable accommodation for the employees. The ministerial decision shall specify Outskirts, conditions governing suitable accommodation, activities and criteria the employers should observe in providing the accommodation."

The Kuwait master plan designates areas within Kuwaiti cities and new urban extensions for private investment housing (areas for housing development by private sector for rental to both Kuwaitis and non-Kuwaitis). It also identifies areas for private housing (mostly designations for Kuwaiti families and diplomatic missions).

The purpose of such dedication is to allow for equal access to housing for both expatriates and nationals and ensure that market forces do not lead to increase in housing supply for expatriates and gradual conversion of areas designated for housing of Kuwaitis to investment housing. Despite the regulations and master plan guidelines, many areas within Kuwaiti cities designated for private Kuwaiti housing have been converted either formally or informally to workers housing. In most cases those concern dilapidated housing in areas awaiting planning for redevelopment and owners cannot develop until then. Hence they rent it to brokers who maximize their gains by sub-letting to large numbers of single expatriate low-income workers. According to a recent Kuwait Municipality and UN-Habitat survey in six areas of Kuwaiti cities (Khitan, Bnied Al-Qar, Glieb El-Shieoukh, Farawania, Salmiya and Hawalli) which focused on the housing conditions of lower-income single workers, most of those workers, of both Asian and Arabian origin, live in group housing in overcrowded situations with an average of five to 14 people per room, sharing

rooms in an apartment unit and most of them as secondary tenants with no security of tenure. Each worker pays an average of KWD 10-15 per month as rent out of an average monthly salary of KWD 65 Kuwaiti dinar. It is important to note that despite the bad condition of the units, lack of security of tenure, overcrowding and lack of basic amenities, safety and services the survey has shown that most of those living in such units and in these areas do not consider their housing as problematic.

They stated that it is still better than their housing situation back in their native countries, with good proximity for work and services. They came to save money and send remittances back home and cheap housing option maximizes their savings and provide them with a social environment that compensate for being away from their families by sharing their living space with fellow expatriates with similar origins.

The Kuwait government addressed group housing needs in the Kuwait Master Plan with the dual objective of ensuring adequate housing for all and regenerating dilapidated areas in the country's cities. It developed a programme for workers housing by which it constructs new workers neighborhoods in several locations and makes plans for dilapidated areas while designating certain locations in these areas for workers housing. The programme design was based on providing group housing for single expatriate workers and gradually reduce densities from 14 to 8 persons/unit by 2030 while producing 55,000 units every ten years to accommodate gradual increases in labour from 2010 till 2030.

INCOME AND RENT FOR LOW-INCOME SINGLE EXPATRIATE WORKERS LIVING IN SIX SURVEYED AREAS, 2010.

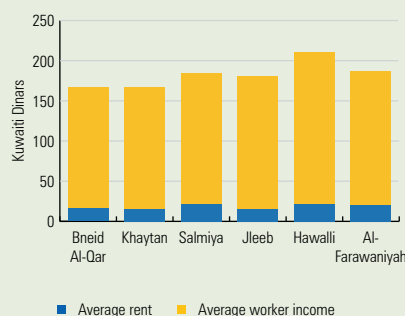


TABLE 59: PERCENTAGE OF URBAN POPULATIONS LIVING IN SUBSTANDARD HOUSING

	Bahrain (2001)	Saudi Arabia (2005)	Jeddah (2009)
Informal Settlements Population	..	3,441,626	1,200,000
% of Urban Residents Living in Informal Settlements	2 (2001)	18 (2005)	35

Sources: Bahrain¹²⁶, Saudi Arabia¹²⁷, Jeddah.¹²⁸

for migrant workers – an improvement, given past levels of KWD 8 (USD 29) to KWD 20 (USD 72) per month.

Worker housing suffers frequent water shortages, loss of electricity, faulty wiring, lack of sanitation and buildings that, at times, are not built to code. In tandem with economic hardship and social abuses, these communities face high levels of crime, violence, prostitution and sexually transmitted diseases.

So-called bachelor ghettos have formed in Bneid El Gar, Jahra, Khaitan, Subhan, Suelibeikhat, and Sulaibya with the most infamous at Jleeb El Shyoukh near the Kuwait International Airport.¹²⁵ Women living in housing compounds as domestic servants are often also vulnerable to abuse.

In response to criticism, the Kuwaiti government passed the New Labour Law in 2009 to provide more rights for private sector workers, to set tougher punishment for abuse and to create a public authority to regulate international labour recruitment. In addition, the government has issued a call for private sector investment in six residential labour cities built to international standards that would house 60,000 workers and be located north of Sabiya, north of Al Mutaleh, South Jahra, East of Ereifjan City, and north of Khairain City.

While these labour cities would improve living standards, more significant efforts are needed to integrate the 2.3 million expatriate workers in the life of the country. As has been demonstrated in housing projects worldwide, the physical, social and residential segregation of low-income groups tend to deepen poverty, lead to disinvestment and encourage the creation of urban slums.

In **Saudi Arabia**, sponsored labourers, rural migrants and poorer nationals have taken residence in mixed-ethnicity communities of substandard housing.¹²⁹ While some employers provide housing on site, others do not. There has, consequently, been a proliferation of informal settlements as a result of an inadequate supply of affordable housing and loosely enforced development regulations.¹³⁰ Of the 3.4 million slum residents in Saudi Arabia, around one-third are located in Jeddah in more than 50 slums spread across 4,800 hectares (about 16 per cent of the city's built-up area).¹³¹

Some are located in the neglected Old City centre – particularly between Al Balad, the Old Airport and Khozam Palace – while others have located in *wadis* subject to periodic flooding – such as the one in which 120 people were killed in 2009.¹³² These settlements lack sanitation, sidewalks and public lighting and, in the old city, lack of maintenance has

caused buildings to deteriorate to unsafe levels. In 2005, 66 per cent of buildings in Al Sharafiyah settlement were considered to be in “bad” or “very bad” physical condition. In the newer, self-built settlements on the periphery of the city, including Kilo 14, Kilo 11 and Quwaizah, low-quality materials make buildings unsafe.¹³³

As part of its Jeddah without Slums programme, the Jeddah Development and Urban Regeneration Company plans to redevelop areas in the city centre and reduce the total number of residents living in informal areas to 300,000.¹³⁴ The programme aims to provide residents with better services, better integrate them into society, redevelop existing areas with high density developments, open key land holdings to high-value uses and preserve and improve existing buildings and street networks.

The programme will begin in the Khosam Palace area, with the regeneration of four communities – Sabil, Nuzlah, parts of Al Balad and Qurayyat – that are located on 370 hectares of which 60 per cent are unplanned settlements. The second phase will address the Ruwais area, with 140 hectares, 60 per cent of which is also unplanned. Forty per cent of residents will need to be resettled in 151,600 new housing units.¹³⁵ Although SAR 4 billion (USD 1.1 billion) has been issued as relocation compensation, not all residents were satisfied or wanted to leave their communities.¹³⁶

Land Tenure, Property Rights and Titling

To open real estate markets and diversify the economy, **Oman** granted all GCC nationals in 2002 the right to own property and all nationalities in 2007 the right to invest in Integrated Tourism Complexes or zones designated for an international clientele.

Along similar lines, **Kuwait** passed a law in 2010 that allows expatriates to buy an apartment of up to 350m² if they have lived in the country for longer than ten years and have an unblemished criminal record. They must sell the property upon leaving the country. **Saudi Arabia**, which historically barred foreigners from owning property, announced in 2010 that foreigners would be permitted to buy property in one of four new cities under construction, the first of which will be the King Abdullah Economic City, a new financial district in Riyadh.¹³⁷ In Jeddah, starting in 2007, the municipality began to issue land titles to Saudis living in unplanned settlements. However, most of the residents of these informal areas are expatriates who will not benefit from these reforms.¹³⁸

In **Bahrain**, while the constitution guarantees property rights and provides just compensation for expropriation, the ruling family has repeatedly violated these policies by taking agricultural and coastal property for development.¹³⁹ In older parts of cities and unplanned settlements, properties commonly lack formal deeds or have overlapping deeds; significant corruption has been cited in this regard.¹⁴⁰

In other GCC countries, expatriates may buy properties in designated zones.¹⁴¹ According to the 2010 Index of Economic Freedom, the GCC countries rank the highest among Arab countries in property rights, with the exception of Saudi Arabia, which lags behind Egypt, Jordan and Morocco.

Urban Land and Fiscal Policies

The sharp market correction of real estate prices in 2008 demonstrated the degree to which property development had become speculative, particularly in Bahrain, Dubai and Qatar.¹⁴² In 2008, the price of 100 m² of unserviced land in Jeddah was 2.2 times the average annual family income, while the same amount of land with water and electricity services and connected by a road was 19 times the average family income.¹⁴³

Real estate speculation in the GCC countries is driven by current public land and finance policies, a prevalence of foreign workers and a lack of urban land management. The inability of foreigners to own property in most areas results in strong and often speculative “buy-to-let” markets. In the absence of effectively enforced land planning and zoning or vacant property taxation, governments have few fiscal management tools to curb land speculation while a lack of private-sector housing finance prevents lower-income groups from making long-term housing investments.

Recently, the Saudi government froze free land allocations, although many grants which have yet to be processed are already in the system, including as many as 200,000 applications (equalling 12,500 hectares) in Jeddah.¹⁴⁴ In addition, private developers in Jeddah have requested the allocation of over 20,000 hectares of land outside the city’s 1988 boundary in what was clearly a speculative move. However, the municipal government demonstrated that the city would need only 17,000 hectares total to accommodate growth in the next 29 years, half of which could be situated on vacant land within its boundary.¹⁴⁵ The burst of the 2008 speculative bubble led Abu Dhabi to adopt a new Escrow Law

and to create an organization similar to Dubai’s Real Estate Regulatory Authority to regulate all property transactions, prohibit off-plan land transfers, and develop a transaction database.

Housing Finance and Mortgage Markets

Traditionally, the Gulf countries, Saudi Arabia in particular, have been suspicious of interest-charging banking services due to *Shari’ah* prescriptions on usury. Laws authorizing the development of Islamic banks led to the establishment of such institutions in Dubai in 1975, Kuwait in 1977, Bahrain in 1979, Qatar in 1982, and Saudi Arabia in 1987.¹⁴⁶ As of 2006, Islamic banks account for 50 to 55 per cent of the financial markets in Bahrain, Kuwait, Qatar and the UAE, 40 per cent in Saudi Arabia, and less than 15 per cent in Oman.¹⁴⁷ Most non-Islamic banks also offer Islamic banking products and services.

Saudi Arabia, the most religiously conservative country in the region, has the least developed housing finance market. The country’s first mortgage law was passed in 2008 but its impacts and implications have yet to become clear. At the same time, the government-owned Real Estate Development Fund, which provides housing finance with zero interest charges to citizens, is poorly capitalized and, given the lack of fines and fees, many borrowers defer or default on their payments. With fewer than 10,000 loans approved each year, the waiting list has grown. The national Islamic Al Rajhi Bank also offers *musharaka* arrangements in which the bank lends for up to 90 per cent of the property cost and the client pays the bank rent and amortization over a 15- to 25-year period. Such arrangements are used mainly in new developments by wealthier clients.¹⁴⁸

Kuwait did not grant low-interest housing loans or government-subsidized housing to women. As of 2010, there were an estimated 68,000 women in the country who were divorced, widowed, single without parents, or married to non-Kuwaitis.¹⁴⁹ The government’s creation of special housing blocks for them only served to deepen their isolation in society.¹⁵⁰ In 2010, at the recommendation of Parliament’s Women’s Affairs Committee, the government agreed to amend housing, credit and banking laws that discriminate on the basis of gender. These reforms and the disbursement of a KWD 500 million (USD 1.7 billion) to capitalize a Credit and Savings Bank housing welfare fund for women paved the way to offer them low-interest housing finance.¹⁵¹

The Challenges of Urban Mobility

Oil money in the Gulf has facilitated heavy investment in extensive road networks, with high-capacity highways and arterials encircling neighbourhoods and cities. In Oman, massive investment in the road system has created a strong network of roads reaching even remote areas. The country paved and repaired nearly 6,000 km of roads from 2007 to 2009.¹⁵² In **Saudi Arabia**, Jeddah's network comprises 564 km of roads, including 100 km of freeways that by the city's own admission are over-scaled and inefficient consumers of urban land.

Concurrent with rising GDP per capita and road construction projects, the Gulf has motor vehicle ownership rates roughly equivalent to those of other high-income countries. From 2004 to 2009 the number of registered vehicles grew by 150 per cent in Bahrain¹⁵³, by 149 per cent in Abu Dhabi from 2006 to 2008¹⁵⁴ and by 143 per cent in Qatar from 2002 to 2007.¹⁵⁵ Riyadh, where, on average, households have 1.7 cars, saw the number of daily vehicular trips increase from 1 million in 1987 to 5 million in 2006 and 6 million in 2007.¹⁵⁶

However, there are large disparities between the national and expatriate residents. In urban areas of Dubai, the average number of cars per urban household was 2.4 for locals, 0.9 for non-locals and 0.3 for expatriates living in group quarters.¹⁵⁷

The surge in vehicles has led to severe congestion in city centres. In Kuwait City, sections of the road network are 85 per cent congested.¹⁵⁸ In Jeddah, outdated and poorly synchronized traffic signals further contribute to delays and congestion. In a survey, Doha's Urban Planning and Development Authority found that only 18 per cent of residents were satisfied with traffic flows, the lowest score given on any topic, compared

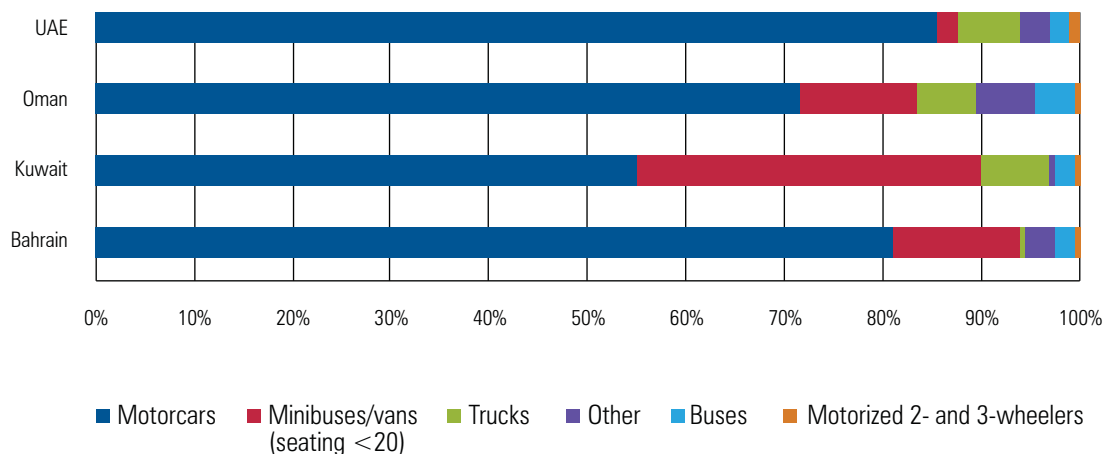
with respondents from outside of Doha, 54 per cent of whom were satisfied with traffic conditions.¹⁵⁹

Abu Dhabi's government predicts that without investment in public transport, the existing road network will reach capacity by 2015¹⁶⁰. If Abu Dhabi's population increases to 3.1 million by 2030, the number of trips will rise to 10 million per day, up from 2 million per day in 2008.¹⁶¹ Congestion results in lost productive time, as well as health and environmental damages. In Dubai, where the transport sector contributes 42 per cent of air pollution, it is estimated that chronic congestion costs the emirate between 2.4 and 3.2 per cent of GDP.¹⁶² Jeddah Municipality estimated that idling cars in congested roads contributed 266 metric tons of CO₂ emissions each year.¹⁶³

The low cost of fuel in the GCC promotes continued reliance on individual motor transport. The price of gas and diesel is heavily subsidized in Gulf States, with Saudi Arabia spending USD 35 billion a year in direct fuel subsidies, in addition to the subsidies it provides oil companies.¹⁶⁴ In 2008, the cost of diesel fuel ranged from USD 0.09 per litre in Saudi Arabia to USD 0.58 in UAE, as compared with USD 0.53 in developing MENA countries, USD 0.78 in the United States and USD 1.41 in the European Union. That same year, the cost of gasoline ranged from USD 0.16 per litre in Saudi Arabia to USD 0.37 in UAE, compared with USD 0.61 in developing MENA countries, USD 0.56 in the United States and USD 1.40 in the European Union.¹⁶⁵

As with any subsidy, fuel subsidies are politically difficult to remove or reduce, particularly given recent riots over food and energy costs and political unrest in the region. As a result, GCC governments are heavily investing in public transportation as a way of promoting mobility behaviour change.

FIGURE 43: PERCENTAGE OF REGISTERED MOTOR VEHICLES BY CATEGORY (2007)¹⁶⁶



BOX 20: DUBAI'S STRATEGIC TRANSPORTATION PLAN



▲ Dubai's impressive road network. ©Philip Lange/Shutterstock

A crucial element of the successful industrialization and development of any country is a well-designed transportation system. Dubai's transportation challenges lie in reducing traffic congestion and developing adequate transportation infrastructure to sustain continued economic growth.

As of 2009, the road network in Dubai reached 10,700 lane-kilometers and comprised of freeways, expressways, arterial roads, collector roads, and local and industrial roads. In 2006, the Dubai Statistics Center reported 213,000 registered vehicles, 80 per cent of which were light vehicles, with the remainder composed of light and heavy trucks, buses, motorcycles and heavy mechanical vehicles. This high level of individualized mobility generates 42 per cent of the emirate's

air pollution. Chronic congestion costs Dubai between 2.4 and 3.2 per cent of GDP.

In response, the government developed a Strategic Transportation Plan, which identifies the most efficient and cost-effective solutions to combat traffic congestion and air pollution. This plan proposes an integrated system consisting of taxis and limousines, buses, metro rail, water taxis and water-buses. The plan, already well underway, suggests how coordinated action can help move a car-dependent society towards greater reliance on public and other more sustainable transportation options.

Dubai opened the Arabian Peninsula's first metro line in 2009 with 29 stations over 52 km to connect major businesses and tourist attractions. In 2010, 140,000 passengers used the metro daily. Two other lines are under

construction and are expected to open in 2011 and 2012 extending the system by 62 km and 26 stations; several other lines and extensions are in the planning stages.

To expand the reach of the mobility system, Dubai's Roads and Transport Authority is planning a 3,000 km bus network to be fully operable by 2020, a 450 km marine transit system, 270 km of tram lines and 900 km of bicycle lanes. In 2009, 1,550 buses serving 116 routes, including 40 feeder bus routes serving the metro system, carried 350,000 passengers per day. By the end of 2010, public transit's mode share rose to 12 per cent, up from 6 per cent in 2008. By implementing the rest of the city's ambitious transportation plans, Dubai's Road and Transport Authority aims to raise transit's mode share to 30 per cent by 2020.

Mass Transportation

Unique among Arab countries, the GCC has the resources to implement ambitious urban transport plans as part of broader development visions. The Gulf governments have developed transportation master plans to reduce congestion and improve public transit, the safety of pedestrian networks and the general quality of urban life. Following the 2008 financial crisis, some development and transit projects have been put on hold or cancelled. Given the long-term value of public transport networks, most of these projects will ultimately move forward.

The most ambitious urban public transportation undertakings are in Abu Dhabi, Dubai and Jeddah. Given their small size, Bahrain, Kuwait, Oman and Qatar are focusing on regional rail, bridge and air linkages with other cities in the region; these initiatives are explored in Section 4.8 – Emerging Issues.

In **Saudi Arabia**, the Saudi Company for Group Transport provides public transportation in ten major cities (Abha, Buraida, Al Attas, Dammam, Jeddah, Mecca, Medina, Riyadh, Tabuk and Taif), serving 11.9 million passengers in 2008. There are also a number of private companies offering transportation services in cities. Intercity transport links 359 cities and villages along 109 routes.¹⁶⁷

In Jeddah, 86 per cent of all trips are taken by car, 10 per cent by taxi, and less than 2 per cent by bus.¹⁶⁸ The state-run bus system operates a small number of routes that are severely underutilized. A network of informal and unregulated minibuses also runs within Jeddah Governorate.

The Ministry of Transport's latest comprehensive transport study calls for the development of a new public transit network consisting of three light-rail lines; a 429 km feeder bus system involving 36 routes; a commuter rail on existing tracks to connect the suburb of North Obhur with Jeddah City Centre; and, for tourists, two water ferry routes and an extension of the existing trolley. Saudi Arabia has launched an ambitious programme to expand its rail system and link it to networks in neighbouring countries.¹⁶⁹

In Abu Dhabi, an estimated 48 per cent of trips are made by private car, 8 per cent by taxi, 33 per cent by contract bus (such as buses for children and day labourers), 10 per cent by foot, and 1 per cent by public transport.¹⁷⁰ Taxis are essentially the only form of transportation available to those without cars.

Based on projected population increase, Abu Dhabi's Department of Transport predicts that, in a baseline scenario, 59 per cent of trips in 2030 would be made by car and 20 per cent by mass transit, with car trips taking an average of 85 minutes. To anticipate the emirate's transportation needs, the Surface Transport Master Plan calls for an investment of Dh 300 billion (USD 86 billion) in a transport system consisting of 131 km of monorail, 340 km of tram lines, at least two metro lines with 40 stations, a feeder bus system

on dedicated bus lanes on the busiest roads, improved pedestrian walkways and "personal rapid transit", a system of battery-powered "podcars".¹⁷¹ As part of its plans to reduce congestion, the Urban Planning Council will promote mass transit developments in two city centres, one downtown and the other in the new Capital District. Through these investments, Abu Dhabi hopes to reduce car trips to 43 per cent of mode share and increase transit trips to 41 per cent by 2030.¹⁷²

Efforts to promote mass transit face obvious challenges given the level of motorization today, but will also be much welcomed by women, the poor and migrant labourers who do not have cars and/or cannot afford taxis. Public transit initiatives must also overcome the low cost and high convenience of private transport, as well as the social stigma that is associated with bus transit.

Road Safety

Despite their high rate of motorization, roads in the GCC countries are relatively safe when compared with other Arab countries although, with the exception of Bahrain, less so than in the advanced economies. **Saudi Arabia** and the **UAE** have the worst road safety record, with an average of 200 accidents per day in Jeddah in 2007,¹⁷³ and the UAE has the ninth-highest rate of fatalities in the world.¹⁷⁴ Traffic-related deaths in **Oman** have consistently risen since 2000 and may soon overtake the rates in **Qatar** and Saudi Arabia if measures are not taken to improve road safety. Traffic fatalities are also on the rise in **Bahrain**.¹⁷⁵

Accidents tend to be concentrated in cities, with a few experiencing particularly high levels of car accidents. For instance, the Al-Jahra Governorate in Kuwait has 3.6 times as many injurious or fatal accidents as Al-Kuwait Governorate although the two have equal populations.¹⁷⁶

About two-thirds to three-quarters of all fatalities involve motorized vehicles with the rest involving pedestrians and cyclists. In 2007, Jeddah reported 1,200 pedestrian casualties, 12 per cent of which were fatal.¹⁷⁷ Ostensibly, most accidents are due to speeding and lack of compliance with or enforcement of traffic rules. More fundamentally, the city's grid layout isolates and surrounds neighbourhoods with high-speed roadways. The poor design of the road network, sidewalks and pedestrian crossings inherently makes pedestrians, who are more likely to be poor, more vulnerable.

A number of GCC countries plan to improve the safety and comfort of pedestrian networks as part of their transport plans. In Dubai, the Road and Transport Authority implemented safety measures, improved pedestrian infrastructure and launched a widespread awareness-raising campaign in order to reduce pedestrian fatalities, which had reached 300 in 2007. Due in large part to these efforts, pedestrian fatalities fell by 33 per cent from 2008 to 2009 and by another 23 per cent in 2010.¹⁷⁸

Water Resource Scarcity and Management

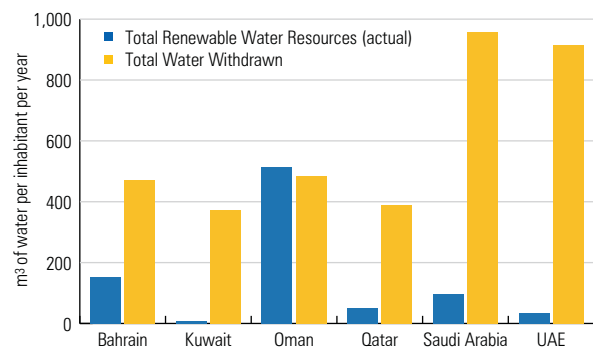
With its arid climate and rapidly growing population, the Gulf is one of the most water-scarce regions in the world. Five GCC countries are among the ten countries in the world with the lowest per capita renewable water supply. The region's limited water resources include shallow aquifers that are replenished by the winter rains and larger supplies of non-renewable fossil water in deep aquifers formed millions of years ago. Since 1960, population in the GCC has grown sevenfold while water consumption per capita rose by 336 per cent in Kuwait from 1992 to 2010;¹⁷⁹ by 125 per cent in the UAE from 2006 to 2008;¹⁸⁰ by 120 per cent in Muscat from 2005 to 2009;¹⁸¹ and by 120 per cent in Bahrain from 2000 to 2008.¹⁸² To meet demand, the GCC countries have overexploited existing resources and have begun to invest heavily in desalination facilities.

Government investments in water and sanitation infrastructure have achieved near universal access to these basic services throughout the region, with the exception of **Oman**. While water distribution networks are extensive in cities, many urban and most rural households continue to rely on wells and tankers.

In **Saudi Arabia**, 1,660 cities, towns, villages and hamlets have water distribution networks, while 4,060 villages and hamlets rely on water tankers.¹⁸³ In Jeddah, only 25 per cent of households have a direct water connection, although the water distribution network reaches 90 per cent of the city. Households in low-income and informal settlements rely on tankers to deliver water that can cost as much as 150 per cent that of piped water.¹⁸⁴

Improved sanitation takes the form of either urban sewer systems or sealed septic tanks. Most areas of the Gulf cities lack drainage systems. Septic tanks are sealed and vacuum tankers collect the waste every few weeks. Dubai has 4,000

FIGURE 44: AVAILABLE AND WITHDRAWN WATER RESOURCES PER CAPITA



Source: FAO Aquastat 2007 data, except for Kuwait's consumption, which is 2002 data.



▲ Kuwait's landmark towers which hold a total of 4,500 cubic metres of water.
©Johnny Dao/Shutterstock

BOX 21: RESPONSES TO WATER SHORTAGES IN THE UNITED ARAB EMIRATES



▲ Desalination plant in Dubai, UAE. ©Shao Weiwei/Shutterstock

UAE governments are vigorously enforcing water conservation measures. In addition to its focus on desalination and wastewater treatment, the UAE has begun adopting alternatives to avoid exploiting hydrocarbon fuel and groundwater supplies.

Abu Dhabi already has plans to increase its underground emergency water storage to 90 days' worth of water, up from its current storage of three days' worth. According to the Environment Agency Abu Dhabi that is implementing the USD 5 billion (Dh 18.37

billion) project, the Aquifer Storage and Recovery (ASR) technique involves injecting excess desalinated and fresh water into the aquifer by using wells or infiltration basins. When the project is ready in 2013, it will be able to store 26 million cubic metres of water to be tapped by the distribution network only in case of emergency. The underground storage has proved technically efficient in comparison with the health, economic and environmental implications of surface storage.

In the western and eastern regions, the Abu Dhabi Environment Agency is implementing a desalination plant that works on solar energy. The newly developed membrane technology will be used for the first time in this plant, which will be powered by ultra-high concentrator photovoltaic technology, capable of operating the system at a concentration greater than 1,500 suns, or about three times the solar concentration of most concentrator photovoltaic panels currently in operation.

Of the ten largest desalination plants in the world, five are in the UAE and four in the other GCC countries. Each square kilometre of land in the MENA region receives solar energy that is equivalent to 1.5 million barrels of crude oil a year. As renewable energy becomes more available, there is a greater need to develop more environmentally friendly and cost-effective sustainable fresh water.

such tankers; only 22 out of 106 municipal areas in Saudi Arabia have sewerage infrastructure and it is estimated that only one-third of these systems treat wastewater to the tertiary standards required for reuse. The Ministry of Water and Electricity estimates that the country will need to invest USD 20 billion in sewer networks and USD 17 billion in wastewater treatment facilities over the next 20 years.¹⁸⁵

As a result of government subsidies, per capita consumption of water in the GCC is among the highest levels in the world. In comparison with consumption levels of 150 to 250 litres per day in the advanced economies, Qataris consume 400 litres and Saudis 250 litres.¹⁸⁶ In Jeddah, households pay SAR 0.15 (USD 0.04) per cubic meter for the first 100m³, although the production and delivery cost to the government is SAR 7 (USD 1.90).¹⁸⁷ In Riyadh and Manama, water costs USD 0.03 and USD 0.07 per m³, respectively.¹⁸⁸ In Kuwait, which has similar water costs and subsidies, government water subsidies equalled 2.4 per cent of GDP in 2002.¹⁸⁹ Systemic water loss levels are also high: Bahrain – 23 per cent;

Saudi Arabia – 28 per cent; Qatar – 35 per cent; Oman – 35 per cent; and Kuwait – 38 per cent.¹⁹⁰ No city in the GCC charges wastewater treatment fees.

