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UN HABITAT
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The National Report for the Third UN Conference on Housing and Sustainable Urban Development (HABITAT III) for the Kingdom of Saudi Arabia

The Ministry of Municipal and Rural Affairs and the National HABITAT Consultation Group in the Kingdom of Saudi Arabia

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Introduction

In 1976, the First United Nations Conference on Human Settlements, or HABITAT I, was held in Vancouver, Canada, where Governments discussed about the consequences of rapid urbanization and the need for effective human settlement policies and spatial planning strategies.

The Second United Nations Conference on Human Settlements, or HABITAT II, was held in Istanbul, Turkey in 1996. Entitled "The City Summit," HABITAT II brought together high-level representatives of national and local governments as well as private sector, NGOs, research and training institutions and the media to discuss global urban agenda and address urban challenges in countries across the world. The objectives of HABITAT II were to arrest the deterioration of global human settlements conditions and ultimately create the conditions for achieving improvements in the living environment of all people on a sustainable basis, with special attention to the needs and contributions of women and vulnerable social groups whose quality of life and participation in development have been hampered by exclusion and inequality, affecting the poor in general; to adopt a general statement of principles and commitments; and to formulate a related global plan of action capable of guiding national and international efforts through the first two decades of the next century. Universal goals of ensuring adequate shelter for all and human settlements for safer, healthier and more livable cities, inspired by the Charter of the United Nations, were discussed and endorsed at HABITAT II.

Twenty years from HABITAT II, the Third United Nations Conference on Housing and Sustainable Urban Development, or HABITAT III, is going to take place in 2016. The Government of Saudi Arabia established a National HABITAT III Consultation Group for the Kingdom of Saudi Arabia, comprised of representatives from the Ministry of Municipal and Rural Affairs (MoMRA), the Ministry of Economy and Planning (MoEP), the Ministry of Housing (MoH), the Ministry of Transport (MoT), the Central Department of Statistics and Information (CDSI), the ArRiyadh Development Authority (ADA), Alriyadh Municipality, Jeddah Development and Urban Regeneration Company (JDRUC) and King Saudi University.

This report, titled *The National Report for the Third UN conference on Housing and Sustainable Urban Development (HABITAT III) for the Kingdom of Saudi Arabia*, was developed by the Ministry of Municipal and Rural Affairs and the National HABITAT III Consultation Group in the Kingdom of Saudi Arabia in collaboration with the United Nations Human Settlements Programme (UN-HABITAT). Aiming to share experiences in the Kingdom of Saudi Arabia in responding to today's urban challenges, the report compiles achievements of the HABITAT II agenda in specific areas of (1) urban demography, (2) land and urban planning, (3) environment, (4) urban governance and legislation, (5) urban economy, and (6) housing and basic services, both at the national and local levels. The report also overviews challenges faced, lessons learned and the way forward for sustainable human settlements and urban development, with expectations to serve as a basis for formulation of the "New Urban Agenda" as stated in paragraph 6 of the General Assembly resolution 67/216.

I. Urban Demography

1. Managing rapid urbanization

Geography

The Kingdom of Saudi Arabia is the largest Arab State in Mashriq, occupying the majority of the Arabian Peninsula. The estimated size of the country is 2,206,714km^2, of which approximately 95% is dominated by desert. The country shares its borders with Jordan and Iraq to the north, Kuwait to the northeast, Qatar, Bahrain and the United Arab Emirates to the east, Oman to the southeast, and Yemen in the south, with access to both a Red Sea coast and a Persian Gulf coast.

The Kingdom of Saudi Arabia has 13 regions (Al Jawf, Northern Borders, Tabuk, Ha'il, Al Madinah, Al Qasim, Makkah, Al Riyadh, Eastern Region, Al Bahah, Asir, Jizan and Najran), each region with the capital city (Sakakah, Arar, Tabuk, Ha'il, Medina, Buraidah, Makkah, Riyadh, Dammam, Bahah, Abha, Jizan and Najran).

Major cities in Saudi Arabia

The national capital and also the largest city in the Kingdom of Saudi Arabia is Riyadh City. As of 2010, the population of Riyadh City was 5.2 million.

The cities of Makkah and Medina are known as some of the most famous religious cities in the world, especially for Muslims. Makkah is regarded as the holiest city in the religion of Islam and is a destination of a pilgrimage known as the Hajj, being home of the Kaaba, the Islam's holiest site. While the population of Makkah was 1.5 million in 2010, the city has approximately 15 million Muslim visitors every year, of which more than 2 million concentrated during a few-day Hajj period.