The GCC countries increasingly rely on desalinated water to meet growing demand and have become the forerunners in desalination technology. **Qatar** relies on desalinated water for 99 per cent of its supply, **Jeddah** 97 per cent; and **Kuwait** and **Riyadh** 60 per cent.¹⁹¹ In the **UAE**, the use of desalinated water increased by 450 per cent from 2000 to 2008; in 2010, the country spent USD 800 million on desalination, a cost that is expected to rise to USD 3.2 billion by 2016 to meet growing demand.¹⁹²

Most desalinated water is used for washing, cleaning, swimming pools and golf courses, while many people use bottled mineral water for drinking. The cost of desalination has decreased over time and Abu Dhabi's experiment with solar-powered desalination plants in 30 locations around the emirate may reduce the energy demand further. However, the disposal of excess salt in the sea has had a growing impact

on the marine environment and increased coastal soil salinity, which in Qatar has forced some coastal farmers to abandon their land.¹⁹³

Governments are re-evaluating water resource management and deploying more sustainable water use strategies. The most prevalent strategy is to expand the capacity of desalination plants and improve the water collection infrastructure.

To implement Oman's National Water Resources Master Plan (2000-2020), the country's 8th Five Year Plan (2011 to 2016) authorizes the Public Authority for Electricity and Water to build ten emergency reservoirs in and around Muscat for water storage, extend water supply networks, build elevated tanks in four of the eight *wilayat*, expand the desalination plant at Al Ghubra, and add a high-speed mobile desalination plant with a 1 million gallon capacity. As desalination capacity increases, the Authority hopes to use less groundwater, which would be held as a strategic reserve.

Similarly, **Qatar**, will invest USD .75 billion to construct a mega-reservoir to contain seven days' worth of emergency water supply. In Abu Dhabi, authorities have begun constructing an underground reservoir to store enough water for 90 days of rationed use. In Saudi Arabia, the production of desalinated water increased from 7.65 million m³ in 1980 to 1,096.7 million m³ in 2009.¹⁹⁴

A second strategy is to reduce demand through tariff reform and consumer education. Reversing its historically free water policy, Doha has set the region's highest rates at USD 1.20 per m³.¹⁹⁵ The Public Authority for Electricity and Water in Muscat will also replace 30,000 water metres to improve the efficiency and metering. In the **UAE**, where water and electricity are jointly managed by state-owned authorities, water and electricity price hikes are expected, with water and electricity prices in Dubai to rise by 15 per cent in 2011.¹⁹⁶

Such measures, important as they are, tend to be highly unpopular and may be put off in the face of social unrest across the Middle East. The electricity and water authorities of Dubai and Abu Dhabi are also sponsoring a number of high-profile demand management campaigns. A study found that even without tariff increases, Abu Dhabi could avoid building two power stations and a desalination plant if it increased the efficiency requirements for households, improved education campaigns and strengthened insulation and cooling system requirements in its building codes.

A third strategy is to reduce domestic agriculture, which consumes 60 to 93 per cent of water in the GCC countries. In 2003, **Saudi Arabia** stopped subsidizing the production of barley and, following a 2008 decree, it will phase out all water-intensive crops by 2016, including wheat.¹⁹⁷

Such policies have critical impacts on national food policies, with countries trading domestic water subsidies for food subsidies. Countries are also increasing wastewater reuse, most of which is used for landscaping and industrial purposes. **Kuwait** treats 60 per cent of its wastewater to tertiary levels,¹⁹⁸ and Abu Dhabi reuses 60 per cent of treated wastewater, which represents only 4 per cent of total water consumption.^{199, 200}

Climate Change

Climate models generally point to higher average temperatures and a combination of lower and increased rainfall and flooding in the GCC, depending on the area. Climate change will further reduce long-term water supplies, increase the reliance on desalination with subsequent energy costs, reduce available water for agriculture, and lead to more heat waves. Already, compared to 1957, average temperatures outside of **Kuwait** City are 1.5 to 2.0°C higher and increased desertification affects nearly 300 km² of land in Kuwait each year.²⁰¹ Surface sea temperatures in Kuwait Bay have been rising by 0.6°C per decade, around three times faster than the global average, due to a combination of climate change, changing wind and water currents, coastal power generation and desalination.²⁰²

Demand for new residential communities in the GCC's coastal areas has led to land reclamation and infilling of the salt-flats and nearby islands. As a result, growing populations live in low-lying areas with little remaining coastal habitat to absorb floods and storms. Many unplanned communities have also developed in floodplains close to *wadis* and water sources.

A one-meter rise in sea level could cover 3 per cent of **Qatar's** land area and 1 per cent of Kuwait's land area; and a five-meter rise in sea level could cover 13 per cent of Qatar's land area²⁰³ and 3 per cent of **Kuwait's** land area.²⁰⁴

These changes could affect over 50 per cent of the populations in **Qatar**, **Bahrain** and the **UAE**.²⁰⁵ In **Saudi Arabia**, were around 50 per cent of the population lives within 100 km of the coast, Dammam, Ras Tanura, Jubail and Khafji on the eastern coast and Jeddah, Rabigh, Yanbu and Jizan on the western coast are the most vulnerable coastal cities.²⁰⁶

In 2009, the World Meteorological Organization recommended that **Bahrain** construct flood barriers in anticipation of sea level rises between 20 and 60cm by 2100.²⁰⁷ As part of its efforts to meet these challenges, Bahrain has established a National Disaster Management Committee that requires all new construction projects in Bahrain to be designed to withstand potential sea level rise.²⁰⁸

In the **UAE**, which has more than 1,300 km of coastline, an estimated 85 per cent of the population and over 90 per cent of the infrastructure are only a few metres above sea level.²¹⁰ Given this vulnerability, the UAE became one of the first major oil-producing countries to ratify the Kyoto Protocol to the UN Convention on Climate Change in 2005. Abu Dhabi's Environment Agency issued projections in 2009 on the possible inundation effects of sea-level rise.²¹¹ Plan Abu Dhabi 2030 cites the need to develop an integrated coastal environmental management plan,²¹² and adopt measures to mitigate heat island effects.²¹³

Over 50 per cent of **Oman's** population lives along the coastline in Muscat and in the Batinah region.²¹⁴ With Cyclone Guno in 2007, Oman experienced its strongest recorded tropical cyclone and realised the vulnerability of its coast to extreme weather.²¹⁵

FIGURE 45: GCC REGIONAL CLIMATE MODEL PROJECTIONS IN THE 2020s, 2040s AND 2070s RELATIVE TO THE 1990s²⁰⁹

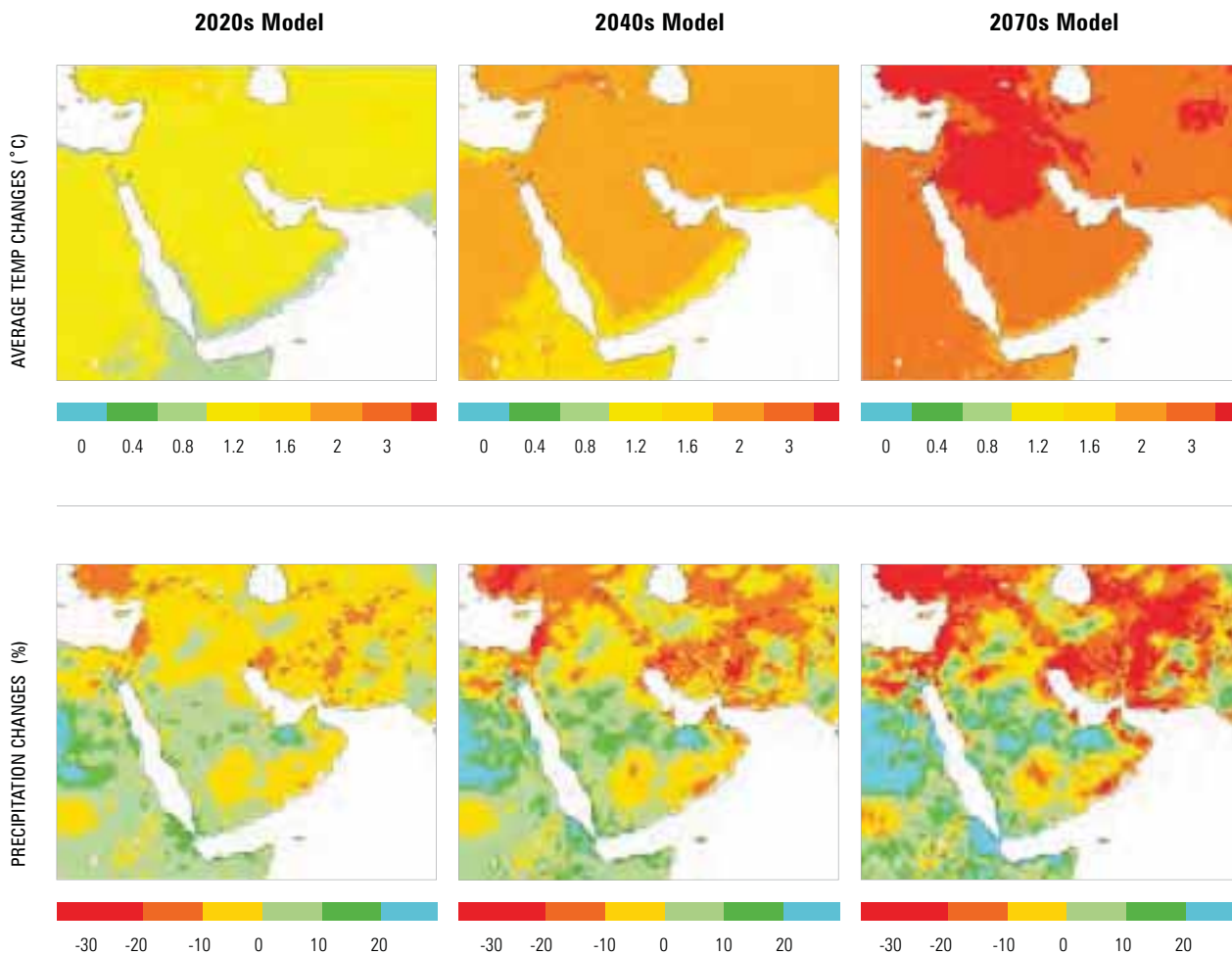
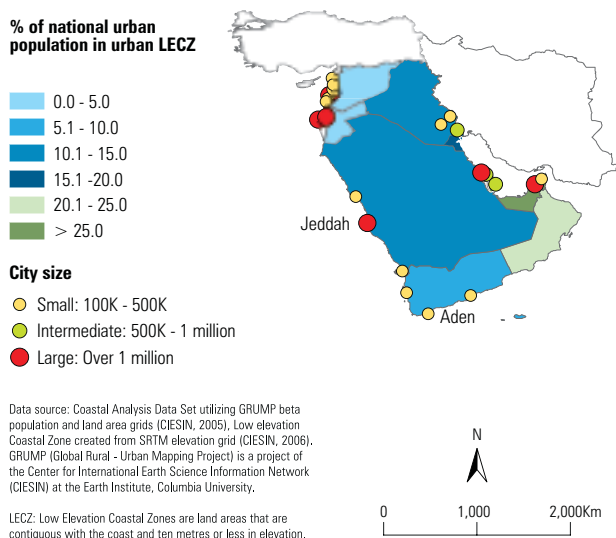


FIGURE 46: GCC CITIES VULNERABLE TO SEA-LEVEL RISE²¹⁶



Data source: Coastal Analysis Data Set utilizing GRUMP beta population and land area grids (CIESIN, 2005), Low elevation Coastal Zone created from SRTM elevation grid (CIESIN, 2006), GRUMP (Global Rural - Urban Mapping Project) is a project of the Center for International Earth Science Information Network (CIESIN) at the Earth Institute, Columbia University.

LECZ: Low Elevation Coastal Zones are land areas that are contiguous with the coast and ten metres or less in elevation.

The government has formed a separate Ministry of Environment and Climatic Affairs to evaluate disaster vulnerability, established a hydro-meteorological network of rain and *wadi* gauges, and it developed guidelines for developments in flood prone areas. These studies point to the inadequacy of the drainage systems in urban areas and the inability of combined sewer systems to handle flash floods.

Food Security

Even as climate change models predict a further reduction in crop production, the GCC demand for food is growing rapidly due to population growth and rising incomes. GCC countries now import 60 to 90 per cent of their food intake.²¹⁷ In 2007, the GCC imported USD 10 billion in foodstuffs, 70 per cent of the Arab region's total food imports that year and roughly double its 2004 imports.

Fiscal surpluses have allowed governments to raise the wages of public sector staff and maintain large food subsidies. In 2007, **Saudi Arabia** and **Kuwait** spent only 0.2 and 0.1

per cent of their GDP on food subsidies.²¹⁸ Following the protests in **Bahrain** in 2011, the King pledged to raise food subsidies by 50 per cent in 2011 and 2012 to USD 175 million each year, or 0.8 per cent of GDP.²¹⁹

After global food price rose by 25 per cent in 2008,²²⁰ the GCC began to make significant agricultural investments in countries that are logistically proximate and have cultural and political ties to the Gulf. In particular, they are focusing on countries such as Sudan and Turkey that have untapped water supplies and lack infrastructure. As of 2010, the **UAE** controlled more than 2,800 km² of farmland in Khartoum, Jazeera, Nile and other provinces of Sudan, an area equal to 3.5 per cent of its own land mass and greater than its farmland.²²¹

GCC countries are aware that some of the countries where they are investing are themselves food importers and receive food aid. Their investments therefore seek to strengthen local food security and socio-political stability while also generating adequate exports to the GCC.²²² See also *The State of African Cities 2010*, p.56. (Free pdf download from www.unhabitat.org)

Energy and Air Pollution

Due to the region's extreme temperatures and need for desalinated water, energy demand in the GCC is exceptionally high. Although electricity costs on average USD 0.12 per kWh to produce in the Gulf, it is sold for around USD 0.04. With the exception of the **UAE**, where Sharjah's Electricity and Water Authority sharply increased electricity prices in 2009 and other emirates are expected to follow, countries have been reluctant to reform tariffs.

On average, demand for energy has increased in the GCC by 6 per cent annually.²²³ In 2007, **Bahrain, Kuwait, Qatar** and the **UAE** were the first, third, fourth and fifth-highest CO₂ per capita producers in the world.²²⁴ As a whole, the GCC produces roughly half the carbon dioxide emissions produced in the Arab world.

The GCC governments are developing new energy portfolios with a focus on nuclear and renewable energy. The **UAE** is the most active in planning its post-oil energy future and is the first Arab nation to develop nuclear power on a commercial scale. It aims to provide 25 per cent of its electricity needs in 2020 from nuclear sources and has commissioned four nuclear power plants at a cost of Dh 75 billion (USD 20 billion) to be built by 2020.

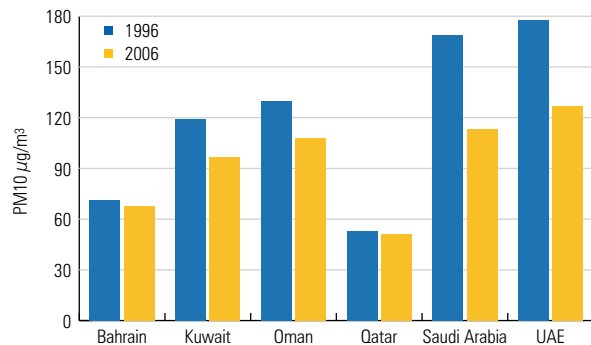
In 2010, the government also launched the Emirates Energy Star programme to promote high-tech infrastructure to monitor and optimize energy use in buildings. If successful, this initiative could reduce UAE's overall power consumption by as much as 30 per cent.²²⁵

One of the UAE's boldest ideas is Masdar City, located 17 km from Abu Dhabi City. The Abu Dhabi



Proposed master plan of Masdar City in Abu Dhabi, UAE. ©www.masdar.ae

FIGURE 47: PARTICULATE MATTER (PM10) AS A WEIGHTED AVERAGE OF THE URBAN POPULATION



Source: World Bank Development Indicators.

Future Energy Company, a government-owned commercial enterprise, will spend USD 15-30 billion to create Masdar, a city that will obtain all its energy coming from renewable sources, recycle most of its water, reuse all waste and include pedestrian walkways. Though the city, which will accommodate 40,000 residents and 70,000 employees, features traditional architectural elements, it also inserts futuristic designs, such as subterranean pod-cars. Lauded by some for its innovation, the project has also been criticized as being targeted for an elite economic class and for its geographic isolation from other existing urban areas.²²⁶

The Gulf has high potential for renewable solar and wind energy. In 2009, Abu Dhabi became the first emirate to declare a renewable energy target, with an aim of generating 7 per cent of electricity from renewables by 2020. It also opened its first solar energy plant in Masdar in 2009. **Bahrain** has begun testing renewables through the use of wind turbines that power 13 per cent of energy use in the World Trade Center in Manama, a solar street lighting project and a feasibility study of commercial scale solar.²²⁷ In **Oman**, where more solar energy falls on each square meter of land than almost anywhere else in the world, the Public Authority for Electricity and Water is conducting a feasibility study to implement the country's first commercial solar plant with 100 to 200MW capacity.

Growing levels of motorization and the construction industry are worsening air pollution in cities such as Abu Dhabi, Doha, Dubai, Jeddah, Kuwait City, Manama and Sharjah.²²⁸ Micro particulate matter (PM10) remains far above WHO standards of 20 micrograms per cubic metre, although they declined between 1996 and 2006. Abu Dhabi's Environment Agency will convert 20 per cent of public vehicles and taxis to run on compressed natural gas and requires all public diesel vehicles to use ultra low sulphur fuel by 2012.²²⁹

Solid Waste Management

The Gulf's per capita municipal solid waste generation rates are among the highest in the world, totalling over 17 million tons per year,²³⁰ not including industrial, hazardous, construction and demolition wastes. **Bahrain's** waste flows rose from 1.3 to 1.6 kg per capita per day in the late 1990s to around 2.7 kg per capita per day in 2007.²³¹ Per capita waste generation in Dubai has been increasing by 10 per cent a year.²³²

Depending on the country, services are provided by municipalities, public-private partnerships, or completely by private companies. The most prevalent method of waste disposal is in sanitary landfills, the majority of which are managed by local or national authorities. Composting and recycling is limited because the lack of domestic reuse markets makes recycling unprofitable in comparison to landfilling.

The rapid expansion of the volume of solid waste has overwhelmed the existing capacity of landfills and is a particular problem for land-scarce countries like **Bahrain** and **Kuwait**. Thirteen of Kuwait's 16 landfills have reached capacity and closed. Illegal dumping, particularly of building wastes, has been reported in the **UAE** and **Bahrain**, resulting in the destruction of marine life.²³³

To counter these trends, the UAE government endorsed a total phase out of plastic shopping bags and decreed that, by the end of 2012, all plastic bags made anywhere in the UAE must be biodegradable.

Dubai plans to develop a 6,000 ton/day waste-to-energy incineration plant.²³⁴ Given that 56 per cent of the country's waste stream comes from the construction and demolition sector, Abu Dhabi recently opened a Construction and Demolition Waste Recycling Plant that uses environmentally friendly technologies to process and recycle building waste into reusable aggregate materials. One of the largest and most sophisticated in the region, the plant has an initial capacity of 5,000 tons per day and could reach 15,000 tons/day in the future.

Liveability and Quality of Life

As part of ongoing efforts to diversify their economies and attract investment, cities in the Gulf are actively trying to improve their urban liveability and quality of life. Open space has declined, with vegetated areas in Riyadh dropping from 78m² per capita in 1950 to 16m² in 1999.²³⁵ A survey of Doha residents found that, in addition to overcrowding and concerns about education, healthcare and congestion, residents felt that public spaces should be improved, feedback that is reflected in the National Master Plan.²³⁶ In Jeddah, there is on average 2m² of open space per capita, compared to the WHO standard of 8m². Jeddah's Strategic Plan therefore focuses on making public spaces available, civic life and allocating non-urban land for protection and leisure.²³⁷



▲ Opened in November 2010, the 842 meter long Sheikh Zayed bridge in Abu Dhabi is said to be the most intricate bridge ever constructed. ©Philip Lange/iStockphoto

National Urban Policy

All aspects of government in the GCCs are highly centralized, including planning and urban administration. Typically, national ministries develop national, regional and local urban policies, and municipal authorities implement plans and new developments. Particularly in the smaller emirates, the national planning agency prepares national, metropolitan and local level plans.

In **Saudi Arabia**, the Ministry of Economy and Planning is responsible for national development, while the Ministry of Municipal and Rural Affairs (MOMRA) is responsible for the development of spatial strategies and infrastructure at all levels of government. Working with UNDP, MOMRA will update the 2000 National Spatial Strategy and provide principles to translate the country's 2025 strategy and Ninth National Development Plan (2010-2015) into urban development projects.²³⁸

Bahrain's Ministry of Municipalities Affairs and Agriculture formulated the 2008 National Planning Development Strategy. The Ministry's Urban Planning Affairs department conducts infrastructure and planning studies, prepares detailed master plans on behalf of towns, villages and cities, and formulates development controls.

In **Oman**, urban planning is managed by the Ministry of Regional Municipalities, Environment and Water Resources. Following the damage caused by Hurricane Gonu in 2007, this

entity was split into the Ministry of Regional Municipalities and Water Resources and the Ministry of Environment and Climatic Affairs, whose focus is on natural hazards. Oman's Supreme Committee for Town Planning launched a National Spatial Strategy in 2010 in coordination with the country's Vision 2020.

In **Qatar**, the Ministry of Municipal Affairs and Agriculture supervises planning and development, road maintenance, agriculture, food safety, public services and the environment. The Ministry's Assistant Secretary for Municipal Affairs coordinates the development of the country's ten administrative districts. However, it is the only GCC country that has not yet developed a national urban strategy.

Both Abu Dhabi and Dubai in the **UAE** have strategic development plans, and Abu Dhabi is conducting some of the more ambitious state-led planning experiments in the region. The Urban Planning Council (UPC), established in 2007, has developed Urban Structure Framework Plans for Abu Dhabi City, Al Ain City, and Al Garbiya, proposing conceptual solutions to meet growth demands.

To implement these plans, the UPC launched the *esidama* ('sustainability' in Arabic) programme, a set of guidelines that aim to increase the long-term sustainability of developments in the emirate. This relies on the Pearl Rating System to evaluate the integrated development process: ecological

systems, liveability, water, energy, materials and innovation in buildings and developments.

Developers seeking to achieve these voluntary standards must introduce improved practices in the design and construction process. The construction of roads, water supply systems, wastewater treatment plants, power supply networks, and education and health facilities resulted in significant improvements in the quality of life of their citizens.

Urban development projects in the GCC are primarily driven by the private sector and market demand. The policy of giving free land and low- or no-interest loans to citizens for housing has contributed to wasteful patterns of urbanization that in turn has led to high operating costs for municipal governments.

As in many labour-importing countries, formal development addresses the needs of nationals and wealthy expatriates. Migrant workers' housing, quality of life and social services are substantially inferior. The challenge for Gulf cities is to integrate rapid urbanization within a holistic framework of sustainable development, spatial planning and development controls to help create more inclusive and ecologically responsive communities.

Decentralization and Local Government Systems

Saudi Arabia reorganized its local governance structure in 1993. The government established regional councils and increased the number of regions from four to 13 to reflect differences in local characteristics and priorities and coordinate the work of the sectoral ministries.

Local governance consists of 13 regions, five city authorities and six directorates for water and sewer. The head of the regional council, the emir, is appointed by the king and has the rank of minister. The emir oversees the governorates, districts and municipalities within the region. The council's membership consists of the local heads of the sectoral ministries, the heads of government agencies, ten citizens and local civic leaders. The responsibilities of the council are to maintain law and order and to supervise socio-economic development within the region. The regional and city councils prepare master plans for their areas and monitor implementation.²³⁹

Recently, the government has attempted to give municipalities more power and autonomy to make and implement decisions. Despite this effort to devolve responsibilities, their autonomy is still limited as higher officials have the power to interfere with decisions and overrule them. The central government also has the power to dissolve a local government, remove members of the local council or choose contractors to undertake local projects, which in some cases can create conflicts of interest.

Central ministries issue regulations and oversee the preparation of plans. Local governments cannot set local tax rates, have no borrowing power and are dependent on central transfer for their budgets.²⁴⁰

Although the power of local governments is limited, some authorities in the Emirates of Riyadh, Mecca and Medina

manage their own finances and have budgets separate from the Ministry of the Interior. In Mecca and Medina, technical committees conduct administrative functions, planning and development, and education and health services, among others. Most importantly, they oversee the Hajj, the annual pilgrimage that brings about 3 million Muslims from all over the world to the holy cities. Medina's performance has been outstanding and its urban observatory with performance indicators has received wide recognition throughout the Arab world.²⁴¹

Municipalities, which constitute the second tier of local administration in Saudi Arabia, are responsible for issuing building and business permits, ensuring food safety and public health, maintaining parks and public space, solid waste management and street lighting. The national ministries provide education, social services and housing.²⁴² While the mayors of all municipalities are appointed, the country held its first elections for the 179 municipal councils in 2005 and another in 2011. Half the seats are filled by elected members, the other half are appointed by the king.²⁴³ In 2005, an estimated 20 per cent of citizens were eligible to vote, namely men over age 21 who were not in the military and had resided in their district for at least one year.²⁴⁴ In September 2011, however, King Abdullah announced that Saudi women will be given the right to vote and run for municipal elections and also have the right to be appointed to the *shura* council.

The smaller GCC countries are essentially city-states, where services are provided by a mix of national and local level agencies. The **Oman** government is technically decentralized into 43 municipalities, although these sub-units have limited autonomy. The Ministry of Regional Municipalities and Water Resources supervises and funds municipalities, and may commission specific infrastructure projects.

Muscat has an elected, 28-member municipal council led by a chairman, with 11 of the councillors representing specific government ministries. The municipal council frames local policies and budgets and develops proposals for local taxes and fees to be approved by the Ministry. While cities provide such public services as parking and wastewater treatment, the central government manages parks, pest control, capital investments in wastewater infrastructure, and services that it is now trying to privatize.

Ultimate power resides with the sultan and the appointed 59 members of the State Council. Citizens of the country have elected the 84-member consultative council (*shura*) since the 1990s but this advisory body has no legislative powers.²⁴⁵ No political parties are permitted in the country.

Qatar has little need for decentralization and central government agencies deliver effective services. The country is divided into 10 municipalities, with 80 per cent of the population living in Doha.

Since the current ruler took power in 1995, a series of reforms have been implemented to increase popular participation in governance, beginning with the creation of a single, popularly elected Central Municipal Council in 1999. The 29-member municipal council has no legislative powers but advises on

BOX 22: MANAGEMENT OF THE HOLY CITIES MECCA AND MEDINA



▲ Medina, Kingdom of Saudi Arabia. ©Ahmad Faizal Yahya/Shutterstock

The Kingdom of Saudi Arabia accommodates the Holy Cities of Mecca and Medina Al-Munawarah, where the Grand Mosque and the Prophet's Mosque are located. These cities have been of great significance since the Islamic age and large numbers of Muslims (up to 7.5 million annually) perform Hajj and Umrah rituals there. Therefore, the planning and organization of services for pilgrims is an important priority for Saudi officials.

The combined resident population of these two large cities (Mecca had 1.48 million people and Medina had 1.10 million inhabitants in 2010) is currently growing by about 3 per cent annually. Together they account for about 10 per cent of Saudi Arabia's 2010 population of 26.3 million.

As in other urban areas of Saudi Arabia, the Holy Cities are in administrative and management terms provided for by the 1938 Statute for the Capital and Municipalities - the Kingdom's first autonomous municipal statute. This empowers municipalities to perform planning and urban management and manage all urban facilities and functions, including public health, building codes and city beautification.