Medina is another holy city for Muslims, with its critical significance in the Islamic history as Muhammad's final religious base after the Hijrah as well as the location of his death in 632 AD. Similar to Makkah, Medina hosts large number of pilgrims in addition to its population of approximately 1.1 million as of 2010.

Jeddah is the principal gateway to the holy cities of Makkah and Medina, and also is the largest city in Makkah Region with the population of 3.4 million as of 2010. Jeddah is the second largest city in the Kingdom of Saudi Arabia with the largest seaport on the Red Sea, playing a strategic role as the commercial hub in the country. Recently, Jeddah began inviting capital investments to incubate advanced scientific and engineering technology.

Given their significance in the Kingdom of Saudi Arabia as well in the religion of Islam, cities of Riyadh, Makkah, Medina and Jeddah are key for the country to achieve sustainable development as it goes through pressure of rapid population growth and urbanization. Managing urbanization in Makkah, Medina and Jeddah, which accommodate more than 15 millions pilgrims annually in total, is equally critical managing urbanization in Riyadh, the capital of the country.

In addition to these four key cities, Dammam should be highlighted as the fifth largest city in the Kingdom of Saudi Arabia and also as the capital of Eastern Region where most

of oil industry of the country are concentrated. Dammam owns the largest seaport on the Gulf Sea and experienced the fastest economic growth in the country. The role of Dammam as the Eastern gate of the country should not be overlooked to achieve balanced development in the Kingdom of Saudi Arabia.

Development Plans

Since the early 1970s, the Kingdom of Saudi Arabia has been experiencing constant natural and social population growth throughout the country. The Government of Saudi Arabia developed its first 5-year Development Plan in 1970 to better respond to rapid population growth. As of September 2014, the ninth Development Plan is in effect and the tenth Development Plan is under preparation by the Ministry of Economy and Finance.

The ninth and the latest Development Plan aims to achieve balanced development in the country by preventing concentration of rapid urbanization in major cities and by enhancing economic, social and environmental roles played by medium and small cities across the country. The objective of the Development Plan underscores the importance of distributing the benefits of economic and social development in a balanced manner among all the regions in the country and thereby reducing regional disparities in infrastructure, social services, living standards and job opportunities. Reducing disparities between different regions of the country is expected to decelerate internal migration from rural areas to major cities that pose pressure on public utilities and infrastructure in major cities.

The ninth Development Plan focuses on national finance and economic development, aiming to achieve growth of various different sectors. On the other hand, the Development Plan lacks policy and strategy on spatial development, which should serve as the foundation for economic, social, cultural and ecological policies of the country.

National Spatial Strategy

In response to the recommendation of the ninth Development Plan that a comprehensive long-term spatial development strategy should be formulated as part of the Development Plan to ensure sustainable urbanization in the country, Deputy Ministry of Town Planning under the Ministry of Municipal and Rural Affairs developed the first National Spatial Strategy in 2001. It was approved by the Council of Ministers, and as of September 2014, is going through a periodic review process although still in effect.

The National Spatial Strategy consists of spatial guidelines and policies that are in line with the national development goals, which aim to achieve economic efficiency and social equity in the country as outlined in the Development Plan.

The overall goal of the National Spatial Strategy is to achieve balanced development in the Kingdom of Saudi Arabia and to build substantial linkages between rural and urban areas. More specifically, the strategy aims to achieve the following objectives:

- Promote a spatially balanced pattern of population distribution within the country;
- Minimize the negative consequences of rapid population growth in major cities;
- Ensure efficient utilization of existing infrastructure and public services;
- Support the overall growth of small and medium cities;

- Diversify economic centers in different regions to fully utilize their existing and potential resources;
- Support new development projects that contribute to link rural and urban areas;
- Support selected cities to function as 'growth centers' to prevent concentration of population in major cities;
- Improve administrative structures of selected growth centers; and
- Support development of cities in border areas to strengthen national security.

The National Spatial Strategy refers to national development corridors as an essential measure to manage long-term spatial development and to ensure effective and efficient integrations of different regions of the country. National development corridors identifies the most desirable and balanced hierarchy of cities, towns and villages, based on the concept of national, regional and local growth centers (Figure I.1-2). The National Spatial Strategy designates a number of medium and small cities to serve as 'growth centers,' based on the assumption that they are capable of accommodating population growth in the future. By accommodating and absorbing population growth, the growth centers are expected to prevent population influx to major cities. The National Strategy also emphasizes the importance of improving administrative structures of medium and small cities designated as growth centers.