In 1992, the Law of Provinces was promulgated to improve provincial

administrative standards and development through local authorities. It also aimed at maintaining law and order while guaranteeing citizens' rights and freedoms within the framework of *Shari'a*. The core priorities of this 1992 law, however, focus on regional and urban development through provincial and local level decentralization of managing local change and development meeting the needs of the population and utilizing local resources and assets. This has required the establishment of a highly-coordinated partnership under the 9th Five-Year Development Plan that includes the formulation of development indicators at the level of provinces, governorates and sub-governorates to be used in the re-classification of provinces and in disparity management between and within provinces.

In 2004, the 'Development Commission of Mecca, Medina and the Holy Sites' was established to develop comprehensive plans for these areas in addition to its supervisory mandate for all other development issues. A Higher Committee for Hajj was established, presided by H.R.H. the Crown Prince, Minister of the Interior and with membership of all relevant departments and bodies involved in Hajj-related procedures and legislation to ensure pilgrims' safety and convenience

in all stages of their journey to Mecca and Medina.

The Municipalities of Holy Mecca and Medina have also established urban observatories, including pilgrim-related observatories (Hajj Observatory), which collect Habitat Agenda indicators and local indicators (special indicators for Hajj activities) to monitor services and facility delivery and that serve as tools for decision making and policy formation. During the past five years, in cooperation with development partners, civil society and the private sector in both cities, a number of urban life indicators have been developed to monitor urban performance - especially during Hajj and Umrah seasons in both cities - as well as seasonal crisis management indicators.

The Holy Mecca and Medina Observatories produce 85 indicators and 107 indicators, respectively. They aim at enhancing urban development and services delivery in the Holy Cities through seasonal city indicators during the Hajj and Umrah seasons of the Greater and Lesser Pilgrimage. They also serve to assess progress in the achievement of local goals and the Millennium Development Goals for the creation of development-conducive environments that include all aspects of development. These indicators are incorporated into municipal projects, including those related to urban studies and research.

Through performance monitoring and evaluation, challenges are being addressed, such as those pertaining to the built environment, infrastructure and services delivery, besides addressing economic challenges like unemployment and Saudization of the private sector.

Finally, the achievements of the urban observatories in both cities under the governance of the administrative boards - presided by the Mayors of each province and with membership of governmental department directors and representatives from civil society and the private sector - illustrates how the constraints and challenges of balanced and sustainable urban growth are being addressed and how societies are created that are based on equity, justice and partnership to achieve sound performance of integrated urban governance systems.

local development and infrastructure programmes that are implemented by the central government.²⁴⁶

For the first time, both men and women were able to vote and stand for municipal elections. The Permanent Population Committee aims to promote decentralization and greater popular participation in local urban management.²⁴⁷

At the national level, the 2003 constitution, approved by referendum, continues to allow the emir to appoint the prime minister, the cabinet and most judges; however, for the first time, the *shura* will comprise 30 elected and 15 appointed members. To date, no elections for the *shura* have been held and the 35-member council is still appointed by the emir, although a 2008 draft law on the issue was approved. Political parties are not permitted.

Bahrain is divided into 12 municipalities with limited autonomy. Most services and programmes are implemented by the Ministry of Interior's Municipal Central Authority and the Ministry of Housing, Municipalities and the Environment.

Following his ascension to power in 1999, H.R.H. Hamad bin Isa al Khalifa decreed some reforms including dismissing controversial state security laws, releasing all political prisoners, giving women the right to vote and holding parliamentary elections. In 2002, he created elected municipal councils in Bahrain's five governorates. The councils are composed of 10 elected members who appoint and supervise a general municipal director.²⁴⁸ They are responsible for acting on behalf of the executive authority and implementing national policy within the governorates.²⁴⁹ However, urban policy continues to be developed at the national level.²⁵⁰ Political parties are not allowed but political associations may form, although these may be disbanded.

In Bahrain's 2030 Vision, the country aims to reduce the scale and cost of its government administration through selected out-sourcing, enhanced regulation and transparency, expanded infrastructure, and a policy framework that moves the country away from oil dependence.²⁵¹

Bahrain's Shia population (65-75 per cent) is high compared to those in Oman (5-10 per cent), Qatar (10 per cent), UAE (10 per cent), Saudi Arabia (10-15 per cent) and Kuwait (20-25 per cent). Despite constituting the majority of the population, they hold only 14 per cent of senior government positions.²⁵² In the workplace, they tend to occupy lower-skilled positions. Older neighbourhoods in and near Manama house a predominantly Shia population.²⁵³ Their discontent and feeling of discrimination led to violent riots in the spring of 2011.

In the **UAE**, a federation of seven emirates, each state is responsible for urban planning and municipal management within its jurisdiction, although some of the smaller and less developed emirates have surrendered some functions to the central government.²⁵⁴

The two largest emirates, Abu Dhabi and Dubai, each have government structures that parallel those of the federal government's consultative council and public administration. Abu Dhabi has two municipalities, each headed by an appointed municipal council, responsible for public works,

finance, the provision of water and electricity, and customs.²⁵⁵

In recent years, these cities have launched e-government and technology upgrade initiatives to modernize municipal administration. By strengthening the capacity of local government, they hope to increase municipal decentralization.

In 2010 the, Dubai local government and executive council launched the Dubai Model for Government Service Delivery to improve the government's operational efficiency and customer satisfaction. The programme will provide information on indicators of government performance, with the eventual aim of inter-agency benchmarking. In 2006, as part of reforms to make the federal government more responsive and accountable to the states, the UAE held its first elections for 20 out of the 40 seats of the Federal National Council, which comprises a fixed number of representatives from each of the states.²⁵⁶

Local Government Finance

In all GCC countries oil revenues finance central government transfers to local governments. In Saudi Arabia, cities may only collect fees for advertising, building permits and annual business registrations. The level of the fees is established by the national government and collected by the Ministry of Finance, which then returns the funds back to the cities where they were collected.²⁵⁷

In the UAE, customs duties and oil revenues account for each emirate's revenues. By law, they must transfer half of the revenues to the federal coffers but in practice only Abu Dhabi and Dubai do so, albeit at less than the required 50 per cent.²⁵⁸ Gulf cities do not pay for capital investments or their operating costs and are not held accountable for their development decisions, resulting in wasteful land consumption patterns, excessive urban sprawl and an increasing reliance on private cars for transport.

The Role of Civil Society

Civil society organizations (CSOs) are legally permitted throughout the GCC and a number have developed around cultural, sports, social service and environmental issues. In all countries, private organizations must register with the Ministry of Labour and Social Affairs or the Ministry of Social Development. In the **UAE**, they must also be licensed by the local authorities, and in **Oman** they must be approved by the Council of Ministers. In **Kuwait**, the ministry responsible for CSO registrations has not approved new organizations for many years and had 149 applications pending as of 2009.²⁵⁹

Semi-official organizations address sensitive issues. The Emirates Human Rights Association in UAE²⁶⁰, the National Human Rights Committee in Qatar and Saudi Arabia's National Organization for Human Rights, whose chairman and executive committee also sit on the *shura*. The government of Oman established the Oman Women's Association in 1970, which now has 38 chapters and an estimated

membership of 3,000 women. Migrant worker associations are a sensitive topic; Qatar prohibits any private society from having a proportion of non-citizens exceeding 20 per cent of its membership.²⁶¹ In all countries, civil society organizations avoid prohibited political activism in their work.

Among the Gulf States, **Bahrain** may have the most developed civil society, with over 500 organizations. Many are sports-related or inactive and the remainder are classified as professional, women's rights, youth, human rights, and topical groups (such as environmental organizations, for example). On the whole, they have had a positive impact on governance and women's groups have led demonstrations to promote their rights. The 1989 Societies Law, prohibits political activity, and a number of organizations are not registered because they did not apply, were denied registration or had their registrations revoked.²⁶² CSOs are also prohibited from accepting foreign funds, which has restricted their growth.

Saudi Arabia imposes restrictive policies on civil society dealing with politically sensitive or divisive issues, reflecting the strong adherence to conservative precepts held by a large segment of the population.²⁶³ Instead, the government levies a 2.5 per cent tax on income (*zakat*) and uses the funds to support permitted charities.

In **Qatar**, civil society initiatives such as Sustainable Qatar, Qatar Green Building Council, Green Doha and Friends of the Environment Society work to raise awareness on environmental issues. Most, if not all, of these initiatives were established and are sustained by expatriates. Local participation remains limited and its increase should be considered a key goal for such organizations.

Women in Politics and Governance

On the whole, attitudes towards women are more conservative in the GCC than in the Mashreq and Maghreb, with their labour participation lagging far behind that of men. However, the number of women with a higher education degree, working as civil servants and gaining senior positions in government is quickly rising, with some countries adopting a policy to increase women's participation in the workforce as a way to diversify and strengthen the economy.²⁶⁴ Women appointees to senior government positions tend to be well educated, often with higher education than in the West; many are also related to the ruling families and married to men of power. Despite gains in the workplace and government, gender equality is not yet achieved.

Outside of Saudi Arabia, the only Arab state to practice conservative Wahabism, women have made important gains in politics. **Qatar** became the first country in the GCC to allow both men and women to run for municipal elections in 1999, and in 2003 Sheikha al-Jufairi became the first woman to win a municipal seat in the Gulf.

In **Bahrain**, ten women were appointed to the 40-member Consultative Council in 2006. One woman, running unopposed, was elected to the Council of Representatives the same year,²⁶⁵ and one was elected to the municipal council of

Muharrag in 2010, the first woman to do so in Bahrain.²⁶⁶

In the **UAE**, women comprise 20 per cent of the diplomatic corps, 20 per cent of the Federal National Council and 66 per cent of government workers; the country appointed four women ministers to the cabinet and its first woman judge in 2008. It is allowing women to have a presence in the military.

In 2000, the sultan of **Oman** appointed five women to the State Council and increased it to eight in 2003. In 2004, he appointed the country's first woman minister for higher education. Women hold around one-third of all civil service posts, and they fill two out of 83 seats on Oman's Consultative Council.²⁶⁷

In **Saudi Arabia**, practices constraining women's ability to participate in society have been changing slowly over time: King Faisal established the first school for girls in 1961 (as compared with Egypt, which established its first girls school in 1873) and women-only shopping malls, banks, offices, colleges and businesses have been created. However, the burden of segregated workplaces makes it difficult for most businesses to employ women, and male migrant workers fill many posts that are traditionally taken by women in other Arab countries.²⁶⁸

A 2009 cabinet reorganization led to the appointment of the first female cabinet member as the Deputy Minister for Girls' Education.²⁶⁹ The level of conservatism varies across the country from Mecca, Medina and Riyadh, where these practices are strictly observed, to cosmopolitan cities like Jeddah, where they are more relaxed.



▲ The Emiri Diwan or Emir's Palace, Doha, Qatar. Qatar has implemented a series of reforms including giving women the right to vote in, and stand for municipal elections.

©Paul Cowan/Shutterstock



▲ Construction workers on a new skyscraper in Doha, Qatar. ©Jason Larkin/Panos Pictures

Migrant Workforce in the GCC

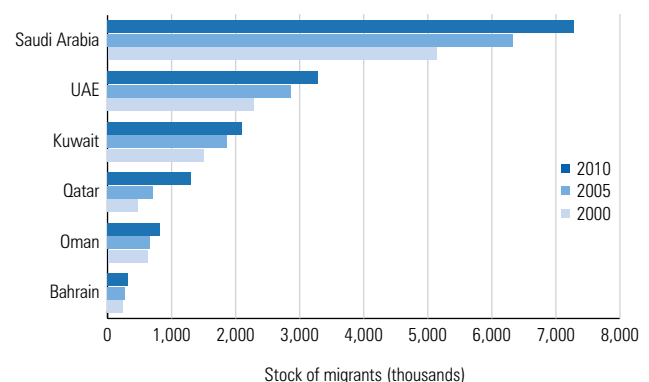
Since the discovery of oil, the GCC has drawn increasing numbers of migrant workers. From 1975 to 2005, the number of migrants rose from 1 million to 12.7 million, while the total population increased almost fivefold, from 7.8 million to 34 million.²⁷⁰ Arabs comprised three-quarters of migrant workers in the GCC in 1975 but GCC countries began to import labour from outside the region, mainly South and Southeast Asia, after the Gulf War of 1990. This was due in part to rising wages for Arab workers.

Today, only about one-quarter of the 15 million migrant workers in the GCC are Arabs,²⁷¹ including 1.5 million Egyptians, 900,000 Yemenis, 500,000 Palestinians and Jordanians and 300,000 Sudanese.²⁷² The remaining migrants include a mix of well-paid expatriates from the advanced economies and low-paid *kafala* or sponsored workers. China, Ethiopia and other African countries are also beginning to send workers. In **Qatar**, which has the highest ratio of migrant workers to nationals in the world, the number of migrant workers increased at an average annual rate of 12 per cent between 2005 and 2010.²⁷³

Although labour importation is a global phenomenon, its magnitude in the GCC is unique. In 2010, in Qatar, the UAE and Kuwait, 87, 70 and 69 per cent of the population was composed of expatriates.²⁷⁴ In Bahrain, and Oman, 39 and 28 per cent of the population is foreign born.²⁷⁵ In Saudi

Arabia, foreigners account for 28 per cent of the population and 67 per cent of the overall workforce and hold 90 to 95 per cent of private sector jobs.²⁷⁶ In Riyadh, migrant workers comprise 52 per cent of a 3.6 million labour force.²⁷⁷ In **Kuwait**, foreigners comprise 69 per cent of the workforce, respectively.²⁷⁸ Migrant workers are predominantly male and in Kuwait, the ratio of female to male workers is 1 to 1.9 and in Saudi Arabia 1 to 2.2.^{279,280}

FIGURE 48: NUMBER OF MIGRANTS IN GCC COUNTRIES IN 2000, 2005 AND 2010 (IN THOUSANDS)



Source: UN DESA, 2009 as cited in IOM World Migration Report 2010

In Kuwait, an estimated 550,000 to 660,000 women work in domestic services, giving the country a ratio of one domestic worker per two nationals, the highest proportion in the Middle East.²⁸¹ Male migrant workers tend to work in the construction industry, where they hold 95 per cent of jobs.²⁸²

The burst of the real estate bubble in 2008 caused the cancellation or delay of numerous projects with resulting impacts on migrant construction workers. In Dubai alone, tens of thousands of workers lost their jobs and in 2010 hundreds of workers remained stranded in labour camps, many of whom claim that they have not been paid and are unable to return home.²⁸³

Living Conditions among Sponsored Migrant Workers

Most migrant workers come to the GCC through the sponsorship system, often with deceptive promises of high salaries that will rapidly pay back the brokerage fee. Labour-contracting companies that are awarded service contracts in the GCC countries import migrant workers from their home countries and are responsible for their housing and well-being. Immigration and sponsorship laws give employers broad power over their workers, many of whom are illiterate and have no social or legal protections in the host countries.

The running of the *kafala* system has come under scrutiny to ascertain whether its safeguards of worker conditions were fairly enforced. The lack of public oversight of workers' conditions has drawn international criticism, recurring riots among the workers themselves and growing opposition within the GCC governments.

Sponsored workers live in labourer housing, low-cost units in dilapidated buildings in the older parts of cities or, in the case of domestic workers, with employers. Many of **Bahrain's** labourers' camps are unlicensed and tend to be made of non-durable materials. Deadly fires are common.²⁸⁴

In 2008, Human Rights Watch found 40 per cent of the **UAE's** 1,033 labourers' camps were in violation of health and fire safety regulations.²⁸⁵ Sonapur, a labourers' camp located in the desert between Dubai and Sharjah, houses as many as 500,000 workers from India and Pakistan. Workers share a single room with up to 14 other people and sleep in shifts.²⁸⁶ When living in shops or employers' homes, workers are often given cramped or degrading living quarters.²⁸⁷

Residential areas for migrant workers are segregated throughout the GCC.²⁸⁸ In **Bahrain**, legislators have tried to prevent landlords in local residential areas from renting to non-Bahrainis.²⁸⁹

A common government response throughout the GCC countries to criticism over migration workers' living conditions has been to re-house workers in new "labour towns", "bachelorvilles" or similar arrangements.

As part of its Labour and Human Resources Policy, Abu Dhabi plans to build low-cost worker housing, located close to workplaces where possible and which satisfies or exceeds international standards for living area, hygiene, safety and

leisure facilities, with a maximum of 10,000 residents per settlement to avoid creating ghettos.²⁹⁰ **Qatar's** government aimed to build a worker city of 50,000 near Doha, but put the project on hold in 2009.²⁹¹ The Southern Municipal Council of Bahrain announced plans in 2010 to build a labour town that would accommodate workers from 100 camps in the area, with other municipal councils planning similar projects.

The motivation behind these initiatives is as much to improve workforce living conditions as to protect nationals from the perceived social problems of migrant workers. This spatial and, therefore, social segregation, however, is not a desirable option as it leads to fragmented cities with concentrated areas of poverty, crime and other mutually reinforcing societal ills.

Workforce Reforms in the GCC

The issue of migrant labour in the GCC is highly complex and reveals the ambivalent attitude towards reform in countries that are both deeply suspicious of and highly dependent upon their migrant labour population. All GCC countries are concerned about the national security threat of having such large populations of foreigners within their borders. To deter migrants from staying, GCC countries have established strict residency permit requirements, set high standards for granting citizenship, adopted tougher recruitment policies and deported surplus workers. Through formal and subtle ways, the GCC states prevent migrants at all income levels from integrating into national society.

Continued dependence on migrant labour presents a significant challenge for governments as they try to reduce both local unemployment and subsidies, either in the form of government jobs or unemployment benefits. For decades, the public sector has absorbed nationals who could not obtain jobs in the private sector and efforts to "nationalize" jobs have had limited success. In **Kuwait**, for instance, 77 per cent of the 350,000 employed nationals work in the public sector.²⁹²

With oil revenues projected to gradually decline, while the number of educated young nationals entering the workforce increases rapidly, GCC governments are reviving efforts to change the structure of the workforce. In **Saudi Arabia**, for instance, the 9th Development Plan (2010-2014) aims at a *Saudization* rate of 54 per cent, up from 48 per cent in 2009. This necessitates the creation of 1.1 million new jobs for Saudis.²⁹³

The experience from similar efforts in the 1990s, when GCC countries faced budget deficits and high unemployment rates, shows that these policies are difficult to implement. A decade of workforce *Omanization* from 1988 to 1999, for instance, led to nationals holding over 86 per cent of jobs in government, far exceeding the 72 per cent target.²⁹⁴ In the private sector, however, nationals made gains only in minor industries that, at the time, comprised only 8 per cent of the private sector workforce.

One of the reasons that the effort failed was because the social guarantees available to nationals did not incentivize productivity. Private companies remain reluctant to employ nationals, who often lack the technical skills and vocational expertise.

The region's various economic plans aim to diversify the economy and reform education to target skilled graduates who can fill local positions. **Bahrain's** Economic Vision 2030 hopes that by 2030, "businesses in Bahrain will have caught up with the world's leaders in productivity. Our private sector will no longer equate competitiveness with low-cost expatriate labour, but instead will create productive, high-wage employment for Bahrainis. The Government will ensure that economic growth benefits all Bahrainis fairly by creating a level playing field in the job market for Bahrainis through immigration reform and the revision of labour laws."²⁹⁵

The GCC's Ministers of Labour have also proposed quota systems to cap the number of foreign workers, citing both security concerns and the local employment issue.²⁹⁶ For the foreseeable future, however, while nationals may replace highly skilled and highly paid expatriates, the countries will continue to import workers in the construction and domestic services sectors.

Under international and domestic pressure, GCC governments are beginning to address migrant labour conditions. In 2009, Bahrain instituted Decree 79, the first policy in the region to end the absolute power of sponsors over workers by allowing migrants to change employment without the consent of their sponsor.²⁹⁷ A major detraction of the law is its exclusion of workers in the domestic sector, where female workers are particularly vulnerable.²⁹⁸

Without ending the sponsorship system, **Kuwait's** 2009 New Labour Law establishes protection of workers' annual leave, end of service indemnities, raises the minimum wage and sets tougher penalties for people who trade in visas, recruit workers without providing jobs or fail to pay regular wages. The government also established an independent labour authority and a shelter for abused workers.

In 2007, the **UAE** introduced a standard migrant worker contract²⁹⁹ and, in 2009, implemented a mandatory electronic Wage Protection System, increased inspections on violations of daytime breaks and continued housing conditions inspections.³⁰⁰ The **Qatar** government is considering requiring employers to submit monthly bulletins demonstrating their wage payments to increase financial protections for migrant workers.³⁰¹ In 2011, the government proposed a law establishing the rights and responsibilities of domestic workers.³⁰² Although **Saudi Arabia** reinforced existing protections in the Labour Code in 2009, it did not make further reforms.³⁰³

Refugees and Stateless Persons

Most refugees in the GCC are concentrated in **Kuwait** and **Saudi Arabia**. As of 2008, Kuwait hosted 38,100 refugees

and Saudi Arabia 240,800, compared to fewer than 200 in the other GCC countries.³⁰⁴ The Saudi border serves as a major transit point for refugees from the Horn of Africa. Despite calls by UNHCR for countries to host refugees from Somalia,³⁰⁵ Saudi agencies continue to deport refugees mostly from Somalia and Ethiopia, to Haradh, a border town in Yemen, where an unknown number of people have been left stranded.³⁰⁶ **Oman** has apprehended and deported hundreds of Somali, Yemeni, Ethiopian, Eritrean, Afghan and Pakistani refugees.³⁰⁷

The Gulf region has a more significant challenge managing stateless persons, also known as *bidoon* or *bidoon jinsiya*, a term meaning "without" in Arabic that is used in the region to indicate their lack of citizenship. They are long-term residents in the Gulf who, for various reasons, have been denied citizenship. Many have been born in a GCC country, some for many generations, and continue to lack citizenship. Their origins vary.

In **Kuwait** and **Saudi Arabia**, most were of Bedouin origin and, either not understanding the concept of statehood or being illiterate, lack the documents needed to prove citizenship. In Bahrain, most are *Shia* of Iranian origin; in other GCC countries, they are from the Baluch region, West Africa and the Comoros.

Statistics on their numbers are uncertain, with an estimated 80,000 to 140,000 in Kuwait³⁰⁸, 100,000 in the UAE³⁰⁹ and 70,000 to 100,000 in Saudi Arabia.³¹⁰ As non-citizens, they lack access to healthcare and education,³¹¹ are barred from public positions (including the military and police) and prevented from owning property or opening businesses, forcing some into illegal activities.³¹² In Bahrain, the government has reportedly naturalized around 68,000 *bidoon* since 2002.³¹³

Remittances

Due to the number of migrant workers, the Gulf has become one of the top remitting regions in the world.³¹⁴ In 2009, remittances equalling 7 per cent of GDP were sent from Bahrain, Kuwait, and Saudi Arabia and remittances equalling 11 per cent of GDP were sent from Oman.³¹⁵ In 2008, the remittance outflows of Bahrain, Kuwait and Saudi Arabia as a percentage of GDP were ranked as the world's fourth, ninth and 12th highest.³¹⁶ In Qatar, the value of remittances rose from QAR 5 billion (USD 1.4 billion) in 2001 to QAR 19 billion (USD 5.2 billion) in 2008, growing on average 19.5 per cent annually.³¹⁷

With such large percentages of national income leaving the country, the GCC countries feel certain negative impacts on their economy. Large remittance outflows can distort the exchange rate and place pressure on foreign reserves; weaken fiscal policy and government spending multiplier effects; exert pressure on monetary policy; disrupt the business cycles through lack of local reinvestment and spending and foster black market activities such as the potential for money laundering through the *Hawala* system.³¹⁸



▲ The 25 km King Fahd Causeway linking Saudi Arabia to Bahrain. ©Mohamed Ghuloom. Licensed under the Creative Commons Attribution 3.0 Unported license.

The GCC countries all compete with each other in finance, transport and energy development.³¹⁹ There is little planning at the regional level and each of the GCC countries has plans to transform key cities into world-class destinations. For instance, Bahrain, Dubai and Doha are existing regional centres for international finance, an area that Saudi Arabia's King Abdullah Financial City in Riyadh, which will house the GCC Monetary Fund, is trying to enter.³²⁰ It will become increasingly necessary for the Council to help cities in the region develop competitive and differentiated sectors.

Regional Cities and Urban Corridors

As cities in the Gulf grow, they are beginning to form larger urban agglomerations and corridors. On the Arabian Gulf, the most prominent urban corridor stretches from Abu Dhabi to Sharjah, and encompasses over 3.6 million residents. It contains Abu Dhabi, Dubai, Ajman, Sharjah, the Jebel Ali Free Trade Zone, which has over 200 factories and

the largest container port between Rotterdam and Singapore, and several other ports.

An Extended Metropolitan Region is also emerging between Dammam and Manama. The 25 km King Fahd Causeway, completed in 1986, allows an average of nearly 50,000 people to travel between the two cities daily. In 2010, **Saudi Arabia** announced an expansion of the causeway to include more lanes, as well as a commercial centre in **Bahrain**. A planned Friendship Bridge will connect Doha with Manama. If completed, this would be the longest causeway in the world.

Kuwait's National Planning Strategy calls for a new port at Bubiyan and road networks to connect with other countries.³²¹ The Kuwait International Master Plan is also driven by the objective of developing a competitive financial and commercial centre in the region.³²²

As the numbers of pilgrims grew to almost 3 million annually for the hajj, Jeddah and Mecca have now formed an urban agglomeration, which could extend along the corridor to Medina following the establishment of the Haramain Railway, which will connect the two holy cities to Jeddah.

FIGURE 49: THE GULF PENINSULA'S EASTERN COAST AT NIGHT



Source: NASA, via Google.

FIGURE 50: THE GULF PENINSULA'S RED SEA COAST AT NIGHT



Source: NASA, via Google.



▲ The E11 or Sheikh Zayed Road, Dubai. The longest road in the UAE, the E11 stretches from Al Silah in the Emirate of Abu Dhabi and ends in the Emirate of Ras Al Khaimah at the Oman border.
©clearandtransparent/iStockphoto

Regional Integration

Given the similarities in their economies, history and social characteristics, the six Gulf countries established the Gulf Cooperative Council to strengthen their national security and promote regional economic development and integration. Since it was created in 1981, the GCC has sought to unify regulations in economy, finance, trade and customs, jointly promote research and development, build a single military presence known as the Peninsula Shield Force and create a common currency.

Today, the GCC is the most integrated sub-region in the Arab world in terms of trade and capital mobility³²³ and its Common Market allows its citizens to work, live, and receive social services and benefits equally in any of the GCC

countries. They have also connected their electricity grids to share reserve capacity and improve reliability.³²⁴ This network is critical as the region is developing renewable resources such as nuclear, solar and wind.

Some efforts at integration have been less successful. In 2003, the GCC countries signed a Customs Union Agreement to remove internal trade restrictions, waive tariffs for goods that originated from within the GCC and establish low tariffs for products from countries outside the GCC.³²⁵ Implementation of this agreement is pending.³²⁶ There have been plans for a decade to launch a common currency, the Khaleeji. If approved, it would be the most important supranational currency after the Euro.

BOX 23: ARAB GULF STATES COOPERATION REGIONAL INTEGRATION

In December 2011, the leaders of a Gulf Cooperation Council (GCC) summit agreed in principle to the Saudi proposal to move from cooperation to form a union. This proposal resulted from more than three decades of cooperation and integration.

The GCC (Saudi Arabia, Kuwait, Bahrain, Qatar, United Arab Emirates, and Oman) economies can benefit from integration. Hit by the financial crisis, they recovered fast as oil demand rebounded and the financial sector stabilized. A solid economic base is very crucial for integration and union formation and in 2010 economic growth for the GCC was 4.2% and reached 5% in 2011.

The path to integration and further union establishment started in 1981 when the members ratified a charter that called for the establishment for the cooperation council for the Arab Gulf States. The overall charter stipulates that the GCC is a political, economic and regional organization. The GCC countries have joint security concerns given the instability in the region.

All countries are, in some way, monarchies with varying levels of democracy. All

countries enjoy cultural similarities. The GCC has coordinated a number of efforts towards integration, which can lead in the future to establishing a union. This will run from joint economic and financial policies to free trade, regional urban planning, cross-border infrastructure transport development and free movement of citizens and residents.

The decrees of the GCC Supreme Council, its directives, reflected the importance of economic and commercial exchange, as well as smooth flow of commodities, goods and people across borders, resulting in the customs union, the common Gulf market, the economic union. The countries adopt a developmental integration approach with projects on transportation, communication and infrastructure and finally the development of human resources and cooperation in the field of scientific and technical research.

The council ensures equal treatment of all GCC citizens in all economic fields, including transportation, work in the public and private sectors, social insurance, retirement, practicing professions, practicing economic service and investment activities, ownership

of real estates, transfer of capitals, tax treatment, trade in and purchasing of stocks, establishing companies, education, health and social services.

This has a positive impact on city developments in Gulf countries with further development of mega infrastructure projects that eases the flow of people, goods and services. The GCC light rail, metro and regional roads and cross-border transportation arteries facilitated integration process.

Furthermore, the GCC is working towards a regional urban planning strategy by which it can develop areas along transport corridors between cities of Kuwait-Saudi Arabia (Al-Nowaiseb-Alkhafji and Al-Salimi – Hafr el-baten), Bahrain-Saudi Arabia cities (Manama –Dammam – Ihsaa) and to establish a sea link between Qatar and Saudi Arabian cities (Doha – Al-Ihsa link). Such programmes will help in boosting development in border areas in the countries and enhance the productivity of citizens living in these areas and attract investment and development towards a number of joint border cities in GCC countries.

KUWAIT – SAUDI ARABIA DEVELOPMENT CORRIDOR



QATAR – SAUDI ARABIA POTENTIAL DEVELOPMENT CORRIDOR



BOX 24: QATAR-BAHRAIN CAUSEWAY: AN EMERGING URBAN CORRIDOR


In 1986, Saudi Arabia and Bahrain officially inaugurated the 25 km King Fahd Causeway. To capitalize on its success as an emerging urban development corridor, Qatar and Bahrain, in early 2005, decided to extend this physical connectivity pattern with a causeway between Bahrain and Qatar. The Qatar Bahrain Friendship Causeway (QBFC) will be one of the world's longest overwater traffic links and serve to extend the King Fahd Causeway between Bahrain and Saudi Arabia. It will take some four years to build and provide rail and multilane road connections, commercially linking the entire region through the free movement of people and freight.

It will also be the affirmation of a new era in foreign relations between Bahrain and Qatar in the wake of the resolution of a 60-year-old territorial dispute over the Hawar group of islands.

In June 2006 the agreement on the 40 km QBFC linking the two countries took shape with the establishment of the Qatar Bahrain Causeway Foundation. Construction of the USD 4 billion causeway was envisaged to start in early 2009. The 40 km QBFC will consist of 18 km of embankments and 22 km of viaducts and bridges, including two bridges high enough to allow freight ships to pass underneath. The four-lane highway is expected to cut the travel time by car between Qatar and Bahrain from four-and-a-half-hours to around 30 minutes. Apart from strengthening ties between Qatar and Bahrain and enhancing cooperation, as an extension of the King Fahd Causeway connecting Bahrain and Saudi Arabia, the QBFC is expected to create a development corridor. Since this development corridor is not primarily aiming at connecting the capital cities it will allow for more diffused spatial developments, both within Qatar and Bahrain, but it also has the potential of stimulating various other urban developments and become a regional urban development corridor.

An urban development corridor is typically a ribbon-shaped, populated strip of land connecting two or more urban areas. If crossing national boundaries, an urban development corridor helps in establishing and reinforcing regional urban connectivity at the international scale that can strengthen political, economic, cultural, environmental and social connectivity.

The relation between an urban corridor and the surrounding land use and development patterns, however, is crucial. Poor connections to the surrounding residential neighborhoods often result in inefficiencies in the corridor's connective functions.

Corridor development strategies should therefore incorporate land use studies, zoning regulations and design guidelines that support the strategic objectives. Such a strategy could support environmentally-sustainable transport that minimizes impacts on the physical, built and social environments to provide more equitably for future generations.

Thriving urban corridors stimulate all types of development and increase surrounding land values but, more important, they improve overall inter-connectivity between cities and external connectivity with regional centers, leading to enhanced regional economic development growth.

Although concentration of development will continue to take place in the capitals of Qatar and Bahrain, the QBFC will help introduce a pattern of spatial development that allows for new urban centers throughout the two countries.

The start of construction works, however, has repeatedly been deferred to allow for redesign and introduction of new, upgrading features, including a high-speed rail line envisioned to eventually be extended to Muscat in Oman and Istanbul in Turkey, creating a major new international gateway that would turn Qatar and Bahrain into ideal access points for international companies to develop their business across the GCC.

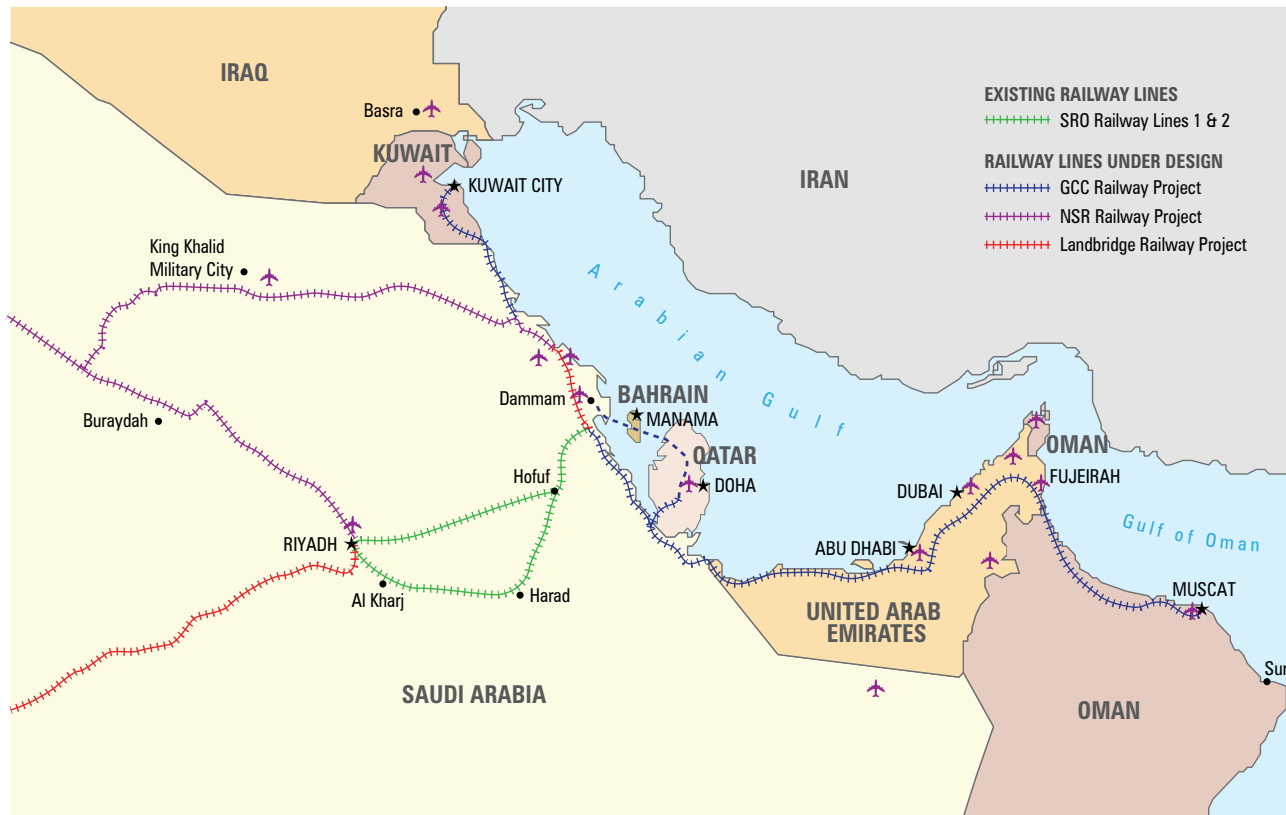
As of 2011, it was expected that the project would be completed in 2015 - the year Qatar is hosting the FIFA World Cup. However, the media are hinting that there are political obstacles to the project's progress but it is hoped that these will soon be overcome and that work will commence.

Emerging Transnational Transportation Corridors

The region possesses a strong network of infrastructure for road, air and maritime transport, and is planning a USD 25 billion project to create a regional rail system stretching over 2,100 km from **Kuwait** at the Iraqi border to Muscat.³²⁷ The system would ultimately connect with railways in the Mashreq and Maghreb. In addition, **Saudi Arabia** is developing a 1,000 km "Landbridge" rail line that would connect Jeddah, Riyadh and **Bahrain**.³²⁸ If completed, the rail corridors would further solidify the eastern coast as an important extended metropolitan region (EMR).

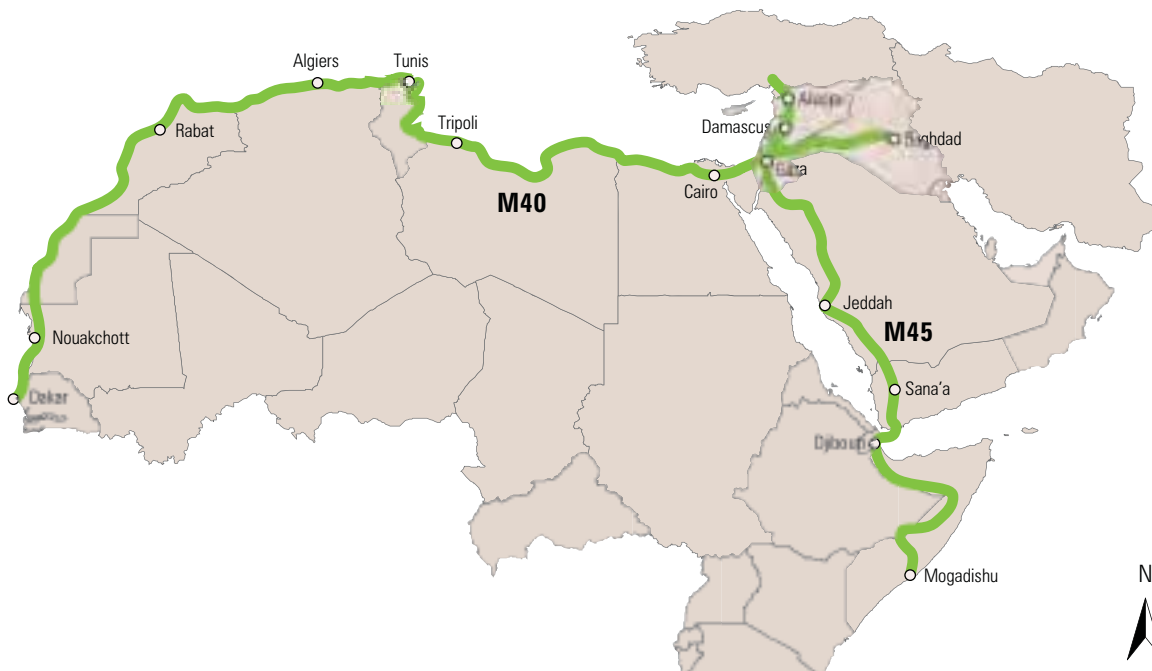
The GCC countries are also members of The United Nations Economic and Social Commission for Western Asia (ESCWA) and signed the Agreement on International Roads in the Arab Mashreq in 2001. The network prioritizes an east-west corridor (the M40) that connects Iraq, Jordan, Palestine and Egypt, and a north-south corridor (the M45) that connects Syria, Jordan, Saudi Arabia and Yemen. With the two road systems 70 per cent complete, UN-ESCWA and member countries are exploring opportunities to extend these networks further east into the Maghreb and further south to reach Djibouti and Somalia.

FIGURE 51: PLANNED REGIONAL GCC RAIL



Source: Executive Magazine, 2010

FIGURE 52: UN-ESCWA PROPOSED ROAD TRANSPORT CORRIDORS



Source: Safwat, N. "Transport Corridors Connecting Africa, Asia and Europe through the Arab Region: Priority Corridors and Facilities." Presentation at the workshop "Impact of Transportation Networks on Trade and Tourism" held in Izmir, Turkey, on June 7-8, 2011.

TABLE 60: TOTAL AND URBAN POPULATION ('000s) AND PERCENTAGE POPULATION URBAN

	1990	1995	2000	2005	2010	2015	2020	2025	2030
Total Population ('000s)									
Bahrain	493	578	650	728	807	882	953	1,021	1,085
Kuwait	2,143	1,725	2,228	2,700	3,051	3,378	3,690	3,988	4,273
Oman	1,843	2,172	2,402	2,618	2,905	3,198	3,495	3,782	4,048
Qatar	467	526	617	885	1,508	1,630	1,740	1,848	1,951
Saudi Arabia	16,259	18,255	20,808	23,613	26,246	28,933	31,608	34,176	36,545
UAE	1,867	2,432	3,238	4,089	4,707	5,193	5,660	6,109	6,555
Urban Population ('000s)									
Bahrain	434	511	574	643	715	784	852	919	984
Kuwait	2,100	1,692	2,188	2,654	3,001	3,326	3,637	3,933	4,218
Oman	1,218	1,557	1,719	1,881	2,122	2,377	2,645	2,917	3,184
Qatar	431	495	586	845	1,445	1,568	1,679	1,787	1,891
Saudi Arabia	12,451	14,361	16,615	19,120	21,541	24,058	26,617	29,131	31,516
UAE	1,476	1,906	2,599	3,364	3,956	4,444	4,915	5,370	5,821
Percentage Population Urban									
Bahrain	88.1	88.4	88.4	88.4	88.6	89	89.4	90	90.6
Kuwait	98	98.1	98.2	98.3	98.4	98.5	98.6	98.6	98.7
Oman	66.1	71.7	71.6	71.9	73	74.3	75.7	77.1	78.7
Qatar	92.2	94.1	94.9	95.4	95.8	96.2	96.5	96.7	96.9
Saudi Arabia	76.6	78.7	79.8	81	82.1	83.2	84.2	85.2	86.2
UAE	79.1	78.4	80.3	82.3	84.1	85.6	86.8	87.9	88.8

Source: UN-DESA, WPP 2008 and WUP 2009.

TABLE 61: NATIONAL AND URBAN POPULATION ANNUAL GROWTH RATES

	1990 -1995	1995 -2000	2000 -2005	2005 -2010	2010 -2015	2015 -2020	2020 -2025	2025 -2030
National Population Growth Rates (%)								
Bahrain	3.17	2.36	2.25	2.08	1.77	1.56	1.37	1.23
Kuwait	-4.34	5.12	3.84	2.44	2.04	1.77	1.55	1.38
Oman	3.28	2.02	1.72	2.08	1.92	1.78	1.58	1.36
Qatar	2.35	3.20	7.23	10.65	1.55	1.31	1.21	1.09
Saudi Arabia	2.32	2.62	2.53	2.12	1.95	1.77	1.56	1.34
UAE	5.25	5.73	4.67	2.82	1.97	1.72	1.53	1.41
Urban Population Growth Rates (%)								
Bahrain	3.23	2.36	2.26	2.12	1.85	1.66	1.5	1.37
Kuwait	-4.32	5.14	3.86	2.46	2.06	1.78	1.57	1.4
Oman	4.9	1.99	1.8	2.41	2.27	2.14	1.96	1.75
Qatar	2.75	3.38	7.33	10.74	1.62	1.37	1.25	1.13
Saudi Arabia	2.85	2.92	2.81	2.38	2.21	2.02	1.81	1.57
UAE	5.1	6.21	5.16	3.25	2.32	2.02	1.77	1.61

Source: UN-DESA, WPP 2008 and WUP 2009.

TABLE 62: AVERAGE ANNUAL RATE OF CHANGE OF URBAN AGGLOMERATIONS WITH 750K+ PEOPLE IN 2009 (PER CENT)

City	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025
Kuwait City	-3.13	4.62	4.61	3.99	2.35	1.47	1.16
Dammam	5.3	3.63	3.62	3.26	2.33	1.8	1.53
Medina	4.69	3.45	3.45	3.12	2.27	1.77	1.5
Riyadh	5.33	3.23	3.23	2.9	2.06	1.56	1.29
Jeddah	4.66	2.63	2.62	2.46	1.97	1.61	1.35
Mecca	3.76	2.45	2.45	2.35	2.02	1.72	1.46
Dubai	6.36	6.64	6.67	4.3	2.46	1.76	1.42
Sharjah	6.11	7.12	7.22	4.78	2.69	1.86	1.51

Source: UN-DESA, WPP 2008 and WUP 2009.

TABLE 63: YOUTH POPULATIONS IN 2010, MEDIUM VARIANT

Country	Per cent youth population (0-24)
Bahrain	34.9
Kuwait	42.2
Oman	49.1
Qatar	28.1
Saudi Arabia	48.3
United Arab Emirates	33.1

Source: UN-DESA, WPP 2010.

TABLE 64: GDP PER CAPITA IN USD

Country	2007	2008	2009
UAE	45,991	53,338	-
Bahrain	17,774	19,794	-
Saudi Arabia	15,868	19,200	14,809
Oman	15,276	21,032	14,529
Qatar	USD	USD	61,106
Kuwait	47,538	59,666	42,385

Source: The Cooperation Council for the Arab States of the Gulf Secretariat General. (2010). GCC: A Statistical Glance, Volume II. The Cooperation Council for the Arab States of the Gulf Secretariat General.

TABLE 65: PRODUCTION OF OIL (1,000 B/D)

Country	2007	2008	2009
UAE	2,530	2,570	2,220
Bahrain	184.3	182.7	182.2
Saudi Arabia	8,816	9,198	8,184
Oman	710	757	813
Qatar	845.7	839.3	792
Kuwait	2,574.6	2,676	2,261.6

Source: The Cooperation Council for the Arab States of the Gulf Secretariat General. (2010). GCC: A Statistical Glance, Volume II. Cooperation Council for the Arab States of the Gulf Secretariat General.

TABLE 66: PROPORTION OF EMPLOYED NATIONALS AND NON-NATIONALS IN THE LABOUR FORCE

Country	Sector	National	Non-National
Oman (2009)	Private	15.3%	84.7% ³²⁹
Qatar (2010)	Total	5.6%	94.4% ³³⁰
Qatar (2010)	Private	0.6%	99.4% ³³¹
Bahrain (2009)	Total	26%	74% ³³²
Bahrain (2009)	Private	20%	80% ³³³
UAE (2008)	Total	3.9%	96.1% ³³⁴
Saudi Arabia	Total	47.1%	52.9% ³³⁵
Saudi Arabia	Private	13.3%	86.7% ³³⁶

Source: Footnoted below due to the sheer number of sources.

TABLE 67: WORKFORCE IN 2008

Origin	Number of workers	Percentage of Total Workforce
UAE	117,022	3.9%
Other GCC Countries	6,051	0.2%
Other Arab Countries	337,791	11.1%
Non-Arab Asian Countries	2,507,792	82.7%

Source: National Bureau of Statistics, Employment, Wages and Hours of Work Survey 2008. Retrieved January 26, 2011 at: <http://www.uaestatistics.gov.ae:85/default.aspx>

TABLE 68: URBAN UNEMPLOYMENT RATES FOR 2009

Gender	National	Non-National
Male	7.1%	1.8%
Female	21.3%	7.0%
Total	11.5%	2.8%

Source: UAE, 2009 labour survey. Retrieved January 26, 2011 at: www.uaestatistics.gov.ae/ReportPDF/DSS_SS_LF%202009.xls

TABLE 69: LEVEL OF MOTORIZATION IN GCC COUNTRIES

	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
Roads (km)	3,851*	5,749	48,874	7,790	221,372	4,030
% roads paved	81*	85	41	..	21	..
Road Density (km of roads per 100 km ² land)	493	32	16	68	10	5
Motor Vehicles (per 1,000 people)	482	502	225	724	..	313
Passenger Cars (per 1,000 people)	405	282	174	335	415	293
Estimated Traffic Related Deaths per 100,000 people ^	12	17	21	24	29	37

Source: World Bank Development Indicators data from latest year available over 2000 to 2007. *CIA Factbook 2007; ^ WHO Traffic Study, 2009.

TABLE 70: WATER AVAILABILITY AND USAGE

Country	Annual Availability			Per Capita Renewable Availability (m ³)			Annual Water Usage		% Use by Sector		
	Natural Renew. Resource Bm ³ /yr	Desal. End Water Bm ³ /yr	Wastewater Reuse Bm ³ /yr	Bm ³	As a % of total water resources	Domestic	Industrial	Agriculture			
									2006	2015	2025
Bahrain	0.11	0.14	Negligible	157	125	106	0.25	170	26	3	71
Kuwait	0.11	0.65	0.12	7	5	4	0.76	87	37	2	60
Oman	1.60	0.12	0.02	550	440	365	1.22	74	9	1	93
Qatar	0.05	0.12	..	71	50	40	0.28	..	23	3	74
Saudi Arabia	2.50	2.28	0.15	96	77	64	17.00	506	15	1	84
UAE	0.20	0.95	0.14	35	26	20	1.60	180	24	10	67

Source: AFED 2010 Arab Environment Water Report.

TABLE 71: 2008 ACCESS TO IMPROVED WATER AND SANITATION

	Improved Water Access			Improved Sanitation Access		
	Total	Urban	Rural	Total	Urban	Rural
Bahrain	100	..	..	100	..	..
Kuwait	99	99	99	100	100	100
Oman	88	92	77	97	..	..
Qatar	100	100	100	100	100	100
Saudi Arabia	97	..	..	100	..	..
UAE	100	100	100	97	98	95

Source: WHO/GHO Database.

TABLE 72: GCC ENERGY INDICATORS

	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
2007 Energy Use (kg of oil equiv. per cap)	11,874	9,729	6,057	22,057	6,170	11,036
2007 Electricity Use (kWh per cap)	12,628	16,311	4,456	17,181	7,080	14,567
2007 Electricity from fossil fuels (%total)	100	100	100	100	100	100
2007 Electricity from hydropower (%total)	0	0	0	0	0	0
2007 Energy Imports (net, % energy use)	-94	-482	-283	-364	-267	-245
2005 Wind Power Potential (GW)	..	..	3	..	11	..
2005 Solar Potential (GW)	..	700	7,900	400	49,800	1,000
2007 Total CO ₂ Emissions (kt of CO ₂)	22,446	86,075	37,289	63,002	402,120	135,429
2007 Per Cap CO ₂ Emissions (t)	29.6	32.3	13.7	55.4	16.6	31.0
2007 % Growth in CO ₂ Emissions (1990-2007)	189	211	361	536	187	247
1996 Micro Particulate Matter (PM10, µg/m ³)	71	119	130	53	169	178
2006 Micro Particulate Matter (PM10, µg/m ³)	68	97	108	51	113	127

Sources: World Bank Little Green Book 2009; World Bank Development Indicators; Booz Allen Report, 2009.

TABLE 73: TOTAL WASTE STREAM BY SOURCE AND PROPORTION OF MUNICIPAL WASTE STREAM BY CONTENT

	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
Total Waste Stream (tons/yr)	1,731,000	2,094,000		1,859,000		6,461,000
Municipal (Domestic)	39%	43%		30%		33%
Demolition & Construction		55%		42%		56%
Industrial	8%	0.3%		3%		1.5%
Agricultural						9.5%
Healthcare	53%	1.6%		24%		
MSW Generated (kg/cap/day)	2.7	1.4	0.7	1.3	1.4	1.2
Material Composition of MWS	(Abu Dhabi)					
Food / organic wastes	35%	50%	40%	45%	37%	49%
Paper	28%	20%	26%	18%	28.5%	6%
Plastic	6%	12.6%	12%	15%	5.2%	12%
Glass	5%	3.3%	5%	10%	4.6%	9%
Mineral	12%	2.6%	11%	4%	8.3%	6%
Textile	8%	4.8%	6%	3%	6.4%	
Other	6%	6.7%		5%	10%	18%

Source: AFED 2008 Report on the Environment.

TABLE 74: PARTICIPATION IN THE WORKFORCE AND NATIONAL POLITICS BY WOMEN / MEN

	Bahrain		Kuwait		Oman		Qatar		Saudi Arabia		UAE	
	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂
Literacy rate of women/men (% literate aged 15 and above, 2005-08)	89	92	93	95	81	90	90	94	80	90	91	89
Labour Force Participation Rate by women/men (% of those aged 15-64 employed, 2008)	34	87	46	85	26	79	49	93	22	82	43	93
Year Women Received Right to Vote and Stand for Election	1973 (partial) & 2002 (full)		2005		1994 (partial) & 2003 (full)		2003 (vote only)		..		..
Year First Woman Elected (E) or Appointed (A) to Parliament	2002A		2005A		..		..		..		..
% of parliament (single or lower house) seats held by women (2010)	2.5				2.4		0		0		22.5	
% of parliament (upper house or senate) seats held by women (2007)	25		3.1		15.5		..		..		..
% of ministerial positions held by women (2005)	8.7		0		10		..		0		5.6	

Source: World Bank Gender Statistics, UN HDR 2007/08.

TABLE 75: SOURCE COUNTRIES OF MIGRANT WORKERS

	Top 10 Source Countries
Bahrain	Algeria, Egypt, India, Iran, Iraq, Morocco, Saudi Arabia, Sudan, Syria and Yemen
Kuwait	Australia, Canada, Denmark, France, India, Netherlands, Saudi Arabia, Sweden, United Kingdom and United States
Oman	Bangladesh, Egypt, India, Jordan, Netherlands, Pakistan, Philippines, Sri Lanka, Sudan and United Kingdom
Saudi Arabia	Bangladesh, Egypt, Pakistan, Philippines, India, Indonesia, Jordan, Sri Lanka, Sudan and Yemen.

Source: Migration and Remittances, Factbook 2008.

TABLE 76: IMMIGRATION DATA BY COUNTRY

	# of International Migrants in Country (2010)	# of Refugees in Country (2008)	% Population Foreign Born (2010)	Average Annual Net Migration (2005-2010)
Bahrain	315,000	0	39.1	4,000
Kuwait	2,098,000	38,000	68.8	24,000
Oman	826,000	0	28.4	4,000
Qatar	1,305,000	0	86.5	112,400
Saudi Arabia	7,289,000	240,600	27.8	30,000
UAE	3,293,000	200	70.0	68,600

Source: UN DESA International Migration Wall Chart 2009.

TABLE 77: FLOWS OF REMITTANCES IN THE GCC

	Remittance Outflows (USD, in millions)		Rank in the World	Remittance Inflows (USD, in millions)		Remittance Outflows (% of GDP)	
	2009	1999		2009	1999	2009	1999
Bahrain	1,391	856	30 th	..	..	7	13
Kuwait	9,912	1,731	18 th	..	..	7 (2008)	6
Oman	5,313	1,438	21 st	39	39	11	9
Qatar	7,000*	1,600 (2001)	..	..	..	5 (2008 ^)	8.5 (2001 ^)
Saudi Arabia	25,970	13,958	2 nd	217	..	7	9

Source: World Bank Development Indicators Database, Migration and Remittances Factbook 2008, * Remittance outflow from Qatar Central Bank³³⁷; ^ Qatar Statistics Authority.³³⁸

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THE STATE OF SOUTHERN TIER CITIES



▲ Juba, South Sudan. South Sudan will have to make up for thirty years of postponed urbanization. ©Frontpage/Shutterstock

The Southern Tier countries of Comoros, Djibouti, Somalia, Sudan¹ and Yemen are home to approximately 80 million people.

Sudan represents over 50 per cent of that population with 44 million inhabitants and Yemen is the next largest with 25 million.² In recent years, total population growth rates have been relatively high to moderate (2 to 3 per cent) but it is anticipated that they will decline by 2030.

With the exception of Somalia, the total population growth rates have been declining quite rapidly since the early to mid 1980s. The fluctuations recorded in population growth are indicative of the absence of reliable information and the difficult field conditions that hamper enumeration. Political instability and civil strife further complicate matters.

The Southern Tier countries' population is very young, with 35 to 45 per cent under the age of 14. In Somalia, they accounted for 44.9 per cent of the population in 2010.³ This underscores the region's need to create employment opportunities and meet large demands for housing, infrastructure and public services for expectant high household formation rates.