Demographic change

The population of the Kingdom of Saudi Arabia has reached 29.9 million in 2013. In Riyadh City, the national capital and the largest city in the country, the population reached 5.2 million people in 2010. Table I.1-1 shows the demographic change in 13 regions during the period of 1992-2013. Riyadh region has the largest population growth rate of 4.6%, which is the highest among 13 regions. The rest of the regions indicate approximately 3-5% annual population growth. Table I.1-2 shows the demographic change in the ten largest cities in the country during the same period. Five major cities (Riyadh, Makkah, Medina, Jeddah and Dammam) and other cities that function as regional and local growth centers both experienced significant population growth.

According to the results of the population and housing censuses, the average population growth rate was estimated as 4.9% per year during the period 1974-1992, which had declined to 2.4% during the period 1992-2004. The breakdown of the population shows that in 2009, 73% of the total population in the country was Saudi and the remaining 27% was non-Saudi. The percentage of the non-Saudi population is expected to decline sharply in the future, given the reduction of foreign expatriates in the country. Despite foreseen deceleration of the population growth, the total population of the Kingdom of Saudi Arabia is still estimated to grow and reach 33.1 million in 2024 (Table I.1-3).

Given the increased concern on direct impact of population dynamics on sustainable development and economy the country, the Council of Ministers for the Kingdom of Saudi Arabia established a National Population Committee in 2007 to advise the Government on issues related to population and how they should be reflected to various policies and strategies in different sectors.