The Southern Tier countries have low to moderate levels of urbanization (30-40 per cent) with the notable exception of Djibouti where 76 per cent of the population lives in and on the periphery of Djibouti City (estimates vary from approximately 60 to 80 per cent of the total urban population).⁴

Urban population growth in the Southern Tier countries has been moderate to high. Most urban areas have been

expanding at around 2 to 5 per cent. In recent years, Djibouti has experienced the lowest rate at just under 2 per cent, primarily because of its already high rate of urbanization (76.2 per cent in 2010). In the past decade, urban growth was highest in Yemen (around 5 per cent) and Sudan (approximately 4 per cent). With the exception of Somalia and Comoros, urban growth rates have been declining and are projected to continue to fall. In Comoros, however, they will likely increase through 2030. In Somalia they will be in the order of 4 per cent.⁵

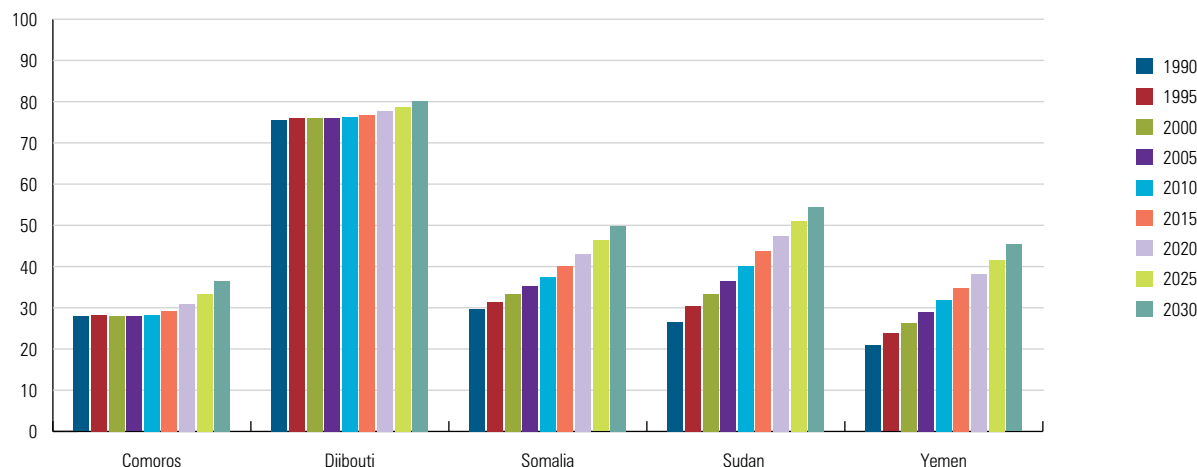
With the exception of Somalia, urban growth rates were highest in the period of 1980-1990 and have declined sharply since then. In Djibouti, growth peaked in the mid- to late-1980s when a large informal settlement on the perimeter of Djibouti City was incorporated into the city boundary.⁶ Yemen experienced its highest rate of growth from 1990-1995, shortly after the country was unified. Comoros witnessed a peak just after independence in 1975.

Southern Tier large cities have been growing at moderate to high rates and are expected to continue to expand at around 3-4 per cent.⁷

Urban Concentrations

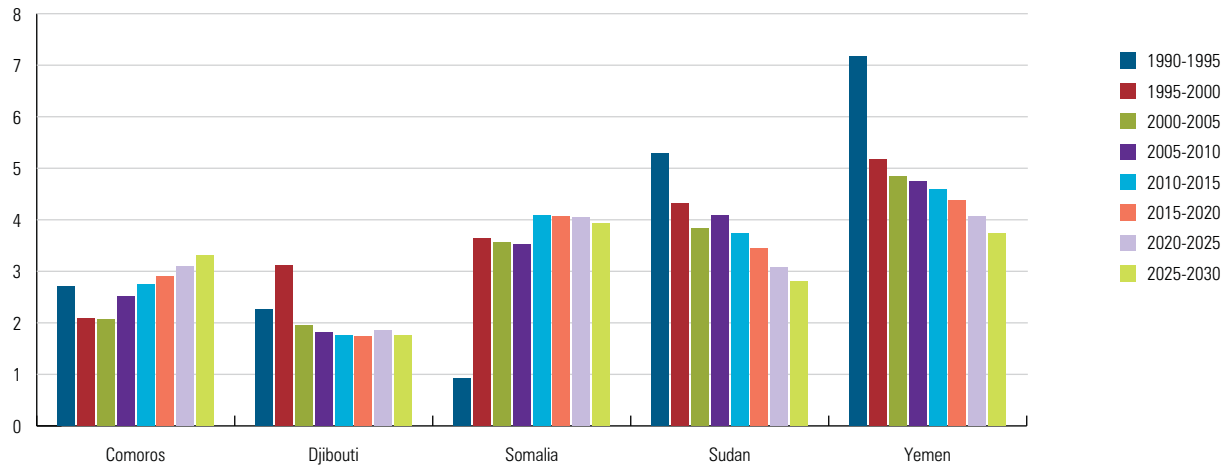
The sub-region's rapid urbanization has been driven by conflict, environmental degradation and rural poverty. With the exception of **Djibouti**, where most of the population lives in the capital city,⁸ most of the region's population still lives in rural areas.⁹

FIGURE 53: PERCENTAGE OF URBAN POPULATION



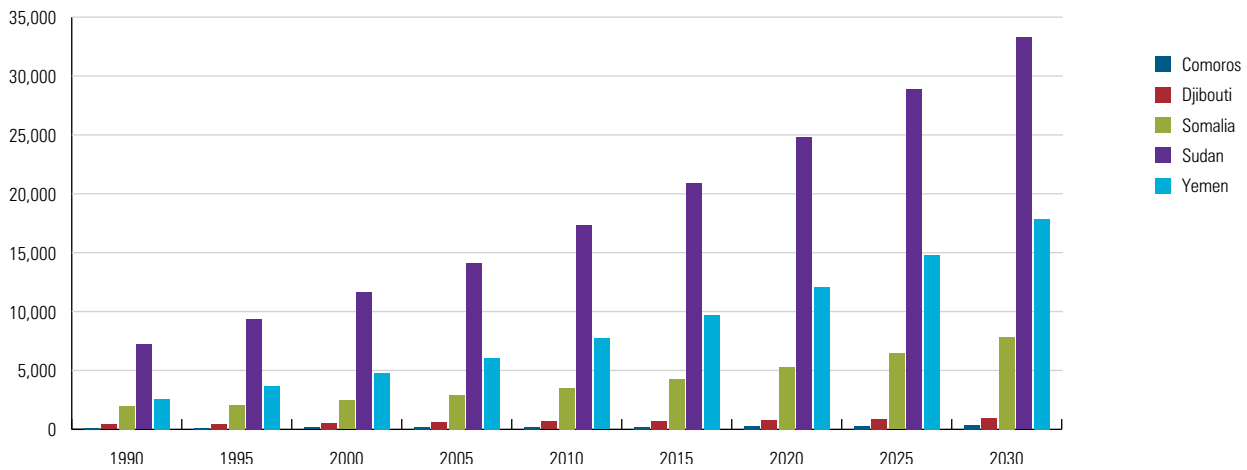
Source: UN-DESA, 2008 and 2009

FIGURE 54: ANNUAL URBAN GROWTH RATES



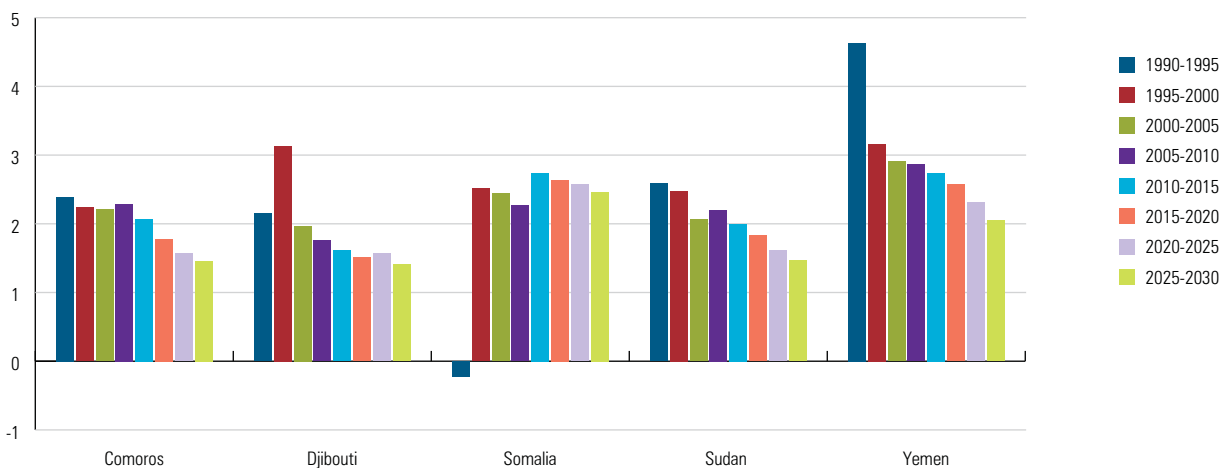
Source: UN-DESA, 2009

FIGURE 55: URBAN POPULATION (IN '000S)



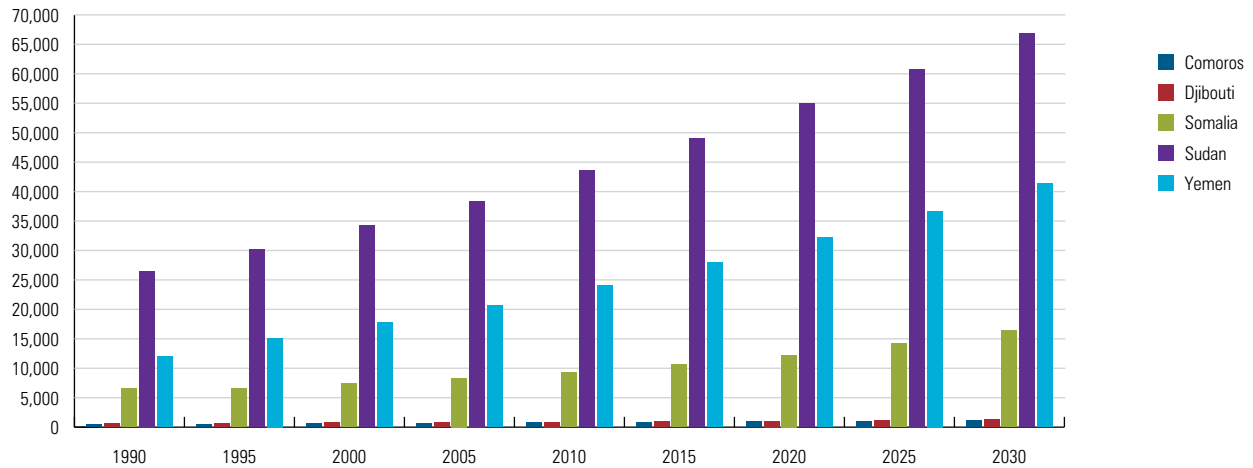
Source: UN-DESA, 2008 and 2009

FIGURE 56: ANNUAL TOTAL POPULATION GROWTH RATES



Source: UN-DESA, 2008

FIGURE 57: TOTAL POPULATION (IN '000S)



Source: UN-DESA, 2008 and 2009

In **Sudan**, severe drought, civil strife, mechanised agricultural schemes and better economic opportunities in the cities have all been key drivers of rapid urbanization.¹⁰ Limited infrastructure, poor transport and the vast size of Sudan have resulted in a concentration of urban growth in the capital and a few regional centres.¹¹ Khartoum has expanded significantly over the past century: 250 times in area and 114 times in population. It is a sprawling city with a population density of 163 persons per km² (2004).¹²

In the **Southern Sudan**, the largest cities are Juba, Wau and Malakal.¹³ They have expanded with the return of internally displaced people (IDPs) after the 2005 peace agreement. While the greatest urban concentrations have been in the Khartoum region and in the Northern provinces, the partition of the country into North and South Sudan will generate further population movements. The peace agreements have prompted the return of nearly 2 million migrants back to Southern Sudan.¹⁴

In **Somalia**, urbanization has been driven by conflict and environmental challenges. In the 1970s and 1980s, there was a mass movement of rural pastoralists to urban centres searching for economic opportunities.¹⁵ As a result, the population of the major Somali towns have increased by 300 to 500 per cent over the past 15 years.¹⁶

More recently, urban migration has been driven by civil strife and terrorist attacks.¹⁷ The Afgooye Corridor, northwest of Mogadishu, has been receiving IDPs from Mogadishu throughout the conflict and is now the third-largest concentration within Somalia and the most densely-populated area.¹⁸

Most of the country's growth has been in the Somaliland region, the most stable part of the country where better economic opportunities have made it an attractive place to settle in the midst of the violence and environmental

degradation in the surrounding areas. The trade routes from Berbera to Ethiopia and the international airport in Hargeisa have contributed to the area's economic development and it is expected that the area will continue to expand through natural increase and in-migration.¹⁹ Similarly, the Puntland region attracted displaced populations from other areas during civil war and has urbanised rapidly, stressing the capacity of Bosaso's infrastructure and services.²⁰ (See also *The State of African Cities 2010*, p.146, free pdf download available from www.unhabitat.org).

In **Yemen**, rapid population growth over the past four decades and limited rural development has increased rural-urban migration, especially to the larger cities. Unplanned urban expansion has accelerated and pressures on the provision of services have increased, particularly in Sana'a.²¹ The municipality's population increased more than tenfold in less than three decades, from 162,000 in 1977 to 1.7 million in 2004. Much of this expansion has been in through informal settlements on the city's periphery.²²

Plans to Manage Urban Growth

Most of the Southern Tier countries do not have comprehensive national or urban spatial strategies to manage growth, although they are likely to have poverty reduction strategies that include such objectives as economic growth, better governance and mechanisms for increasing human capital. Many also have infrastructure improvement plans to promote economic development in the ports and major urban centres as in the Comoros and Djibouti. Only some countries have developed master plans at the city level.

In **Djibouti**, the challenge is to balance the growth and development of the capital city with other areas in the country. Djibouti has a strategic plan to shift a portion of the urban



▲ Street scene in Mogadishu, Somalia. ©Mohamed Amin Jibril/IRIN

population from Djibouti City to secondary cities.²³ Plans for the regions, sub-regions and localities are to be prepared to further this objective.²⁴

The government is currently undertaking a comprehensive review of the plan for Djibouti City as part of its next five-year integrated urban strategy. Its purpose is to provide better access and infrastructure services in the city and its periphery, improve local governance and civic participation, and create public spaces and parking.²⁵

In Somalia, UN-Habitat is currently developing a Mogadishu Community-Based District Rehabilitation and Upgrading Programme, with a planned three- to five-year timeframe, incorporating housing development, urban improvement, basic service provision, resettlement of returnees, economic recovery and job creation, neighbourhood protection and grassroots reconciliation.²⁶ In Hargeisa, Somaliland, the government has developed an integrated urban strategy, highlighting challenges and outlining programs to promote development and organized growth.²⁷

Historically, urban planning in **Sudan** has been focused primarily on Khartoum.²⁸ The most recent urban plan for greater Khartoum was prepared in 2007 and focuses on the improvement of roads, public transport and services. Plans are also being created for provincial capitals.²⁹

In 2006, the government launched the Village Development Strategy and Structural Plan for the Khartoum Governorate to increase the economic self-sufficiency of villages in order to reduce migration into the cities and to increase food production. The scheme will elevate villages to locality status

and provide land for their expansion depending over a 10-year development forecast. Each of the 538 villages in the region would ultimately be connected to Khartoum by a network of roads.³⁰

In **South Sudan**, the challenge of providing housing to the influx of returnees following the 2005 peace agreement has prompted local governments to prepare growth management plans. While most cities have planned urban extensions, Unity State has developed a 2006-2025 comprehensive structure plan focussing on housing returnees in an integrated functional and economic hierarchy of towns and villages.

As part of the Integrated Urban Development Project, started in 2009 with support from the World Bank, **Yemen's** national government will develop a national plan for urban development that will be implemented by the local authorities. The plan aims to improve the living conditions of slum dwellers and squatters.³¹ In addition, the World Bank is currently supporting a Second Port Cities Development Project to improve the port cities of Aden, Hodeida and Mukallah.³² Beginning in Aden, the project initially focuses on small-scale infrastructure improvements to foster small business activity and create transport connections.³³

An Integrated Urban Development Project is being prepared for the city of Taiz, where the proportion of informal settlements is particularly high, to upgrade the settlements and improve the delivery of services.³⁴ In Sana'a, the government has prepared a city development strategy that identifies planning challenges and makes recommendations for its economic development, enhance urban planning and improve financial management.³⁵

In comparison to the remainder of the Arab world, the economic activities in the Southern Tier tend to be more rural, with the exception of Djibouti, per capita GDPs are lower and there is a higher incidence of poverty. GDP growth rates vary significantly by country. Djibouti and Sudan have experienced the highest rate of economic growth at around 4 to 5 per cent while other countries are growing at more moderate rates. Comoros has been expanding most slowly due to political instability and a slow recovery from the recent financial crisis. In Sudan, the high growth rate can be attributed to increases in oil production and expansion in the non-oil sectors.

Economic activities differ across the Southern Tier countries. The economies of Comoros and Somalia are dominated by agriculture, fisheries and services, whereas Djibouti focuses on transportation, communications, trade and services. Sudan extracts much of its income from oil resources. In Yemen, services make up the largest segment of the economy (53 per cent), followed by industry (approximately 39 per cent), but employment in agriculture and herding employs more than 75 per cent of the labour force.³⁶

In **Comoros**, fishing and agriculture account for over 57 per cent of employment³⁷ but services contributed 45.2 per cent of GDP in 2010.³⁸ Remittances from abroad play a significant part in household incomes. Most expatriates work in restaurants or caretaking, which have been secure during the financial crisis.³⁹

Recently, government policy has emphasised developing the agricultural foods industry and the Arab Authority for Agricultural Investment and Development, with funding from the European Union, has invested in potato and banana planting.⁴⁰ There is also potential to expand the fishing industry but the existing port and processing infrastructure is inadequate.⁴¹ The government recently received funding from the European Union to improve the institutional framework related to the fishing industry and has also signed an agreement with Japan to re-open the national fisheries school in Anjouan.⁴² To promote foreign trade and commerce within the islands, the government plans to upgrade the port in Ngazidja, which handles 80 per cent of the country's commercial activities, and to dredge the ports of Mutsamudu and Moroni,⁴³ construct small fishing ports with proper storage facilities and increase security and management of port facilities.⁴⁴

In **Djibouti**, the bulk of economic activities are concentrated in Djibouti City. With its strategic location between the Gulf of Aden and the Red Sea, along the main east-west shipping lane and its designation as a free trade zone, **Djibouti** City provides mostly transportation and communication services.

Djibouti City serves as a refuelling and transshipment location and a transit port.⁴⁵ To expand existing activities and facilitate new growth, the government has invested in infrastructure to upgrade the port, improve the road network,

particularly to Ethiopia and Eritrea.⁴⁶ The construction of a container terminal in Doraleh and the exploitation of geothermal energy from Lake Assal have attracted foreign direct investment.⁴⁷ In response to the decline in its port operations in 2010 as a result of the financial crisis, Djibouti is encouraging the development of the financial sector with legislation to improve regulation of banks, investing in tourism and providing tax and non-tax incentives for businesses to settle in Djibouti.

Despite its investments in infrastructure, Djibouti's economy is still constrained by the lack of own sources of energy and water. The supply of energy hovers around 57 megawatts (MW), but the demand is 75 MW and could increase to 138 MW by 2015. To reduce its dependence on foreign oil, Djibouti is working with Ethiopia to import electricity and plans to develop its geothermal energy, which has significant potential.⁴⁸

Somalia's traditionally nomadic pastoral economy has been significantly disrupted by the civil war. The economic base of Somaliland, where most of the population is nomadic and depends on livestock, has been completely devastated and the lack of infrastructure, substantial illegal overfishing by foreign fleets and the dumping of toxic waste into some fishing areas⁴⁹ has prevented the development of the region's potential for fishing.

In Puntland, most of the workers are employed in the livestock sector. The drought and the resettlement of internally-displaced persons from the south have caused a rapid expansion of the region's urban areas. In south central Somalia, most of the residents work in the agricultural, mining or livestock sectors. Armed conflict, the deterioration of infrastructure and insufficient investments have adversely affected the agricultural activities and caused migration to the cities and other parts of the country.⁵⁰

In urban areas, 53.6 per cent of the population is economically active and mostly employed in services and industry.⁵¹ Investments by United Nations operations in Somalia and the growth in remittances have generated more urban employment opportunities, even in the unstable areas of south central Somalia. Further expansion is expected to occur in telecommunications, airlines and trade as well as small manufacturing.⁵² The private sector has made investments in roads, water supply, sanitation, ports and energy as well as education and health with support from the diaspora and Islamic funds.⁵³

In **Sudan**, the economy is dominated by oil revenues but production is to peak in 2012 and will run out in another 20 to 30 years.⁵⁴ Sudan's non-oil economic sectors are agriculture, mining and livestock, the latter being basic to the stability in the rural areas;⁵⁵ services make up close to 43 per cent of GDP. Recent government policy has promoted manufacturing by liberalizing the labour laws, improving



▲ Well casings lined up beneath a Heglig drilling rig in South Kordufan, Sudan. ©UNEP

the legal system and agriculture by continuing its Green Mobilization Program. It is expected that manufacturing and agriculture will reinforce one another through agro-processing industries.⁵⁶ The government is also developing the agricultural sector through better access to credit and strong partnerships with private investors.⁵⁷

As is the case with most primary cities, Khartoum generates a major share of the country's GDP. In 1990, greater Khartoum contained 73 per cent of Sudan's industries, 85 per cent of its commercial enterprises, 70 per cent of taxpayers, 70 per cent of its hospitals and health centres and produced 81 per cent of taxes collected. It also consumed 67 per cent of the power from the national grid.⁵⁸

The partition of the country is expected to have a significant impact on Khartoum as the north will be deprived of much of the oil revenues as the wells are predominantly located in the south. To remedy the deficit in infrastructure, the government is investing in roads and electricity to support the non-oil sectors.

In **Yemen**, agriculture and herding employ most of the labour force even though industry and services generate most the GDP. Seventy per cent of export earnings and government revenue are derived from oil, which could be depleted in five to 14 years.⁵⁹ The country's strategic location along the Babel-Mandeb strait should allow it to develop other economic activities and its two strategic ports, Aden and Hodeida, could become shipping hubs.⁶⁰

Although the equipment and capacity of the ports are currently insufficient, the government plans to improve them and create a maritime planning institute.⁶¹ There are also opportunities to expand mining for resources like limestone,

gypsum, marble, rock salt, granite and basalt as well as the fishing industry.⁶² There is potential to expand tourism, handicrafts, private health care, education and real estate.⁶³

Urban activities are concentrated in Sana'a, which accounts for 21.6 per cent of total employment and 30 per cent of industrial establishments,⁶⁴ with smaller industrial concentrations in Taiz and Ibb.⁶⁵ The capital is also the country's hub for formal employment generation, with 39 per cent of all new formal jobs between 1992 and 2006 and 33 per cent of new formal establishments.⁶⁶

Inequality and Poverty

With the exception of **Sudan**, where inequality is approximately equal in urban and rural areas,⁶⁷ inequality rates are higher in urban areas and are increasing. In **Djibouti**, most of the wealth is concentrated in the 1st, 2nd and 3rd *Arrondissements* of Djibouti City.⁶⁸ In **Yemen**, the highest rates are in Sana'a and the Hajjah, and Almahwet-Alhodeidah-Dhamar areas.⁶⁹

In most of the countries, poverty is higher in rural than urban areas. In Djibouti, poverty rates have been very high, particularly in Djibouti City, where close to 69 per cent of households live below the relative national poverty line of USD 3/day/adult household member. Relative poverty has also been very high in Ali Sabieh (92.4 per cent), Obock (88.1 per cent) and Tadjourah (88.9 per cent).⁷⁰

In an effort to combat poverty, Djibouti's Urban Poverty Reduction programme, which is supported by the World Bank, emphasizes improvements to social and economic services through technical assistance, community projects,

infrastructure development,⁷¹ access to microfinance and targeted economic development. The programme is focused on the poorest neighbourhoods.⁷²

In **Somalia**, extreme poverty, as defined as the proportion of the population living on less than USD 1/day Purchasing Power Parity (PPP), is highest in rural and nomadic areas (53.4 per cent) and lower in urban locations (23.5 per cent). General poverty, defined as the number of people living on USD 2/day, is also lower in urban areas.⁷³

In **Sudan**, poverty rates have been higher in the South (50.6 per cent of individuals living below the national poverty line) than in the North (46.55 per cent)⁷⁴ and greater in rural areas (55.4 %) than in cities (14.4%).⁷⁵

In **Yemen**, spatially, the highest rates of urban and rural poverty are in Shabwah, Al-Jawf, Hadramout and Amran governorates.⁷⁶

Marketing

There are specific constraints to business development in the Southern Tier countries. In addition to general institutional and economic constraints, marketing the sub-region's potential has been made difficult by political instability and civil strife as well as by continuing incidents of piracy by Somali pirates.

In **Yemen**, where the government has been trying to attract investment by focusing on infrastructure upgrading and investment in the three major ports of Aden, Al-Hodeidah and Al-Mukallah, they include cumbersome administrative processes, a difficult business environment, lack of transparency, the high cost of credit, the difficulty in acquiring securely-titled serviced land for development and degraded infrastructure and unreliable electricity and water supplies.⁷⁷

The government of **Djibouti** has been proactive in creating a good investment environment and has developed its road network and expanded the port. It is attempting to attract foreign investment to develop a new terminal in Doraleh and a free trade zone with incentives including exemptions from profit taxes and the repatriation of capital and benefits.⁷⁸ It is also reforming the financial sector and restructuring the tax system prior to joining the Common Market for Eastern and Southern Africa. Trade has been fully liberalised to attract investment.⁷⁹

In **Sudan**, the business environment has generally been poor. However, the government has been investing in infrastructure and created a Ministry to serve as a one-stop-shop for administrative issues. Its oil revenues attracted many foreign investors from China, India and Malaysia to invest in railways, power generation and industries such as plastic and furniture.⁸⁰

Unemployment

As in other regions in the Arab world, unemployment disproportionately affects youth and female populations. In

Comoros, unemployment among youth accounts for nearly 65 per cent of the total.⁸¹ In **Djibouti**, it was 83.8 per cent among the 15-19 age group and 69.4 per cent among the 20-24 year age group.⁸² In **Yemen**, urban unemployment has been much higher for females (36 per cent) than males (15.9 per cent).⁸³

Policies targeted to improve employment opportunities, particularly for urban residents, youths and women will be critical for the future. In **Sudan**, the 2008 unemployment rate in the 15-24 year age group was 25.4 per cent as opposed to 17 per cent for the population as a whole.⁸⁴

In the **Comoros**, unemployment in the urban areas of Ngazidja, Ndzouani and Mwali has varied from 15 to 22 per cent. The exception is the other urban area of Moroni with a relatively low rate of 7.3 per cent. Rural rates have been significantly lower at 11 to 15 per cent.⁸⁵

In **Somalia**, urban unemployment is estimated to be around 65.1 per cent and as high as 80 per cent in some cities if underemployment is taken into consideration.⁸⁶ The higher labour force participation rates in urban areas contribute to their higher unemployment rates. In **Djibouti**, a predominantly urban country, unemployment has vacillated around 40-50 per cent recently. Employment has been hampered by the limited availability of labour intensive industries, low labour productivity and lack of credit for start-up or expansion of self-employment activities.⁸⁷

Education

Educational attainment and enrolment rates vary significantly but are generally much lower than in other Arab countries. In **Sudan**, they were 71.1 per cent in 2007, varying between 93.6 per cent in Khartoum State and 36.1 per cent in Red Sea State. The rates of completion of the primary cycle were 72 per cent for males and 62 per cent for females.⁸⁸ In **Djibouti**, gross participation rates are just under 37 per cent for primary education and 17 per cent for secondary and 1 per cent for tertiary education.⁸⁹ The wars in **Somalia** have severely limited educational attainment. By 2004, after a 50 per cent growth in enrolment rates in the previous five years, primary enrolment rates reached 19.9 per cent.⁹⁰ In **Comoros**, attendance rates in primary school range from 62 per cent to 85 per cent depending on the island and economic status. Secondary education enrolments are relatively good and range from 56 per cent to nearly 76 per cent.⁹¹ In **Yemen**, at 85 per cent, overall enrolment rates are relatively high for primary education and moderate to low for secondary (41 per cent) and tertiary education (10 per cent).⁹²

In all countries, urban enrolment and attainment rates are higher in urban areas. In **Djibouti**, the urban primary school enrolment rate was 67.1 per cent compared to 49 per cent for rural locations in 2006.⁹³ Urban literacy rates (48.4 per cent) are much higher than rural rates (14.2 per cent).⁹⁴ In **Yemen**, Sana'a had higher rates of attainment than the country as whole or other urban areas.⁹⁵



▲ Djibouti. Children in a Koranic class at school. ©Giacomo Pirozzi/Panos Pictures

Health

The overall state of health in the Southern Tier countries is relatively poor, compared to other countries in the Arab world. In **Djibouti**, health services are also more accessible in urban areas (100 per cent) than in rural locations (95 per cent).⁹⁶ In **Comoros**, health attendants assisted in nearly 79 per cent of urban births as compared to only 43 per cent in rural areas.⁹⁷ In **Somalia**, the comparable figures are 65 per cent and 15 per cent, respectively.⁹⁸ Vaccination rates were also much higher in urban areas⁹⁹ as was access to hospitals.¹⁰⁰ In **Sudan**, health services are concentrated in Khartoum and the surrounding states.¹⁰¹ In **Yemen**, access to health services is significantly higher in urban areas (80 per cent) as compared to rural (25 per cent).¹⁰²

Improving the provision of adequate hospital services in urban areas and investments in primary care programmes in rural areas are major challenges to the Southern Tier countries.

Despite the civil conflicts, Somalia has been focusing on improving urban health by participating in the WHO “1000 cities, 1000 lives” campaign and disseminating health awareness tips through text messaging in the cities of Buraq, Berbera, Bosasso, Galkayo, Garowe, Hargeisa, Merka and Mogadishu.¹⁰³ Hargeisa has also created a healthy city programme, which emphasizes education, healthy lifestyles and better access to water, green space and recreational facilities.¹⁰⁴

Tourism

Although many of the countries are attempting to diversify their economies and promote the tourism sector, inadequate

infrastructure and limited accommodation are severe constraints. In Somalia, Yemen and Sudan, tourism has been limited by security challenges.¹⁰⁵

In **Comoros**, the government is promoting eco-tourism and seaside tourism through the improvement of infrastructure (roads, water, sanitation and energy), workforce training in the hospitality sectors, liberalization of the airline industry and marketing.¹⁰⁶ The government has signed agreements with international tourism groups to develop hotels¹⁰⁷ and the number of arrivals and revenues from international tourism has increased in recent years.¹⁰⁸

Djibouti has attempted to promote tourism, but the progress has been limited and will require additional investments.¹⁰⁹ The government has prepared a strategic tourism development plan with a focus on Lake Assal, Lake Abbe, Day Forest, Le Goubet, the Seven Brothers islands, Moucha Island and Maskali Island.¹¹⁰ The number of arrivals has been increasing but tourism revenue has fluctuated.¹¹¹

Yemen has the potential to expand its tourism industry as it has important cultural attractions¹¹² which include two UNESCO World Heritage Sites in the cities of Zabid and Shibam¹¹³ as well as beautiful beaches. The focus has been placed on the cities of Aden, Mukalla, Sana’a, Shibam-Hadramout and Taiz.¹¹⁴

The government is trying to promote and support the industry through improvements in infrastructure and the creation of a tourism and hotel institute.¹¹⁵ Inadequate infrastructure, an insufficiently trained workforce, a lack of high-quality hotels and restaurants and safety challenges are all serious constraints.¹¹⁶ Before the recent unrest, the number of arrivals had increased significantly, as had receipts, growing by more than a factor of 10 from USD 73 million in 2000 to USD 886 million in 2008.¹¹⁷



▲ A residential area in Mogadishu, Somalia. ©Kate Holt/IRIN

Growth Patterns of Southern Tier Cities

The rapid growth of cities in the Southern Tier in recent decades has superseded the capacity of local governments to provide adequate services. Furthermore, the prolonged and, in some cases, continued conflict has led to the destruction of infrastructure and housing, as well as the displacement of millions of people.

At the same time, a series of droughts have wracked the region, creating an exodus of people from rural and pastoral communities to the cities. The concentration of many people in a few, safe cities has driven up land prices and increased the cost of housing. The contested national and local governments in the Southern Tier countries have been largely unable to provide basic physical and social services or to establish the enabling factors for a strong private sector response. As a result, many cities that are the recipients of migratory flows are composed almost entirely of informal settlements, slums and refugee camps that suffer not only from severe housing deprivations but social and physical trauma. Outside of the primary cities, most urban areas have not received significant investments in infrastructure and lack most basic services.

The region's typical urban development pattern features an old historic quarter of compact one- to two-storey buildings, surrounded by loosely-organized urbanised areas, informal settlements, refugee camps and industrial zones. Khartoum's development strategy of incorporating surrounding villages has engendered a pattern of speculative squatter settlements in increasingly remote villages with the aim of eventually capitalizing upon the value of incorporated city status.¹¹⁸ This has created an actively-brokered process of speculation.

Informal Settlements and the Challenge of Affordable Housing

In addition to natural disasters and political conflicts, the Southern Tier has some of the highest fertility rates in the Arab world. An estimated 57 to 65 per cent of the population in each country is between the ages of 0 and 24, comprising one of the largest youth bulges in the Arab region.¹¹⁹

From 1990 to 2009, urban populations grew by 150, 172, 179, 260 and 286 per cent in the Comoros, Somalia, Djibouti, Sudan and Yemen, respectively. By 2009, 28 to 44 per cent of the population lived in cities, except Djibouti,

BOX 25: SUDAN - MIGRATION TO KHARTOUM AND THE DAR ALSALAM APPROACH

Khartoum is historically the main destination of migration in Sudan. It hosts 45 per cent of total rural-urban migration and 50 per cent of the IDPs. Khartoum hosted 79 per cent of all migrants between 1983 and 1993 and about 83 per cent between 1993 and 2008.

IDPs were accommodated in the four huge camps of Wad Elbashir, Mayo, Dar Alasalam and Jabal Awlya. The combined population of these camps reached 1,284,340 in 1995, with 76 per cent from South Sudan. After the CPA in 2005, which established peace in Sudan, half of Khartoum's IDPs returned to South Sudan (UNEP 2007).

There is a long history of spatial planning regulation in Sudan, dating back to McLean's plan of 1912 and it is currently based on a new structure plan of Khartoum State 2007-2033. Government responses towards dire urban issues like migration, squatters and illegality, however, are trailing behind and not addressing problem when they arose. The National Quarter Strategy (2007-2031) too does not give guidance on these important urban issues.

In 1993, the highly primate city of Khartoum had 9.5 times the population of the country's second-largest city of Port Sudan. In 2008 it is 8.7 times the now second-largest city of Nyala (Darfur).

Illegal and squatter housing proliferated, reaching its apex in 1989 when these constituted 60 per cent of the Khartoum city population in about 96 separate settlements. Four major attempts between 1960 and 1989 to address these problems all failed because of erroneous approaches:

The forced slum eradication practices of the 1970s and 1980s merely led to squatters changing their location around the city. Land price controls levying high taxes for land exchange only brought higher land prices and land speculations. Rent control acts in favour of low-income households discouraged developers and increased demand, prices and speculations. The creation of a huge green belt around the city to stop the proliferation of peri-urban squatting, failed because the squatters simply leap-frogged across the belt in new settlements.

The Dar Alsalam concept was introduced in 1991 to address the problems of the huge squatting and IDP communities. It adopted a site and services approach, providing 200m² plots with title deeds and communal basic services against 10 per cent of the market price. Building by-laws were suspended in these areas to allow for low-cost construction and share facilities.

It commenced with a replicable module of 10,000 plots in three areas at the fringe of the city. The new approach has shown positive results and has a relatively short consolidation time of around ten years. The Dar Alsalam project was replicated around the seven localities of Khartoum State and 273,711 squatter and IDP households had been resettled in 2005. (UN-Habitat 2009). Through this new approach, squatter housing in Khartoum fell from 60 per cent in 1989 to a mere of 17 per cent in 2008. It secured tenure for the urban poor and IDPs but, on the other hand, this process prompted further migration to Khartoum and contributed to the sheer unlimited horizontal expansion of the city. Khartoum, with a 2008 census population of 5.27 million is now 45 times as large as in 1956.

where 88 per cent of the population was urbanized, with two-thirds living in Djibouti City.¹²⁰

Yemen, which has the second highest fertility rate in the Arab world after **Somalia**, is estimated to require an additional 80,000 units of housing each year to keep up with demand.¹²¹ UN-Habitat predicts that Khartoum requires 60,000 units per year since the city's unmet housing demand is estimated at 22 per cent of existing stock while 60 per cent of the existing stock is in poor condition.¹²²

Governments in the Southern Tier countries have been unable to build enough affordable housing or establish conditions that enable private sector investment in medium-income housing. From 2005 to 2008, **Djibouti's** government built on average 2,500 units of social housing per year,¹²³ a fraction of the number needed to meet the 2008 estimated housing gap of 140,000 units.¹²⁴ In **Yemen**, an estimated 95 per cent of housing is built by the private sector, most of which is incremental construction by households in informal settlements.¹²⁵

In Khartoum, the government's response to rapid immigration into the city in the 1990s was the widespread deployment of sites and services schemes, which initially helped to settle low-income communities fleeing war-torn regions but eventually became the foundation for extensive urban sprawl.¹²⁶ From 1956 to 2005, Khartoum provided

300,000 plots at cost that were distributed at to all categories of beneficiaries in the hope that lower-income households that had obtained legal title to land and had access to basic services would build their own homes. Due to the high cost of construction materials and taxes on construction, most families needed four years to build a single room and had instead settled in rental properties elsewhere. As a result, 51.7 per cent of plots remained vacant, with only 40 per cent completed and eight per cent under construction.¹²⁷

The government's response to informal settlements built by squatted and internally displaced people's fleeing war-torn regions in the 1990s was the construction of sites and services schemes. In the 2000s, existing informal settlements were combined into satellite settlements encompassing 10,000 plots each in Khartoum and 20,000 plots in Omdurman. By 2005, 273,711 families had moved to these areas, where infrastructure services were provided at 10 per cent of the plot value.

The city has also surveyed nearby villages and prepared plans for their integration into the urban fabric. Six districts have been completed to date, benefiting 160,900 families.¹²⁸ In 2009, the government halted the provision of serviced plots to all but current dwellers of informal settlements and is exploring public private partnerships for the development of middle-income housing.¹²⁹

In **Djibouti**, where almost all materials are imported, housing construction costs are as high as six times the average annual household income.¹³⁰ With the recovery of the economy, landlords have raised rents and speculators have obtained attractive parcels for future development.¹³¹ The rise of housing costs in the city centre has pushed development outwards, particularly towards the Balbala suburbs, which lack basic services provision.

In **Sudan**, the rise of oil wealth has led to speculative luxury private developments in Khartoum that cater to expatriate communities and are fuelled by foreign investment from the Gulf States, eliciting the nickname “Dubai on the Nile”.¹³² These developments, which neither serve local residents nor are in line with the level of development of the country, have effectively driven up the cost of land and construction materials and pushed residents out.¹³³ In a 2008 survey of Khartoum residents that had experienced an eviction, 51 per cent moved due to government relocation and 30 per cent due to the rise in rents.¹³⁴ The rise in rents has negatively impacted both the middle class and the most vulnerable groups.

In **Somalia**, 12 per cent of urban households are migrants and 14 per cent are displaced persons and returnees.¹³⁵ Displaced and refugee populations are typically poorer and more vulnerable than other low-income households and rising land prices and construction costs have trapped them in cycles of poverty and housing deprivation.

Informal and slum settlements have grown rapidly in the Southern Tier countries. From 1990 to 2005, **Yemen’s** slum population in urban areas grew by 229 per cent, concentrated in Aden, Hodeidah, Sana’a and Taiz.¹³⁶ An estimated 67 per cent of urban residents live in slum and informal settlements.¹³⁷ These settlements often encroach upon *wadi* beds or are built on steep slopes;¹³⁸ they typically lack basic services such as water, sanitation, and solid waste collection.

A 2010 World Bank study of Taiz found that *in situ* upgrading through the provision of basic services would cost USD 1,000 per household and was the economically viable option for the government, as compared to resettlement, which would cost USD 13,000 per household.

The lack of secure land tenure poses significant challenges in implementing either strategy.¹³⁹ In Sana’a, some communities have drafted neighbourhood development plans after informal settlements have been established yet these plans neither address modern development patterns nor are implementable because they fail to address the underlying ownership issues.¹⁴⁰ Sana’a’s City Development Strategy proposes to resolve these challenges through greater efforts in participatory consultation and holistic planning based on community concerns.¹⁴¹

In countries for which there is data, the great majority of homes suffer at least one housing deprivation – most commonly improved sanitation – and a large proportion also lack water, housing durability and/or sufficient living area. In **Djibouti**, according to the 2002/03 household budget survey, 65 per cent of urban homes (not including refugee and homeless populations) were made of wood

and sheet metal; 24 per cent were individual houses; 6 per cent, tents; and 4 per cent apartments.¹⁴² In **Somalia**, as of 2002, only 60 per cent of urban families had a permanent residence, 32 per cent a semi-permanent residence and 7 per cent a temporary residence; 19 per cent of urban households had only one room, and 38 per cent had two rooms.¹⁴³ In Puntland, 78 per cent of urban households had a home made of stone and 22 per cent lived in huts or makeshift homes used by IDPs.¹⁴⁴ Slum settlements are rapidly growing on the periphery of Berbera in Somaliland and these areas are undergoing a process of formalization as some households begin to transform makeshift houses to durable construction. IDP communities have been assigned subdivided areas with only an emergency water supply.¹⁴⁵ In **Sudan**, an estimated 391,000 IDPs lived in formal camps as of 2008 and 1 million to 1.28 million live outside the formal camps; in either case, residents often live under deplorable housing conditions.¹⁴⁶

Land Tenure, Property Rights and Titling

Land tenure in the Southern Tier countries comprises several layers of legal systems. Customary rights govern communal and grazing land; *Shari’a* law governs much of private, state and *waqf* land and Western-inspired legislation applies to the registration of private property.

While overlaps in land laws occur in all Arab countries, the lack of clear land laws, registration procedures and records in the Southern Tier countries make for particularly confusing ownership patterns that have been a continued source of conflict. The lack of clarity of ownership has depressed land and property markets, slowing private sector investment in affordable housing.

Sudan’s 1947 Town Land Regulation Act, inherited from the British colonial period, is the most robust land registry system in the region. All unregistered land became government property in 1970¹⁴⁷ and the government owns 98 per cent of the country. As a result, the government is able to supply leasehold land to individuals at a nominal price.

In **Somalia**, the 1975 land law that recognized only state-registered ownership instead of customary tenure favoured those with access to the registration systems and helped to trigger the conflict that ensued.¹⁴⁸ Deed registers in municipal offices were looted during the civil war, particularly south central Somalia and Mogadishu, where almost nothing is known about actual property ownership today and, as a result, property tax is neither levied nor collected.

Strong clans, warlords and militias in Mogadishu, Puntland and Somaliland have at times seized land without compensation.¹⁴⁹ In some areas of Mogadishu, land allocation for public services is conducted at the neighbourhood level and mediated by the community leaders. Until a legitimate and stable government is established in Somalia, it will not be possible to conduct land registration without legitimizing land acquired through violence and seizure.¹⁵⁰

Land-titling initiatives are limited and competing land claims are common in urban areas – particularly over

formerly public land, resulting in land-related conflicts at the local level.¹⁵¹ In Somaliland and Puntland, land registration is a paper-based system run by under-staffed municipal departments with limited resources that cannot keep up with the growth of cities. Building permits are required but title registration is not; in Hargeisa in 2006, there were 60,000 developed properties and only 3,000 registered titles.¹⁵²

In Djibouti District, 44 per cent of households lacked tenure security in 2006, with 19 per cent of these households believing that they would soon be expelled due to lack of tenure and 10 per cent having been expelled from a previous home in the past five years.¹⁵³

Yemen has no official system of land registration, leading to frequent disputes over land ownership that account for 30 to 50 per cent of all cases heard at local courts.¹⁵⁴ Violent conflict over land disputes is common in Sana'a and, to a lesser extent, in Aden.¹⁵⁵

Overlays of land ownership claims exist in **Comoros**, where only a small proportion of properties are titled. To promote economic productivity and investments, the government established a property registry in 2007 and made land reform a primary goal of its 2010-14 poverty eradication strategy.¹⁵⁶ It has established the ambitious targets of registering 15 per cent of agricultural land by 2010 and 65 per cent by 2014. During this period, the government hopes to clarify land ownership laws and rights, significantly reduce property registration costs and make the procedure more accessible.

Urban Land and Fiscal Policies

During the colonial period, the British established four categories of plot sizes permitted for land registration in **Sudan**. The first, second and third classes had different plot sizes and lease terms depending on income. For instance, in Juba, the downtown area with permanent structures and colonial style buildings consists of Class One plots; further from downtown, Class Two plots contain fewer permanent structures and more huts while Class Three settlements are huts built on the grid plan.¹⁵⁷ On the periphery, villages built without a plan were classified as a fourth class known as "native lodging areas" reserved for migrants who could upgrade their plot status into a higher class if they built a permanent building.¹⁵⁸ These colonial era zoning guidelines remain in place throughout Sudan, with the exception of the fourth class category which was abolished in 1957 to discourage temporary construction.

The government has sought to manage Khartoum's growth through successive master plans that comprised this strict zoning code within fixed municipal boundaries. The Third Class plot with a minimum of 200m² is the smallest permitted registered version but it is unaffordable to the poor, effectively excluding them from obtaining secure land tenure.¹⁵⁹ It took the 2000-2033 Master Plan to expand the municipal boundaries for the first time and begin to address the need for a metropolitan-scale infrastructure – including highways,

road networks and flood control – required of a city of more than 5 million people.

In **Yemen**, land markets tend to function poorly due to the lack of clear land records and speculative land hoarding. It is not uncommon for private investors who have bought state land to also pay tribal or private parties using the parcel to gain access to the property.¹⁶⁰ Local regulations mandating large minimum lots sizes and land contributions for circulation and recreation have also pushed prices above an affordable level for the middle class. Land prices throughout the country have risen as a result of speculators who took advantage of low prices in the years following unification in 1990.¹⁶¹

Housing Finance

The banking sectors of the Southern Tier countries are not well developed. In **Somalia**, the number of banking institutions operating in the country has declined from six, prior to the civil war, to one public bank and a few remittance companies and microfinance networks. The formal banks mostly finance short-term commercial and seasonal cash crop activities. Due to the unstable economic and political outlook, they are unwilling to invest in longer-term, more productive activities. The lack of a developed financial system has restricted credit liquidity for all sectors and the lack of competing banks allows interest rates to remain prohibitively high.¹⁶²

By one report, only 4 per cent of Yemenis have bank accounts.¹⁶³ In the **Comoros**, aside from two microfinance networks, there was only one general private bank in 2007 and three in 2008.

Microfinance networks are growing in the Southern Tier countries, although for the most part these do not directly impact housing. For instance, in the Comoros, the national bank and two decentralized networks offering microcredit loans cater mostly to small- and medium-sized businesses.¹⁶⁴

As a result, households in Southern Tier countries tend to incrementally invest in and upgrade their homes through a cash economy through limited savings, loans from friends and family, and remittances. Only in **Djibouti** has there been an improvement in the financial and banking sectors, with an expansion in domestic credit by 8 per cent from 2005 to 2006 and a decline in interest rates.¹⁶⁵

The importance of remittances in housing construction varies by country. In the **Comoros**, recipients of remittances spend most of the funds on consumption rather than investing in housing, prompting the IMF to recommend changes to economic policies that would incentivize productive investments.¹⁶⁶ In **Somalia**, the diaspora sends an estimated USD 1 billion in remittances each year, much of which is believed to be spent on basic needs, housing, and small enterprises in cities around the country.¹⁶⁷ Given the magnitude of remittances, Somalia's remittance companies underpin the country's financial structures by funding trade and commerce. They are considering launching commercial banks, particularly those geared towards lower-income segments.¹⁶⁸

The Challenge of Urban Transportation

Transportation infrastructure is critical to a country's economic and social development; when linked with the networks of other countries, transport systems can also help increase the countries' openness and development.

The Southern Tier countries rely mainly on a limited road network that is often poorly maintained, particularly in Somalia, Sudan and Yemen. Given their limited resources, the countries have a limited network of paved roads connecting major cities. The **Comoros** has the best-developed national road network, with 47 km of roads per 100 km² and 77 per cent of all roads paved, although many rural areas lack access roads. **Sudan** has the lowest road density in Africa and most roads are in greater Khartoum and Port Sudan¹⁶⁹ or north-south roads serving the oil fields. In **Somalia**, prior to the internal conflict, 2,757 km out of 21,830 km of roads were paved in 1989, only 600 km of roads were still paved in 2006.¹⁷⁰

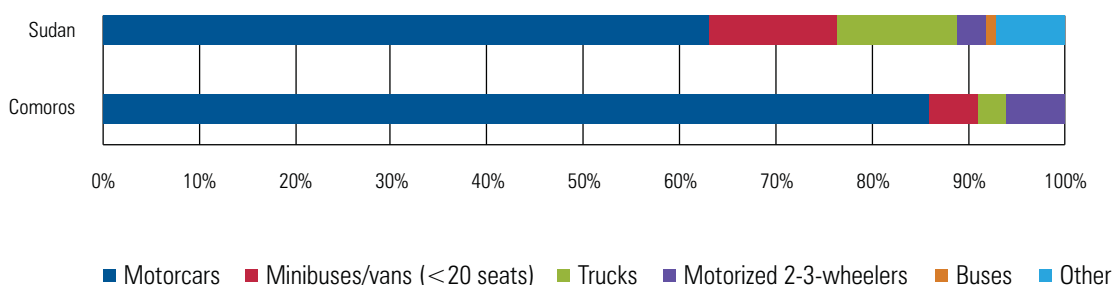
With the help of donor countries and organizations, major investments are being made to improve transport infrastructures. From 2000 to 2008, **Sudan** used its oil wealth to increase its paved road network by 150 per cent and launched a programme to rehabilitate and extend its railway network which is Africa's second longest.¹⁷¹ **Yemen** has been constructing and paving 1,000 to 1,400 km of roads each year, increasing its paved roads to 15,300 km in 2009.¹⁷² A USD 1.6 billion highway is under consideration to link Aden in the south with Amran in the north, halving the travel time from the southern coast to the border with Saudi Arabia.¹⁷³

Use of motorized transport remains limited, with 28 to 35 motor vehicles per 1,000 people in the region.



▲ Merca, Somalia. ©COSV. Licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license.

FIGURE 58: PERCENTAGE OF REGISTERED MOTOR VEHICLES BY CATEGORY (2007)¹⁷⁴



Mass Transportation

None of the Southern Tier countries has adopted national public transportation policies or operated a public transport service. In all countries, private and informal providers operate minibuses, trucks, pickups and taxis to move passengers. Government participation is limited to tariff setting, licensing and enforcing traffic rules. As a result, the transportation system is fragmented and limited in geographic scope and operating hours.

Minibuses provide services within **Djibouti** City and buses connect the city with peripheral areas and villages. In 2002, the government implemented important reforms of the transport sector when the Ministry of Equipment and Transport created a national advisory board on comprised of experts, user associations, government agencies and the District of Djibouti.¹⁷⁵

The Ministry sought to regularize the informal operators, establish a fee to maintain and develop the roads used by minibuses and buses, require compulsory licences for passenger transport vehicles and establish technical requirements for vehicle inspections and operator responsibilities. In 2006, the Ministry reorganized routes and stops in Djibouti City and issued a concession to a private party to build bus shelters and signs.

In **Sudan**, urban transportation is primarily provided by the private sector and 67.5 per cent of urban riders use minibuses, 22.8 per cent taxis and 8 per cent small pickups. Inter-city buses run mainly between Khartoum and the 15 state capitals. Tariffs are high relative to income and, on the periphery of Khartoum, for example, relocatees from Soba to El Fatih, where 95 per cent of the working population commutes to work, now spend on average 20 to 40 per cent of their daily income on transport.¹⁷⁶

In more remote areas, lorries carrying cargo from one city to another will also take passengers. Pick-ups, known locally as *boksi*, are the main form of local transport between villages, as well as trans-desert routes from Dongola to Karima and Atbara. Camels are widely used in the west and north of the country and donkeys are used throughout.¹⁷⁷

Similarly, in **Somalia**, public transport services are provided informal providers in Mogadishu and other main cities. A few inter-city minibus services connect major centres in the south of the country, while the use of camels and donkeys for transport are widespread in rural and nomadic areas.¹⁷⁸

In the **Comoros**, the Ministry of Transport, Posts and Telecommunications and Tourism supervises transport nationally, with Directorates of Transport overseeing services on each island.¹⁷⁹ The central government is responsible for setting fares and the national police is responsible for enforcing road safety regulations.

According to vehicle registration data, 85 per cent of motor vehicles are private passenger cars. The remainder comprise a mix of minibuses, trucks and motorized two- and three-wheelers. Since any citizen may obtain a licence for a vehicle to transport passengers, and the government does not monitor



▲ Minibuses in Sana'a, Yemen. ©Gryshchuk Yuriy. Licensed under the Creative Commons Attribution 3.0 Unported license.

these licenses, the actual number of vehicles offering public transport services is not recorded.

In **Yemen**, responsibility for transportation planning is divided among the Municipality of Sana'a, the Ministry of Transport and the Ministry of Interior, with little coordination between them and no clear responsibility for urban transport planning. Sana'a's recent Comprehensive Traffic Management Study did not analyze multi-modal public transport options and strategies.¹⁸⁰ The significant investments in roads in recent years have favoured peri-urban and inter-city connections and neglected inner-city arterials that have become highly congested. Competing minibus and taxis clog the main routes while other areas remain underserved.

Road Safety

Given the increasing number of vehicles in the Southern Tier countries, the dearth of traffic regulations and the laxity of their enforcement are undermining road safety. The **Comoros** and **Yemen** both lack regulations governing speed limits, mandating the use of motorcycle helmets and child restraints and prohibiting drunk driving.

In **Sudan**, where such vehicle safety laws do exist, a lack of enforcement and poorly-maintained roads contribute to poor road safety. WHO estimates that 34.7 persons out of 100,000 die in traffic accidents each year, one of the highest rates in the world.¹⁸¹

In **Yemen**, 10 per cent traffic-related deaths and 20 per cent of injuries occur in Sana'a.¹⁸² WHO estimates that the number of road traffic deaths per 100,000 residents is 29.3 for Yemen and 30.3 for the Comoros. Most fatalities are drivers and occupants of four-wheelers and roughly one in six are pedestrians.

Managing Scarce Water Resources

With the exception of Djibouti and Yemen, the Southern Tier countries do not suffer from physical water scarcity but they rather lack the infrastructure to capture, treat and distribute water resources. Without reservoirs, irrigation canals, water abstraction pumps, purification facilities and distribution networks, cities cannot supply adequate water to residents.

With only 360 cubic metres of renewable water supply per capita, **Djibouti** is one of the most water-scarce countries in the world. However, it uses only 6 per cent of its actual renewable supply. A semi-desert country, its water resources lie in deep aquifers and water shortages could worsen over time since the population grows by three per cent per year, while its renewable surface water supply is estimated to have fallen by 28 per cent between 2007 and 2015 due to climate change.

Unlike other Southern Tier countries, 86 per cent of water used in Djibouti is for domestic rather than agricultural use, and Djibouti City is projected to have to cope with a water deficit of 18 million cubic meters by 2015 as three-quarters of the city depends on a single aquifer that is being depleted faster than it can be replenished.¹⁸³ The government has invited a Chinese company to build a new desalination plant in the city and the Arab Fund for Economic and Social Development is helping finance the rehabilitation of the city's water supply network, as systemic water loss has reached 44 per cent.¹⁸⁴

In **Somalia**, water demand is expected to increase when stability is restored and refugees and IDPs return to their homes. Use of water is well within the range of water resources although Somalia lacks the reservoir infrastructure on its two main rivers to capture annual floodwaters for use in the dry season and during cyclical droughts. Moderate droughts happen every three to four years and severe ones every seven to nine years. Traditional community-based water management systems have deteriorated during the civil war.

In Somaliland, the rehabilitation and development of dam and irrigation infrastructure is a priority. However, because it is not an internationally recognized country, it lacks the authority to negotiate with neighbouring Ethiopia to develop the necessary infrastructure on trans-border rivers.¹⁸⁵

The five upstream Nile countries signed a Cooperative Framework Agreement in 2010 demanding a greater share of the river. North and South Sudan use 57 per cent of their renewable water supplies, most of which is from the Nile watershed. Water resources are concentrated in South Sudan, and subject to significant year-to-year variability. Municipal water, which accounts for less than 3 per cent of total water use, relies on a combination of groundwater and river

pumping. Traditional agreements for water access may change following Southern Sudan's independence and shifts in access for nomadic and pastoral communities over water use could lead to new conflict. (See also *The State of African Cities 2010*, p.165, free pdf download from www.unhabitat.org).

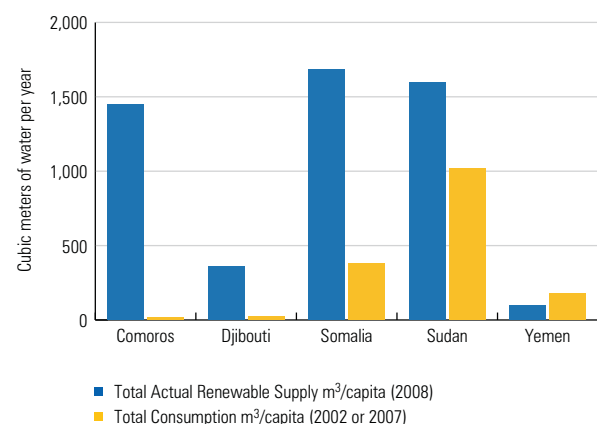
Sana'a and Yemen are consistently projected to be the first city and country in the world to run out of water. Regardless of climate change, Yemen is expected to deplete its groundwater reserves by 2030 or 2040.¹⁸⁶ Over 90 per cent of the country's ground and surface water is used for agriculture, predominantly the production of *qat*.¹⁸⁷ In Sana'a, households connected to the public water distribution network receive water once every 15 days due to limited supplies and private tankers fill the gap in service.¹⁸⁸ Around 80 per cent of Sana'a's water comes from an aquifer northwest of the city that drops six to eight metres each year and will be depleted within ten to 15 years.¹⁸⁹

Water authorities face significant challenges in management and technical capacity, with systemic water loss from leaky pipes amounting to 40 per cent. To date, Yemen lacks a comprehensive water management strategy. Sana'a's City Development Strategy has recommended that *qat* agriculture and industries requiring large amounts of water be limited in the surrounding areas.¹⁹⁰ (See Box 26)

Urban Access to Domestic Water

Primary cities tend to have better access to services than secondary cities. Comoros and Djibouti have achieved nearly universal access to water in urban areas, while Somalia, Sudan and Yemen provide 64 to 72 per cent of urban residents with water. The **Comoros** has launched the Clean Water and Sanitation Project in 2009 to provide 180,000 people with clean water and 20,000 people with improved sanitation

FIGURE 59: AVAILABLE AND WITHDRAWN WATER RESOURCES PER CAPITA

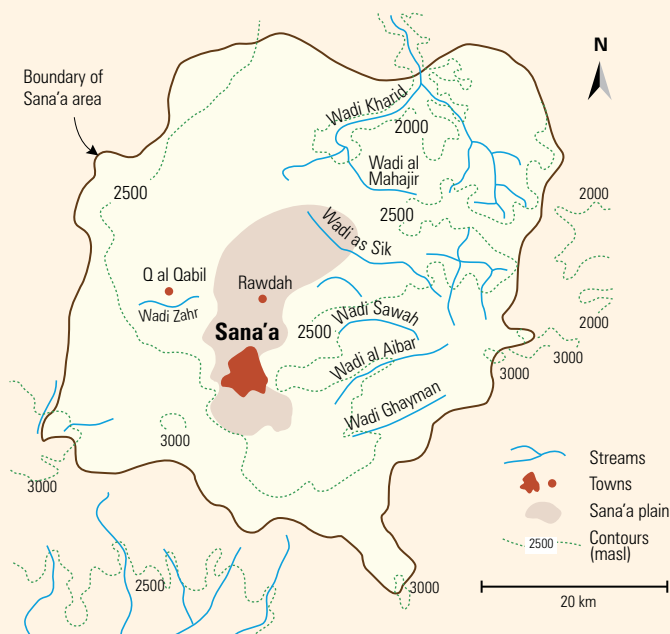


BOX 26: YEMEN – URBAN WATER SECURITY



▲ Kawkaban City, Yemen. A woman collects water from a reservoir. ©Adriano Bassignana. Licensed under the Creative Commons Attribution-Share Alike 2.5 Generic license.

THE SANA'A BASIN



Source: Sustainable City Development Strategy/ Municipality of Sana'a 2007

Yemen is the most water-stressed country in the world and one of the ten poorest countries in water resources with a water per capita share of less than 120 cubic metres per year. Ground water tables, which are the main water source, are depleting at a very fast pace, especially in Sana'a and other major towns such as Tiaz, Abyan and Hadhramout. The increasing demand for water caused by constant high population growth presents enormous stress on the already scarce water resources due to the high rates of ground water extraction which outstrip replenishment ability.

It threatens food security by reducing agricultural productivity, as well as hindering human health and economic development. Water scarcity can also lead to additional environmental stress and increased suffering of the poor while widening the poverty map of the country.

The water supply of Sana'a is approaching a critical point. More than 80 per cent of the national water supply comes from fossil reserves in the geological Sana'a Basin which covers an approximate area of 70 km by 40 km on the North West side of the city. It is estimated that the basin will be depleted within ten to 15 years. This is mainly due to the rapid population growth and *ad hoc* abstraction of water. The annual consumption of water has hit a record of 260 million m³ and potable water of questionable quality is increasingly being pumped from underneath the city. The public water network is estimated to cover only 55 per cent of the city's households.

The problem of undersupply is exacerbated by the physical deterioration of the network which results in serious leakages (estimated at 30 to 40 per cent). As a result, water supply in Sana'a has been rationed - not just posing problems in residential areas but also posing severe constraints for industry. The issue is crucial for determining the future spatial development trends of the city and its population growth pattern.

It is therefore essential to seek and evaluate other conventional and unconventional alternatives to utilize the available water resources in the most economic manner and hence try to mitigate the imminent future water crisis in the area.



▲ Water vendor in Khartoum, Sudan. ©UN-Habitat

in Fomboni, Mbéni, Moroni, Mutsamudu, Oichili and Ouani.¹⁹¹ Continued conflict in **Somalia** and **Sudan** has eroded gains in access to services over the past two decades. In Sudan, urban access to potable water fell from 85 per cent in 1990 to 59.4 per cent in 2009, mainly due to unserved urban expansion.

In Somalia, while urban access has improved, rural access to water fell to 9 per cent in 2008 from 20 per cent in 1990 and access to sanitation fell to 6 per cent from 12 per cent.¹⁹² Due to ongoing conflicts and lack of investment, Somalia, Yemen and Sudan are not expected to reach the Millennium Development Goals targets for water and sanitation.

In **Djibouti** City, 95.5 per cent of residents have access to clean water supply, compared with 83 per cent in other urban districts.¹⁹³ In the Comoros, where about 33 per cent of households obtain water from public standpipes (rising to more than half of households in Grand Comoro), 25 per cent obtain water from rainwater fed cisterns and only 17 per cent from house connections.¹⁹⁴ In **Yemen**, 70 per cent of the poor have access to improved water, compared to 80 per cent of non-poor.¹⁹⁵ In Sana'a an estimated 59 per cent of households are connected to the public supply network, 4.5 per cent to private networks and 32 per cent purchase water from water tankers at a significant price mark-up and health risk.¹⁹⁶

Among the Southern Tier countries, **Somalia** has the least developed water and sanitation infrastructure which, underfunded before the conflict, has since been degraded or destroyed, particularly in the central and southern regions.

Investments in water supply infrastructure are limited almost exclusively to UN and other international agencies in Somaliland and Puntland.

Local private sector operators serve as the main providers, drilling uncontrolled boreholes or transporting water from public urban systems. In Somaliland and Puntland, local urban water services have been reorganized as public-private partnerships, some of which have made small extensions in their services areas. The southern town of Jowhar established a successful example of this model, which has been replicated in other towns in Somaliland and Puntland.¹⁹⁷ The UN has funded the installation of two water systems in Somaliland.¹⁹⁸

The World Bank provided support to **Yemen's** port cities in 2002 to upgrade their water supply, reduce water loss, and build sewerage facilities with wastewater reuse systems. In 2009, it provided additional funding to support the implementation of the national water and sanitation strategy, which aims to increase access to water and sanitation services, stabilize groundwater abstraction and strengthen local institutions and community-based management.¹⁹⁹ The limited capacity of existing institutions, weak enforcement mechanisms and lack of clarity in role delineation, however, continue to hamper project implementation.²⁰⁰

All Southern Tier countries lag in providing urban residents with access to improved sanitation. In **Sudan**, most major cities lack wastewater treatment facilities and sewer networks service less than 15 per cent of urban centres. Instead, septic systems and pit latrines are used by 65 per cent of urban households.²⁰¹ Most major cities have stormwater drainage systems but poorly-designed drainage channels, lack of maintenance and the mushrooming of squatter settlements on the main drainage courses contribute to heavy flooding.²⁰² The sewer network in Khartoum covers only 25 per cent of the city and is overloaded, resulting in significant volumes of untreated sewage flowing back into the Nile. In the **Comoros**, the Clean Water and Sanitation Project, sponsored by the African Development Bank, will provide 20,000 people with improved sanitation in major cities.^{203, 204}

In **Yemen**, about 40 per cent of the residents of Sana'a are connected to the sewer system and the remainder rely on onsite cesspits and septic tanks. Inadequate wastewater treatment has resulted in the pollution of Sana'a Basin, the city's primary water source.²⁰⁵ The lack of wastewater treatment and recycling infrastructure in Yemen is particularly alarming given the country's rapidly declining water resources.

Climate Change

Although climate change models and scenarios vary, they forecast a reduction of rainfall and increased volatility. According to a 2010 ranking of countries' vulnerability to climate change based on their ability to adapt to changing conditions, the **Comoros**, Somalia and Yemen are among the top most vulnerable countries in the world.²⁰⁶

As an island nation, the Comoros will be susceptible to sea-level rise, which is expected to displace 10 per cent of



▲ Mutsamudu, Comoros. The Comoros is very susceptible to the risks of rising sea levels. ©Peioma. Licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license.

the country's coastal areas residents in the next 100 years.²⁰⁷ In **Somalia**, rural residents have been migrating to the settlements around Mogadishu as a result of drought.²⁰⁸ In **Sudan**, the line of semi-desert and desert areas has moved southwards 50 to 200 kilometres since 1930 and is projected to continue moving southwards, threatening 25 per cent of the country's agricultural land and reducing food production by 20 per cent.²⁰⁹

Climate change to date has already changed pastoral practices and contributed to ongoing conflict in Darfur and Kordofan. **Djibouti** will experience increased flash floods, including in Ambouli Wadi near Djibouti City, as well as reduced groundwater recharge, increasing salinity of aquifers, desertification and loss of forests and marine resources.

Southern Tier countries are eligible for UNDP funding to develop climate change National Adaptation Programmes of Action (NAPAs). Comoros, Djibouti, Sudan and Yemen have developed NAPAs as of 2010.

The majority of priority projects address agricultural productivity, soil rehabilitation, and water use efficiency. For instance, the United Nations is financing 15 projects in the Comoros to address food security through adapted agricultural practices, fisheries management, increasing water supply and quality, restoring soils and stabilizing slopes, as well as building institutional capacity for dealing with climate change.²¹⁰ As part of these initiatives, 22 towns in Grand Comoro and Anjouan have agreed to regulate environmentally damaging activities, including illegal hunting and deforestation for charcoal, and indiscriminate solid waste dumping. In view of the lack of stability of the

national government, these local actions are an important step towards building adaptation capacity.²¹¹

Food Security

Many Southern Tier countries have traditionally faced challenges in producing sufficient food due to the scarcity of water and arable land, high population growth rates, persistent droughts, and continued conflict. Continued droughts in the Horn of Africa have kept people at or below the poverty line and frequently lead to humanitarian crises.

As of 2011, an estimated 60,000 urban households in **Djibouti** were reported to suffer from severe food insecurity due to high food prices, high unemployment and reduced remittances, in addition to 140,000 persons in rural areas that require food assistance. Wholesale rice prices at the end of 2010 were 150 per cent higher than in mid-2007. According to UNICEF, malnutrition has become a serious problem in and around Djibouti City, home to two-thirds of the country's population.²¹²

In **Somalia**, where 60 per cent of the people relies on herding, droughts have shrunk pastures and water supply, causing the migration of pastoralist and livestock.²¹³ The 2008 to 2010 retail prices of domestically produced grains sold in Mogadishu are three to seven times the pre-2008 prices.

Decades of droughts in **Sudan**, caused mainly by long-term changes in weather patterns, along with population growth, have led to changes in agricultural practices which include increased land clearing, expansion into the desert, overstocking and overgrazing. As of 2011, 4 million to 4.5

million people in Sudan, particularly in the Darfur, the Red Sea and the North and South Kordofan States are vulnerable to food shortages.²¹⁴

In the three-month lead-up to the January 2011 referendum, over 200,000 people migrated from Sudan to South Sudan. If these migratory trends continue, the number of people needing food assistance could increase to 1.4 million under peaceful conditions. If trade flows are disrupted, the food security of as many as 2.7 million people could be threatened.

Water shortages underlie **Yemen's** food security crisis. As of 2009, as much as one-third of the country is moderately to severely food insecure, a figure that has since increased due to rising food prices in 2010 and political unrest in 2011.²¹⁵ As of 2009, food subsidies amounted to 0.5 per cent of GDP but given the country's fiscal deficit and civil unrest, the government is unlikely to be able to significantly increase spending on food subsidies if prices continue to increase.²¹⁶

In 2010, the UN World Food Programme implemented an Emergency Seasonal Safety Net program in **Yemen** aiming to provide 700,000 people in the least food secure governorates, namely Amran, Al-Dhala, Hajjah, Ibb, Raima and Sana'a. As of January 2011, an estimated 250,000 internally-displaced persons and 170,000 refugees, mostly from **Somalia**, required food assistance.

As a small island nation with one of the highest population densities in Africa, the **Comoros** is only able to produce 49 per cent of its food domestically, and its food import to export price ratio is 3.8.²¹⁷

Energy and Air Pollution

In the Southern Tier countries, the significant reliance on wood and charcoal for energy has environmental implications. In Comoros, Somalia and Sudan, wood-based fuels supply 78, 87 and 90 per cent of energy needs, respectively, while hydrocarbons supply only 2 per cent of energy consumed in Comoros and 13 per cent in Somalia.^{218,219,220}

This has led to widespread deforestation and erosion, particularly in Comoros and north and central Sudan, where 8.8 million hectares of forest cover have been lost from 1990 to 2005.²²¹ In **Djibouti**, 81 per cent of households use kerosene for cooking and only 13 per cent use wood fuel – 10 per cent in urban areas and 79 per cent in rural areas.²²²

Yemen has an estimated 1,000 MW of electricity generation capacity, one-third of which is in Mareb Governorate. Civil strife and attacks on the gas power station there have led to blackouts and highlight the vulnerability of the network. **Comoros** has a total generation capacity of 24 MW from its thermal power plants,²²³ but an estimated 55 per cent of generated electricity is lost to fraud, illegal connections, network deficiencies and poor tariff collection.²²⁴

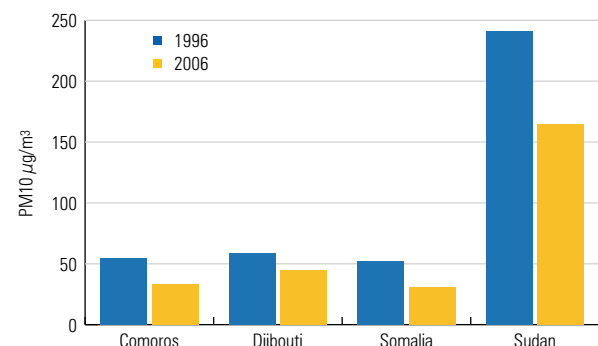
As with other forms of infrastructure, conflict situations have reduced access. The mass urbanization engendered by land degradation and the conflict in Darfur has left two-thirds of people in Al Fashir, Al Genaina and Nyala without electricity.²²⁵

Electricity grids are restricted to the major cities. In the **Comoros**, where all petroleum products are imported, energy prices are among the highest in Africa.²²⁶ Limited access to the grid and the high costs of electricity constrain access and consumption for lower-income households. The cost of electricity in **Djibouti** is more than two times higher than in Ethiopia and constitutes a major constraint on businesses; 67 per cent of residents in Djibouti City have electricity, compared with 43 per cent in other urban districts and 10 per cent in rural areas.²²⁷ In **Somalia**, the majority of electricity in the country is supplied through private providers, whose volatile rates are higher than those of the public sector. The cost of electricity in Hargeisa ranges from USD 0.60 to USD 1.00 per kilowatt-hour.²²⁸ In **Sudan**, 15 per cent of the population has electricity²²⁹ mostly concentrated in urban areas and Khartoum, with 12 per cent of the country's population, consumes 33 per cent of Sudan's electricity.²³⁰ In Sana'a 85 per cent of residents have electricity, compared with 50 per cent of urban residents in general and 20 per cent in rural areas.²³¹

Despite a significant potential for renewable energy, the continued instability has impeded investments in the Southern Tier countries.²³² The **Comoros** has potential to develop hydroelectricity in Anjouan and Mohéli and from biomass, solar, wind and tidal sources.²³³ It has begun investigating the potential for geothermal energy on the three volcanic islands.²³⁴ Liquefied petroleum gas is being introduced in Sudan and particularly Khartoum. The Merowe dam is also expected to double the country's electricity generation, lower prices, expand the national grid and hopefully foster an accelerated switch away from charcoal.²³⁵

Given the low level of energy consumption, air pollution has not yet become a regional challenge and is localized near specific industries or transportation hubs. Carbon dioxide emissions are among the lowest in the world and far below the average for Arab countries. Dust is a challenge in Sudan, where dust storms, exacerbated by deforestation and erosion, regularly cover the country with adverse respiratory health consequences.

FIGURE 60: PARTICULATE MATTER (PM10) AS A WEIGHTED AVERAGE OF THE URBAN POPULATION



Source: World Bank Development Indicators

Solid Waste Management

The collection and proper disposal of solid waste pose significant challenges to local governments. In tandem with urbanization, per capita solid waste generation is growing and, throughout the region, cities lack collection management systems and no sanitary landfills exist in any of the countries.

Except for affluent urban areas that have organized private collection, trash typically accumulates in open dumps and vacant lots and is periodically burned. Waste is also disposed of in waterways and the ocean.

In **Sudan**, only Khartoum has disposal sites in suitable locations while municipal dump sites in El Geneina, El Obeida, Port Sudan and smaller towns and villages are located in peri-urban informal areas and along *wadis*.²³⁶ Waste from slaughterhouses, medical facilities, industries and sludge are typically mixed together. In the **Comoros**, household waste

production has increased to one cubic meter per person per day.²³⁷ **Djibouti** City produces 240 tons of waste each day, 62 per cent of which is disposed of without treatment.²³⁸ In **Somalia**, the United Nations funded two garbage stations in Garowe; however, Puntland and Mogadishu lack a solid waste management policy. Waste pickers often live in degrading conditions to recover sellable materials from landfills, and are subject to numerous health hazards.

Yemen published two laws in 1999 that enabled local authorities to fund their own solid waste services.²³⁹ In 2010, Yemen drafted a National Strategy for Solid Waste Management,²⁴⁰ which creates a framework for goals and targets, institutional responsibilities and donor support. The national investment plan for solid waste is based on this strategy. Pilot cities and governorates have implemented integrated solid waste management systems that have affected four million people.



▲ Ali and his friends play in the rubbish in the Al-Basatree slum area of Aden, Yemen. ©Abbie Traylor-Smith/Panos Pictures



▲ Bab al Yemen (The Gate to Yemen) in Sana'a. None of the Southern Tier countries have a national urban policy. ©Vladimir Melnik/Shutterstock

Governance in Conflict and Post-Conflict Situations

The Southern Tier Arab countries share a recent history of civil unrest, violent conflict and political instability. These conflicts are rooted in colonial decisions on political boundaries that have led to struggles for power and resources between ethnic or tribal groups following independence.²⁴¹

In conflict situations, the central government's capacity to implement state functions is the first to collapse. Where central agencies remain in place, they often lack the authority and credibility to collect funds and coordinate local government activities. At the same time, local authorities lacking central support are weakened and local communities become fragmented along ethnic and religious ties with some of these cleavages dating back to colonial times. In the face of the destruction of infrastructure and collapse of public services, leadership devolves to respected local community leaders and services are provided almost exclusively through private, often informal, providers.

The Comoros, Djibouti, Sudan and Yemen have emerged from a conflict stage in which establishing and strengthening political stability, security and the restoration of basic services are the priorities. During this stage, the allocation of power

and resources can reignite old confrontations, particularly tribal conflicts.

National Urban Policy

All Southern Tier countries have ministries that are in charge of urban planning and infrastructure development. In the **Comoros**, these responsibilities are shared by the Ministry of Development, Infrastructure Urbanism and Housing and the Ministry of Agriculture, Fishing, the Environment and Energy. In **Sudan**, the Ministry of Physical Planning and Public Utilities is charged with spatial planning and infrastructure development.

In **Yemen**, the Ministry of Planning and International Cooperation is charged with planning for the country's development and mobilizing external resources to implement these plans. The Ministry of Finance's Department of Public Domain and the Ministry of Public Works and Highways administer urban land. In addition, the General Authority of Lands, Survey and Urban Planning (GALSUP) is responsible for urban and rural land inspections and surveys, layouts, and planning; management of state, private, and *waqf* land; administration and registration of land, including maintaining land records; and valuation of land and oversight of land expropriation.²⁴²

However, due to the relative weakness of these ministries, they often have difficulty coordinating action at either the inter-agency or the local government level.²⁴³ None of the Southern Tier countries has a national urban policy, and many cities lack the capacity to implement urban plans where they exist.²⁴⁴

In **Sudan**, Khartoum has a Structural Plan 2007-2033, which proposes improved road networks and transportation systems to better connect neighbourhoods. Though approved by the State Cabinet, it has already proven difficult to implement due to issues of land use and inter-agency conflicts.²⁴⁵

Nyala's 2006-2021 master plan, which was passed by the South Darfur Legislative Council after nearly 20 years of development, takes a highly technical approach to modernizing the city's commercial centre. Actual implementation remains uncertain given the state of post-conflict resolution.²⁴⁶ Port Sudan's latest master plan dates back to the 1970s.

Since 2000, in tandem with decentralization efforts, the World Bank and Cities Alliance have assisted the **Yemeni** cities of Aden, Hodeida, Mukallah and Sana'a in drafting city development strategies, bringing together public, private and citizen stakeholders to revise city master plans and address social, economic and environmental challenges and opportunities.²⁴⁷

Decentralization and Local Government Systems

Many of the conflicts in Southern Tier countries can be attributed to the efforts to impose centralized legal and administrative frameworks on traditionally different tribes and clans. In spite of attempts to implement decentralization reforms, local authorities lack adequate funding to discharge their responsibilities. With higher levels of government controlled by traditional power elites, the development of local capacity and improved service delivery are key areas requiring international and donor support.

In 2000, **Yemen** launched one of the most ambitious decentralization programs in the Arab world in a widely-supported move to return the highly-centralized government to traditional decentralized practices.

The country is divided into 21 governorates, which comprise 21 provincial municipalities and 326 district municipalities. The Local Authority Law delegated planning, development and administrative responsibilities to municipal and district councils.

A significant challenge posed by the decentralization law is the overlap of municipal and district councils; for example, the cities of Taiz and Hodeidah each overlaps with three district boundaries and Sana'a has a municipal council as well as ten district councils, each of which operates its own services, resulting in confusion over roles, responsibilities and revenue collection, as well as duplicated departments.²⁴⁸

In 2008, the country held its first elections for governors by council members; however, 17 out of 20 seats were won

by the ruling party, further consolidating the ruling elite's control over a tribal society that was bound to reject it.²⁴⁹ Indeed, in January 2011, violent demonstrations erupted in Sana'a bringing the country to the brink of civil war.

Following 20 coups in 25 years, the **Comoros** adopted a new governance system under the 2001 Constitution based on the principle of subsidiarity and established four levels of government: federal, island, regional and local.²⁵⁰ The presidency rotates between the three islands on a five-year basis.

Although these reforms aimed to provide each island with semi-autonomy and reduce the violence and frequency of coups, they have effectively created duplicative layers of government that consume 80 per cent of the country's GDP. In 2009, 52 per cent of eligible voters went to the polls, with 94 per cent approving a referendum to streamline the government system. The referendum reduced island presidents to governor status, ministers to councillor status, and government expenditures by 10 to 15 per cent.²⁵¹

After **Djibouti's** first regional elections in 2006, the central government in 2008 formally transferred key basic services to regional governments, including waste management and supervision of local markets.²⁵² Building on these decentralization efforts, UNDP and the African Development Bank (AfDB) are financing a series of projects to help build the capacity of local agencies to plan, collect revenues, manage fiscal resources, and implement projects. One component of the Urban Poverty Reduction Project funded by AfDB seeks to build capacity to access funding and establish a system of microfinance in five major towns outside of Djibouti City.²⁵³

In **Sudan**, local government comprises four levels – *wilaya* (governorate), *mahalya* (locality), *alwihda al-idaria* (administrative unit), and *lajna sh'abiya* (popular committees). The popular committees are elected volunteers, usually tribal leaders, who monitor programmes operating in their jurisdictions, provide services, collect taxes, distribute *zakat*, and mobilize local communities. These responsibilities overlap with those of the administrative units and localities, and many residents perceive the committees as being corrupt extensions of political parties.

A 2007 review of selected local authorities in Sudan found varying levels of capacity to provide basic services and a general lack of transparency, limited public participation, and poor planning capacity. Urban agencies had more resources and better fiscal management, but rural communities tended to be more accountable and participatory.²⁵⁴

Internally-displaced population camps lack any government presence and essentially run themselves, and Native Administrations still exist and play an important role when the normal governance system fails. Overlapping responsibilities, exacerbated by uncoordinated aid interventions has delayed or worsened service delivery, with the severest impact on the poorest and IDP communities. Local elections were held in April 2011 and will be held next in 2016.²⁵⁵

The 2005 Comprehensive Peace Agreement (CPA) allowed **South Sudan** to operate as an autonomous region and



▲ A blind voter at a Southern Sudan referendum polling center. ©USAID Africa Bureau. Licensed under the Creative Commons Attribution 2.0 Generic license.

institute reforms to improve the decentralization process. The CPA delegated significant responsibilities in revenue collection, expenditure management, urban development and basic services to state governments, which further delegate responsibilities to county and city governments.²⁵⁶ In 2011, South Sudan's residents overwhelmingly voted to become independent from the north and in July 2011 the country formally became the Republic of South Sudan. The oil-rich new country has been invited to join the East Africa community.

Somalia lacks a national government and its society is better characterized by tribal and clan affiliations.²⁵⁷ A key instigator of the current conflict was the imposition of a central government on a traditionally fragmented society that was further divided under colonization by the French, British and Italians.

Of the three regions, Somaliland has the most functional though still limited government. It has a bicameral parliament with proportional clan representation. The Association of Local Government Authorities established by mayors from Berbera, Borama, Burao, Dhahar, Erigavo, Gabilai, Hargeisa and Sheikh districts supports democratic institutions, conducts trainings on financial accountability, provides feedback on draft strategic plans and operating procedures.²⁵⁸

Puntland is more stable than south central Somalia, but suffers from security breakdowns and lacks a functional system of governance.²⁵⁹ south central Somalia continues to be a battleground between the Transitional Federal Government (TGF), the Islamic Courts Union and Al Shebaab group. After the withdrawal of invading Ethiopian troops in 2009, the conflict has displaced an estimated 200,000 people from Mogadishu, with violence spreading to Kismayo and several ministers being assassinated.²⁶⁰ A new United Nations 2008 to 2021 programme will assist rural and urban districts throughout Somalia in building local government institutions, shoring up most importantly their ability to deliver basic services, strengthen local participation in decision-making and, most important, resolve conflicts around land and housing.

Local Government Finance

In line with the low level of economic development, the local revenue generation base and receipts fall short of meeting the needs. In the Southern Tier countries, central government revenues are bolstered by donor aid, United Nations funds, foreign direct investment and migrant remittances. In **Somalia**, the bulk of government revenues come from trade taxes which, by the end of the 2000s, equalled USD 22 million in Somaliland and USD 16 million in Puntland.

As in the pre-war years, however, the majority of funds are spent on the military and security forces with small amounts channelled towards service provision and infrastructure development. In Puntland, the government's budget covers only staff salaries and limited operations costs.²⁶¹ Throughout Somalia, state governments have shifted responsibilities to district authorities without providing them with funds. As a result, private providers deliver most of the basic services.

In **Yemen** before 2002, all local revenues were transferred to the central government then redistributed to local authorities. Following the passage of the Local Authority Law, local governments can retain locally-collected taxes in addition to receiving some portion of the centrally-collected taxes proportional to the size of the municipal population.²⁶² However, the local revenue base is weak and central transfers provide the bulk of local government funding (73 per cent of Sana'a's budget in 2006/07).²⁶³

The country's oil sector, which funds 75 per cent of the central government's budget, is projected to become depleted by 2017.²⁶⁴ To reduce dependence on central transfers, the 2009 Sana'a City Development Strategy sets forth a series of

BOX 27: SOMALIA - CADASTRAL DEVELOPMENT, PROPERTY TAXATION & FINANCING URBAN IMPROVEMENTS

Rapid urbanization puts pressure on local authorities to maintain and expand delivery of basic services. In a post-conflict context, stable and responsive local governments are extremely important for taking up urban challenges and contributing to stability and peaceful development.

Hargeisa, the capital of Somaliland, was the first Somali town where a Geographic Information System (GIS) was established for property taxation and planning in 2005, with a plan to expand the technology towards resolving land conflicts and supporting land management practices.

A database includes key property attributes (construction quality, building size, infrastructure, number of occupants and access to services) and a digital photograph of each property. The database also includes geo-referenced spatial data collected through field surveys using laptops.

Database development consisted of three main steps:

1. Acquisition of a high-resolution satellite image (Quickbird);
2. On-screen vectorization of the image to create a base map; and
3. Field verification of the base map and the collection of attribute data.

The reliability of a spatial database depends on data source (aerial photographs and field measurements or satellite images), spatial resolution, distortion, field checks and measurements, experience and quality of

digitizing personnel. The degree of accuracy must be related to the project objectives, financial resources, time and staff capacities and considerations of sustainability.

The objective was to collect information useful for property taxation, urban planning and service delivery. The survey has produced two interlinked data sets:

1. Spatial data - Vectorization of geo-referenced high resolution satellite images produced a base map with data on the properties digitized on the satellite image and verified through the field survey. Additional layers for roads, informal areas, administrative boundaries and so on. can produce thematic maps, if required. Future data layers will include land parcel boundaries, road names, infrastructure and so on.

2. Attribute data: The property survey reflects the 2005 property characteristics of Hargeisa. The development of databases is time-consuming and costly. Donor support, however, helped produce the database but maintenance and operational costs should be borne locally through a percentage of the tax revenues.

Effective consultations and awareness campaigns were essential for implementing the property survey and assuring data/system compatibility. Database variables should be non-ambiguous, informative and useful in wider applications. Skills and experience to maintain the property taxation system after

transfer to the municipality has been lacking since the office personnel and surveyors were not municipal staff.

To use a GIS-based property database for taxation, decisions had to be taken on who is paying what. Owners and occupants should pay tax based on property value and type of use (commercial, residential and so on). Current tax calculations in Hargeisa only consider plot area rather than building size, location or number of floors and tax levels are based on a flat rate that does not reflect property value.

A major risk of property surveys is that the potential municipal revenues will not be realized unless the GIS database is simple, focused and quickly produces income. It is equally important that the database can be maintained and easily expanded with additional data sets.

To minimize property tax evasion, the taxation must be clearly linked to public works upgrades and visibly improved local environments. A small portion of the collected taxes must be used to pay for salaries, administration, database maintenance and updates and for collection, registration and enforcing the payments of taxes.

Other application of the GIS database in Hargeisa include commercial licence revenue collection by the Municipality, mapping of public properties, road classification, expansion of electricity main grid and expansion of water network.

HARGEISA PROPERTY TAX REVENUES

Year	Revenue (USD)	Taxable properties	Increase (%)
2004	144,417	15,850	---
2005	169,062		17
2006	241,983	47,323	43
2007	412,179	"	70
2008	588,754	"	42
2009	678,584	60,312	15
2010	697,708	60,826	3

measures to strengthen institutions and financial management as well as improve local revenue collection.

Following the discovery of oil in 1999, **Sudan's** GDP has grown fivefold to USD 53 billion in 2008, allowing investment in social and physical infrastructure. Irrigation projects absorbed as much as 41 per cent of development spending.²⁶⁵ However, despite decentralization policies, the rise of oil wealth has not translated into proportionate increases in local government budgets. Local authorities must finance their projects from their own sources and grants from the provincial resource allocation council. Following the partition, the bulk of the oil fields will be located in South Sudan and Sudan's oil earnings will be limited.

In 2007, in collaboration with its residents, the municipality of Hargeisa started a capital investment programme to develop its infrastructure and public services. To improve tax collection, UN-Habitat helped Hargeisa implement a property tax collection system that included a geographic information system database of all buildings linked to household surveys. (See Box 27). By 2008, property tax revenues had increased 250 per cent from 2005, allowing the city to begin investing USD 320,000 in paving roads and USD 80,000 to construct a bridge.²⁶⁶ Hargeisa is expanding rapidly and has been able to maintain and update the property database. Further technical support from development partners is needed.²⁶⁷

The Role of Civil Society

In principle, the rights to assemble and to form civil society organizations (CSOs) are protected by law in Southern Tier countries. Where they are allowed to operate, CSOs have an important effect in providing humanitarian and basic services, moderating conservative traditions, and introducing modern technology.

Attitudes towards civil society are perhaps most open in Comoros and Yemen. Only a few CSOs and human rights organizations, mostly international, operate in the **Comoros** but they are able to work without disturbance.²⁶⁸

In the other Southern Tier countries, however, years of conflict have eroded the public trust and the development of civil society remains limited. Political groups face particular controls, or are prohibited outright, as in Yemen.²⁶⁹ Higher education institutions, which are often the seeds of civil society development, are underdeveloped in Southern Tier countries. **Djibouti** recently established the country's first university but maintains government controls over the media outlets.²⁷⁰

In **Somalia**, due in part to the absence of a functional government, domestic civil society groups blossomed in 1991 to meet the population's needs. Many of these groups, composed of businessmen, women, community elders, remain in operation particularly in Somaliland.²⁷¹

In Puntland, CSOs suffer both from harassment by the government and opposition groups, discouraging popular participation. Ongoing security concerns and violence

towards civil society leaders, human rights activists, aid workers and journalists²⁷² have prevented humanitarian teams from reaching Mogadishu; other international NGOs have been expelled by Al Shebaab in 2010.²⁷³

According to UN OCHA in 2010, Mogadishu's accessibility for humanitarian efforts was 1 out of 100 possible points, compared with Baidoa (10), Bosasso (69) and Hargeisa (88).²⁷⁴ This is unfortunate because humanitarian aid is badly needed given the prevailing situation of drought and famine.

Women in Politics and Governance

Constitutional laws in the Southern Tier countries protect the rights of women to vote and hold elected offices. In reality, deeply ingrained traditions govern property transactions, business dealings and family relations, particularly in rural areas. Women routinely have fewer opportunities to gain education, employment and political office, particularly in **Yemen and Somalia**.

To improve conditions for women, countries are slowly trying to change old laws, establish ministries on women's affairs and quotas for female representation in elected bodies, including 25 per cent in parliament in **Sudan**.²⁷⁵

In 2002, **Djibouti** passed a new Family Law that replaced *Shari'a* as the national code and provides strong protection for the rights of women and children. The government has promoted girls' education and reserved 10 per cent of elected offices for women, who in 2008 gained their largest representation in office ever, with nine legislators – or 14 per cent – in the 65-person legislative assembly.²⁷⁶

In Puntland, Somalia, 30 per cent of district councillor positions are allocated to women as of 2007.²⁷⁷ In 2010, Somaliland reduced the number of ministries from 26 to 20, and welcomed two women ministers. The same year, four women were selected as councillors in Burtinle, Gardo, Garowe and Jariban. In **Sudan**, women are allocated 25 per cent of the seats in the National Assembly, and 10 per cent of the seats in Council of States.²⁷⁸

Despite these improvements, discriminatory customs persist, particularly in Somalia and Yemen.

In **Somalia**, while gender discrimination is illegal, society is strongly patriarchal and women have few rights, including that of determining their fertility and state of dress. Along with escalating urban violence, rape is on the increase.²⁷⁹ Although the Transitional Federal Government constitution requires 12 per cent representation by women in parliament, women occupied only 2.5 per cent of the seats following the expansion of the number of parliamentary seats in 2009.²⁸⁰ The 2002 household survey found that only 4 per cent of women participate regularly in local councils, 8 per cent occasionally.²⁸¹ Women's groups in Bosasso, Hargeisa, Mogadishu and smaller towns continue to lobby for women's rights.

In **Yemen**, consistently ranked as one of the countries with the highest gender disparities, there are only three women among 412 national representatives.²⁸² Women suffer from illiteracy, lower wages and employment discrimination.



▲ Dadaab, in Northern Kenya: the world's largest refugee camp. ©Homeros/Shutterstock

Many of the Southern Tier countries and their neighbours have been affected by civil strife, environmental degradation and poverty. These circumstances have had a significant impact on migration and urbanization through both internal and trans-boundary population movements. Migrants, including refugees, often settle in urban areas and this increases informal urbanization and the demand on services.

Most countries have experienced a net outmigration, with Somalia and Yemen having the largest emigrant populations. An estimated 50,000 migrants left **Somalia** annually from 2005 to 2010 or 8.7 per cent of the population. Migrants from other countries also cross Somalia with the hope of reaching Yemen across the Gulf of Aden.²⁸³ These numbers are the outcome of four categories of population movements:

1. Emigrants seeking better economic opportunities in the rich countries and sending remittances back to their families in their home countries;
2. Emigrants leaving the country more or less permanently in search of a better future elsewhere, remitting for short periods until the rest of the family can join them;
3. Refugees displaced by violent conflicts and droughts who cross into neighbouring countries for safety and survival, and who often settle in large refugee camps where they receive humanitarian aid; and
4. Immigrants moving into the country, who can either be returnees, migrants looking for employment or refugees from neighbouring countries.

Internally-displaced persons are not reflected in these figures

but have a significant impact on urban areas.

Sudan is both a transit country, and the region's only net receiver of migrants in search of economic opportunities as the country developed its oil production. Migrants come from Chad, the Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, India, Nigeria, Somalia, the West Bank and Gaza, and Yemen.

International Migration and Remittances

Djibouti's relatively stable political and economic climate and its strategic location close to the Gulf and international transportation links makes it attractive for migrants.²⁸⁴ Many settle in Djibouti City, while others go on to Europe, the Gulf, North America, and Australia. **Yemen** is used as a transit country by international migrants while also some 1.7 million Yemenis have emigrated to wealthier countries like Saudi Arabia (800,000 Yemenis alone are here) and other Gulf States.^{285 286} In the **Comoros**, where employment opportunities are limited, the prime destinations for emigrants are Europe, North America and Africa.²⁸⁷

Remittances have become a significant source of household income in the region. In 2008, **Sudan** and **Yemen** received just over USD 2.1 billion and USD 1.2 billion, equal to 3.9 per cent and 4.4 per cent of GDP respectively. Remittances have had a positive impact on urban household incomes. In Yemen, international remittances contribute to 4 per cent of household incomes.²⁸⁸ In **Somalia**, remittances support consumption as well as real estate investments and the creation of small businesses.²⁸⁹

International Migration of Refugees

Many of the Southern Tier countries are receivers of refugees. A significant proportion of the immigrants in **Sudan** (27.80 per cent), Yemen (20.60 per cent) and, to a lesser extent, Djibouti (7 per cent) were refugees in 2010, with many coming from Somalia and Ethiopia.²⁹⁰ **Somali** refugees displaced by internal conflict have resettled in Bosasso, Puntland, the Al Kharaz Camp in Yemen, the Ali Addeh camp in Djibouti, the Dadaab and Kakuma camps in Kenya and the Shedder camp in Ethiopia.²⁹¹

Yemen receives migrants from Somalia, Iraq, Ethiopia, Sudan and Eritrea, most settling in Aden, Sana'a and other urban areas.²⁹² The government of **Comoros** has offered protection to refugees that are in danger as a result of political, ethnic or religious persecution.²⁹³ **Sudan** continues to receive refugees from the Democratic Republic of Congo, the Central African Republic, Eritrea,²⁹⁴ Ethiopia and Chad. Approximately 30,000 refugees, mostly from Ethiopia and Eritrea, live in Khartoum.²⁹⁵

Internally Displaced People

The movements of internally displaced people (IDPs) as a result of conflict and environmental change have had a significant impact on the urbanization and demand for services in many of the Southern Tier countries. Accommodating and integrating these populations is a serious challenge.

Civil strife in **Sudan** has shaped population movements. Over 4 million residents have been displaced over the past 20 years due to conflicts over resources (primarily oil), inter-tribal and ethnic violence and attacks from Uganda's Lord's Resistance Army on the civilian population.²⁹⁶ With the signing of the peace agreement in 2005, 2 million residents

returned to **South Sudan**, putting additional pressure on housing, employment opportunities and services. Although the Comprehensive Peace Agreement ended the civil war in 2005, violence broke out again in 2009, killing 2,500 people and displacing 350,000 more.²⁹⁷ With the partition of the country in July 2011, there have been additional population movements: 3.5 million migrants and refugees from the south have started to return to their villages and an estimated 800,000 persons in the south are travelling to the north.²⁹⁸

To the west in Darfur, conflict has continued between the government and rebel groups, among rebel factions and between tribes. As a result of land occupation and the destruction of agricultural crops, many residents have fled the region and settled in urban areas, transforming Darfur from a primarily agricultural area to an urban one.²⁹⁹ There are approximately 1.7 million IDPs in Khartoum State of whom 1.3 million live in informal squatter camps around the city and the remaining 400,000 reside in official camps.³⁰⁰ Once in the cities, they often segregate themselves spatially according to tribal affiliations.³⁰¹

Years of internal conflict and severe droughts in **Somalia** have spurred internal and external migration³⁰² many seeking refuge in Puntland and Somaliland, others in the Afgooye Corridor in very dense, makeshift settlements without access to basic services.³⁰³ As fighting between the Transition Federal Government and the armed militia groups in Mogadishu continues, the unrest has led to food shortages and the interruption of trade activities, further increasing displacement.³⁰⁴

Yemen has had to deal with 150,000 IDPs from 2009 to 2010 as a result of ongoing political conflicts.³⁰⁵ There has also been internal displacement of an estimated 700,000 persons as a result of severe flooding in the Governorates of Hadramout and Al-Mahra.³⁰⁶ In **Comoros**, residents have displaced as a result of volcanic eruptions and flooding.



▲ Children play in a returnee camp on the outskirts of Aweil in Northern Bar El Ghazal, South Sudan. ©Siegfried Modola/IRIN



▲ Khartoum, Sudan. Khartoum is expected to reach megacity size of 10 million in 2045. ©Bruno Gilissen/iStockPhoto

Each of the Southern Tier Countries is witnessing the emergence of dominant cities, the largest of which are Khartoum, Sana'a, Aden and Mogadishu. Although warfare and violence have disrupted settlement patterns in some cities and distorted their normal expansion through population displacements and the development of large informal settlements in outlying areas, these areas have been integrated in the urban fabric as cities expand, and have developed into strong subsidiary nodes.

The massive population movements that followed the partition of **Sudan** affected cities in the North and South. Despite the loss of some residents, Khartoum is expected to reach megacity size of 10 million in 2045.

More importantly is the reshaping of the urban region. The most recent master plan calls for dividing the 538 villages in the Khartoum province into clusters linked to the city of Khartoum for which planned housing extensions will be developed. This scheme in effect lays out the spatial framework for the emergence of an urban region extending along the axis connecting Khartoum to the clusters in addition to the traditional growth corridors along the course of the Nile branches. Over time, some of the village clusters may coalesce to form significant growth nodes or satellite settlements. In Sudan, the road linking Khartoum to Port

Sudan has the potential of becoming an urban development corridor.

In **Yemen**, topography, history and the tribal structure of society have resulted in an inadequate transport infrastructure with disruptions in the interconnections between its cities. Sana'a, which has grown more or less organically, is extending along the six major roads radiating out of the city. As it grows, it will eventually form an Extended Metropolitan Region (EMR). The major road linking Sana'a to the port city of Hodeida may in time become a development corridor. Rough topography, however, constitutes the major constraint.

In **Somalia**, a region with extensive coastline, the absence of any coastal corridors is striking. The only incipient corridor is the coastal road linking Mogadishu to Kismayo through smaller coastal settlements. The road then turns sharply inland to cross into Kenya and reach Nairobi. This transnational corridor could benefit from the economic links between Kenyan and Somali businesses and investors once stability is restored in Somalia.

Djibouti's strategic location will continue to shape its growth patterns. The transnational coastal road leading to the international airport and then continuing on to Somaliland has the potential of attracting development along the alignment starting in the section south of the airport.

TABLE 78: TOTAL AND URBAN POPULATION ('000S) AND PERCENTAGE POPULATION URBAN

	1990	1995	2000	2005	2010	2015	2020	2025	2030
Total Population ('000s)									
Comoros	438	494	562	643	735	832	933	1,041	1,160
Djibouti	562	627	732	808	889	975	1,066	1,166	1,263
Somalia	6,599	6,525	7,399	8,360	9,331	10,607	12,237	14,152	16,360
Sudan	26,494	30,141	34,188	38,410	43,552	49,072	54,919	60,811	66,856
Yemen	11,948	15,148	17,723	20,649	24,053	27,980	32,232	36,698	41,342
Urban Population ('000s)									
Comoros	122	140	155	172	195	224	259	302	356
Djibouti	424	475	555	612	670	732	798	875	956
Somalia	1,956	2,049	2,458	2,939	3,505	4,299	5,268	6,451	7,851
Sudan	7,211	9,393	11,661	14,128	17,322	20,889	24,804	28,924	33,267
Yemen	2,577	3,688	4,776	6,083	7,714	9,707	12,082	14,803	17,844
Percentage Population Urban (%)									
Comoros	27.87	28.30	28.08	27.89	28.19	29.17	30.85	33.30	36.51
Djibouti	75.65	76.07	76.03	76.01	76.23	76.79	77.65	78.80	80.15
Somalia	29.66	31.43	33.25	35.19	37.45	40.06	43.02	46.33	49.86
Sudan	26.62	30.46	33.41	36.51	40.10	43.77	47.42	51.02	54.54
Yemen	20.93	23.76	26.27	28.94	31.80	34.89	38.19	41.69	45.35

Source: UN-DESA, WPP 2008 and WUP 2009

TABLE 79: NATIONAL AND URBAN POPULATION ANNUAL GROWTH RATES

	1990 -1995	1995 -2000	2000 -2005	2005 -2010	2010 -2015	2015 -2020	2020 -2025	2025 -2030
National Population Growth Rates (%)								
Comoros	2.39	2.24	2.21	2.29	2.07	1.78	1.57	1.46
Djibouti	2.15	3.13	1.97	1.76	1.61	1.51	1.57	1.41
Somalia	-0.23	2.51	2.44	2.27	2.74	2.64	2.57	2.46
Sudan	2.59	2.48	2.06	2.2	2	1.83	1.61	1.47
Yemen	4.63	3.16	2.91	2.86	2.74	2.57	2.31	2.05
Urban Growth Rates (%)								
Comoros	2.70	2.08	2.07	2.51	2.75	2.90	3.10	3.30
Djibouti	2.26	3.12	1.96	1.82	1.76	1.73	1.86	1.75
Somalia	0.93	3.64	3.57	3.52	4.08	4.07	4.05	3.93
Sudan	5.29	4.32	3.84	4.08	3.74	3.44	3.07	2.80
Yemen	7.17	5.17	4.84	4.75	4.59	4.38	4.06	3.74

Source: UN-DESA, WUP 2009 and WPP 2008

TABLE 80: AVERAGE ANNUAL RATE OF CHANGE OF URBAN AGGLOMERATIONS WITH 750,000 INHABITANTS OR MORE (PER CENT)

City	1990 -1995	1995 -2000	2000 -2005	2005 -2010	2010 -2015	2015 -2020	2020 -2025
Mogadishu	2.04	0.92	3.28	1.17	3.59	3.67	3.66
Khartoum	6.35	3.95	2.69	2.70	3.12	2.95	2.54
Sana'a	9.18	5.55	5.54	5.26	4.51	4.01	3.62

Source: UN-DESA. (2010). The World Population Prospects: The 2009 Revision. New York: UN-DESA.

TABLE 81: GDP PER CAPITA IN CURRENT USD

Country	2006	2007	2008	2009
Comoros	657	740	824	833
Djibouti	938	1,016	1,157	1,214
Sudan	921	1,151	1,404	1,294
Yemen	882	972	1,175	1,118

Source: World Bank Development Indicators, 2010

TABLE 82: REAL GDP GROWTH RATES (%)

Country	2008	2009	2010	2011
Comoros	0.6	1.1	2.1	2.5
Djibouti	5.8	5.0	4.5	4.6
Somalia	N/A	N/A	2.6	N/A
Sudan	7.0	4.5	5.0	5.1
Yemen	3.7	3.8	N/A	N/A

Sources: African Economic Outlook for Comoros, Djibouti and Sudan; CIA World Factbook for Somalia and World Bank Indicators for Yemen

TABLE 83: CONCENTRATION OF ECONOMIC ACTIVITIES IN YEMEN (AS %) ³⁰⁷

Sector	Sana'a	
	Establishments	Employment
Commerce and Small Services	58.9	31.1
Manufacturing	12.1	12.5
Hotels and Restaurants	7.1	7.4
Transportation	4.8	4.0
Other Activities	11.2	10.8

TABLE 84: SLUM POPULATIONS AS A PERCENTAGE OF URBAN POPULATIONS (2000S DATA)

	Comoros	Djibouti	Somalia	Sudan	Yemen
Urban Population	234,000	..	3,136,000	17,012,800	6,729,000
Slum Population	162,000	..	2,120,000	2,892,176	4,102,000
% Living in Slum	69	..	74	17	67

TABLE 85: PERCENTAGE OF HOUSEHOLDS EXPERIENCING HOUSING DEPRIVATIONS BY COUNTRY ³⁰⁸

	One	Two	Three	Four
Comoros	43.9	20.8	4.3	0
Djibouti	..	..	..	..
Sudan	17.8	35.8	31.0	9.6
Somalia	..	..	..	..
Yemen	39.9	18.1	7.9	1.4

TABLE 86: LEVEL OF MOTORIZATION IN THE SOUTHERN TIER COUNTRIES

	Comoros	Djibouti	Somalia	Sudan	Yemen
Roads (km, 2000)	880	3,065	22,100	11,900	65,144
% Roads paved (2000)	77	45	12	36	9
Km of Roads per 100 km ²	47*	13*	35*	0.5*	15 [^]
Motor Vehicles (per 1,000 people) (2007)	33	..	..	28	35
Passenger Cars (per 1,000 people) (2007)	31	..	..	20	..

Source: World Bank Development Indicators; * estimated for 2000; [^] actual 2005

TABLE 87: WATER AVAILABILITY AND USAGE

Country	Annual Availability			Annual Water Usage			% Use by Sector				
	Actual Renewable Resource Bm ³ /yr	Desalinated End Water Bm ³ /yr*	Waste-water Reuse Bm ³ /yr*	Per Capita Renewable Availability (m ³)			Bm ³ /yr	As a % of total water resources	Domestic	Industry	Agriculture
				2007	2015*	2025*					
Comoros	1.2			1446			0.01	0.8	48	5	47
Djibouti	0.3	0.0	Neg.	360	306	260	0.02	6	84	0	16
Somalia	14.7			1683			3.3	22	0.45	0.05	99.5
Sudan	65	0.0	0.0	1020	1369	1122	37	57	2.3	0.6	97.1
Yemen	2.1	0.02	0.03	94	70	50	3.4	160	8	2	90

Source: AFED 2010 Water Report; FAO Aquastat Database; UNESCO³⁰⁹

TABLE 88: 2008 ACCESS TO IMPROVED WATER AND SANITATION, %

	Improved Water Access			Improved Sanitation Access		
	Total	Urban	Rural	Total	Urban	Rural
Comoros	95	91	97	36	50	30
Djibouti	92	98	52	56	63	10
Somalia	30	67	9	23	52	6
Sudan*	62	59	64	42	65	25
Yemen	62	72	57	52	94	33

(Source: WHO/GHO Database) *Public Water Corporation of Sudan 2009

TABLE 89: 2007 NATIONAL ANNUAL EMISSIONS OF CARBON DIOXIDE

	Comoros	Djibouti	Somalia	Sudan	Yemen	Arab Countries	World
Total (kt of CO ₂)	121	487	601	11,512	21,958	1,441,989	30,649,360
Per Cap (t)	0.19	0.58	0.07	0.28	0.99	4.3	4.6
% Growth (1990-2007)	57	22	3,180	107	..	105	36

Source: World Bank Development Indicators

TABLE 90: PARTICIPATION IN THE WORKFORCE AND NATIONAL POLITICS BY WOMEN / MEN

	Comoros		Djibouti		Somalia		Sudan		Yemen	
	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂
Literacy rate of Women / Men (% literate aged 15 and above, 2008)	68	79					60	79	43	79
Labour Force Participation Rate by Women / Men (% of those aged 15-64 employed, 2008)	75	86	63	80	58	86	32	74	20	74
Year Women Received Right to Vote and (/) Stand for Election	1956		1946 / 1986		1956		1964		1967	
Year First Woman Elected (E) or Appointed (A) to Parliament	1993 E		2003 E		1979 E		1964 E		1990 E	
% of parliament (single or lower house) seats held by women (2010)	3		14		6.9		18.9		0.3	
% of parliament (upper house or senate) seats held by women (2007)							4		1.8	
% of ministerial positions held by women (2005)	..		5		..		3		3	

Sources: World Bank Gender Statistics, UN HDR 2007/08, MDG Indicators Database.

TABLE 91: IMMIGRATION DATA BY COUNTRY

	# of International Migrants in Country (2010)	# of Refugees in Country (2008)	% Population Foreign Born (2010)	Average Annual Net Migration (2005-2010)
Comoros	14,000	..	1.9	-2,000
Djibouti	114,000	9,200	12.8	..
Somalia	23,000	1,800	0.2	-50,000
Sudan	753,000	181,600	1.7	27,000
Yemen	518,000	140,200	2.2	-27,000

Source: UN DESA International Migration Wall Chart 2009

TABLE 92: REMITTANCES PAID AND RECEIVED IN THE SOUTHERN TIER, 2009 DATA

Country	Net ODA and Official Aid Received (in constant USD)	Remittances Received (current USD)	Remittances Received as a Percentage of GDP
Comoros	50,670,000		
Djibouti	162,170,000	4,276,366	3.1
Somalia	661,650,000		
Sudan	2,288,890,000	2,106,143,455	3.9
Yemen	499,690,000	1,160,000,000	4.4

Source: World Bank Development Indicators, 2009

TABLE 93: EMIGRATION AND IMMIGRATION STOCKS AND COUNTRIES

Country	Emigration		Immigration		
	Stock of emigrants as % of population	Top destination countries	Stock of immigrants as % of population	Refugees as a percentage of immigrants	Top source countries
Comoros	5.60	France, Madagascar, Tanzania, Egypt, U.S., U.K., Germany, Belgium, Canada and Bahrain	2	0	Madagascar, Mayotte, France and Tanzania
Djibouti	1.50	France, Ethiopia, Canada, Egypt, U.K., U.S., Belgium, Germany, Australia and Italy	13	7	Somalia, Ethiopia and Yemen
Somalia	8.70	Ethiopia, U.K., U.S., Yemen, Djibouti, Kenya, Egypt, Saudi Arabia, Canada and Sweden	0.2	3	Not available
Sudan	2.20	Saudi Arabia, Uganda, Yemen, Kenya, U.S., Chad, UAE, Australia, Jordan and Canada	1.7	27.8	Eritrea, Ethiopia, Chad, Nigeria, Egypt, Yemen, India, West Bank and Gaza, DRC and Somalia
Yemen	4.70	Saudi Arabia, UAE, U.S., Israel, Jordan, U.K., West Bank and Gaza, Sudan, Germany and France	2.1	20.6	Sudan, Somalia, Egypt, Iraq, West Bank and Gaza, Syria

Source: World Bank. *Migration and Remittances Factbook 2011*.

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The Arab world has played a very important role in the history of urbanization. It is the region where urban civilization was born and where urban matters have been addressed for centuries. The Arab urban civilization, as it has evolved over the past millennium, has generated some of the most beautiful cities in the world.

This publication is the first ever to comprehensively analyze urbanization processes in the Arab States through the review of its four sub-regions: the Maghreb, the Mashreq, the Gulf Cooperation Council countries and the least-developed Arab countries of the Southern Tier.

Although the region has the world's safest urban areas, these cities are also confronting daunting social, economic and political challenges. Western style democracy remains hard to adopt as Arab patterns of governance remain highly centralized. The availability of water and food poses similarly large challenges - especially at the urban level – as the future security of these two commodities could become one of the greatest risk factors to some Arab nations' social stability.

The region also needs to accommodate large numbers of urban in-migrants. Traditionally the source for this flow of people was rural to urban migration, but at present this only remains an issue in the least-developed Arab nations. Migration has become an international matter that directly affects urban development throughout the Arab world, whether it are economic migrants from Asia and other Arab States to the oil-rich Gulf Countries, migration from sub-Saharan Africa to the Maghreb in the hope of travelling on to the European Union, migration away from conflict and environmental degradation within the Arab region, or domestic migrations as in Sudan.

The overarching challenge for Arab States' governments is to reshape social and urban policies towards sustainable economic growth and adequate living conditions for rapidly expanding numbers of young and poor urban dwellers. But the confrontation with urbanity and modernity can only be resolved by the region itself, while the outcomes of policies to better integrate the Arab States among themselves and in the global economy will determine its future.

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