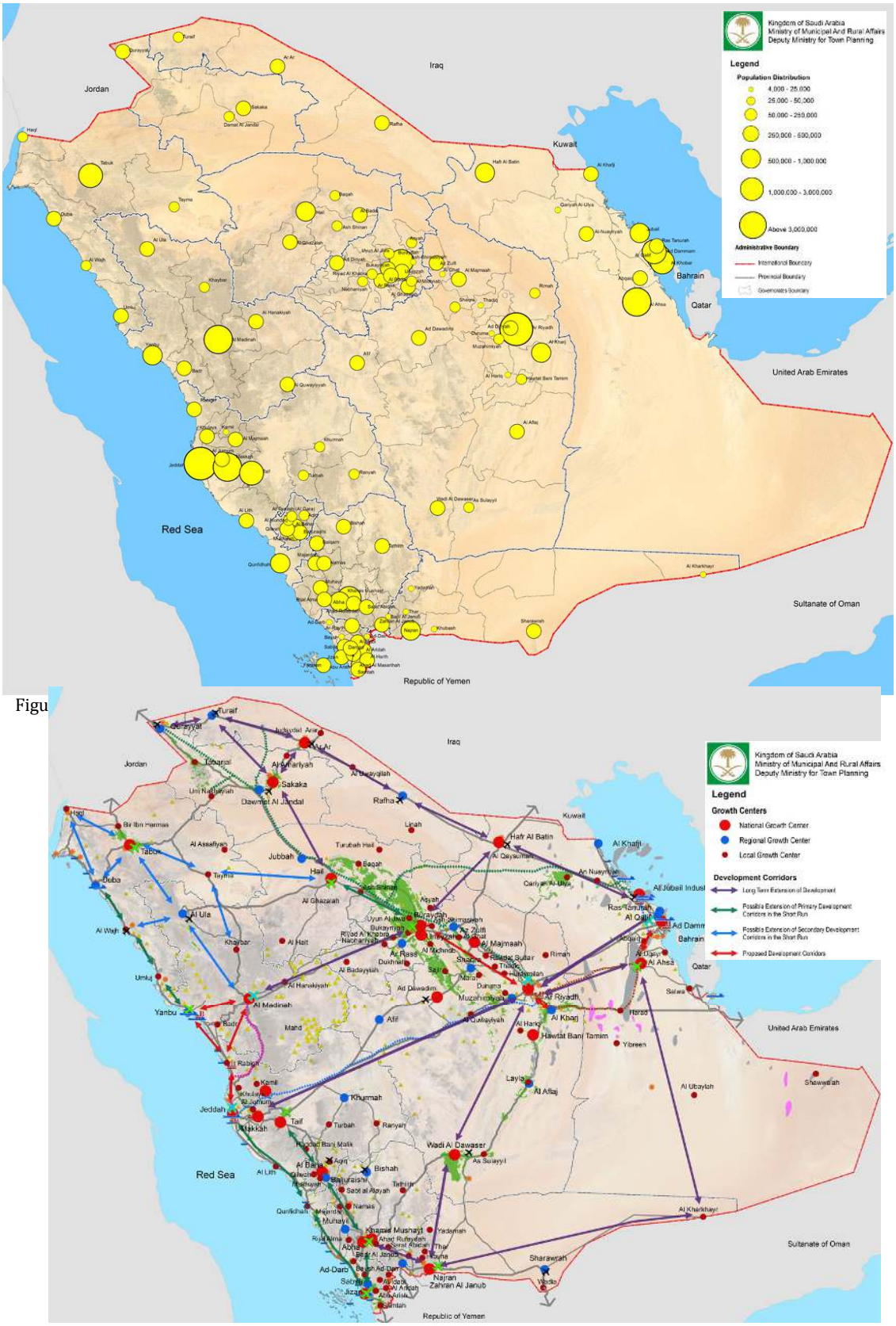


Figure I.1-2 Growth centers and existing development corridors in the Kingdom of Saudi Arabia, National Spatial Strategy

Table I.1-1 Population change in regions, the Kingdom of Saudi Arabia

Region	Capital City	Area (km²)	Population (Region)				Annual population growth 1992-2013(%)
			1992	2004	2010	2013	
1. Al Jawf	Sakakah	100,212	268,228	361,738	440,009	483,100	3.8
2. Northern Borders	Arar	111,797	229,060	279,971	320,524	351,000	2.5
3. Tabuk	Tabuk	146,072	486,134	691,716	791,535	866,800	3.7
4. Ha'il	Ha'il	103,887	411,284	526,882	597,144	654,700	2.8
5. Al Madinah	Medina	151,990	1,084,947	1,512,724	1,777,933	1,962,600	3.9
6. Al Qasim	Buraidah	58,046	750,979	1,015,972	1,215,858	1,337,600	3.7
7. Makkah	Makkah	153,128	4,467,670	5,797,184	6,915,006	7,688,600	3.4
8. Al Riyadh	Riyadh	404,240	3,834,986	5,458,273	6,777,146	7,517,000	4.6
9. Eastern Region	Dammam	672,522	2,575,820	3,360,031	4,105,780	4,533,800	3.6
10. Al Bahah	Bahah	9,921	332,157	377,900	411,888	450,700	1.7
11. Asir	Abha	76,693	1,340,168	1,687,939	1,913,392	2,095,900	2.7
12. Jizan	Jizan	11,671	865,961	1,187,587	1,365,110	1,497,400	3.5
13. Najran	Najran	149,511	300,994	420,345	505,652	555,100	4.0
Saudi Arabia	Riyadh	2,149,690	16,948,388	22,678,262	27,136,977	29,994,300	3.7

Data source: Central Department of Statistics and Information, the Kingdom of Saudi Arabia

Table I.1-2 Population change in major cities, the Kingdom of Saudi Arabia

City	Provincial capital	Population (City)			Annual population growth 1992-2013(%)
		1992	2004	2010	
1. Riyadh	X	2,776,096	4,087,152	5,188,286	4.8
2. Jeddah		2,046,251	2,801,481	3,430,697	3.8
3. Makkah	X	965,697	1,294,168	1,534,731	3.3
4. Medina	X	608,295	918,889	1,100,093	4.5
5. Dammam	X	482,321	744,321	903,312	4.8
6. Al-Hufuf		444,970	572,908	660,788	2.7
7. Taif		416,121	521,273	579,970	2.2
8. Tabuk	X	292,555	441,351	512,629	4.2
9. Buraidah	X	248,636	378,422	467,410	4.9
10. Khamis Mushayt		217,870	372,695	430,828	5.4

Data source: Central Department of Statistics and Information, the Kingdom of Saudi Arabia

Table I.1-3 Population projection 2004-2024 in the Kingdom of Saudi Arabia

	Population (Million)					Average annual growth (%)
	2004	2009	2014	2019	2024	
Total Population	22.67	25.37	28.19	30.53	33.11	1.9
Saudis	16.53	18.54	20.7	22.97	25.48	2.2
Non-Saudis	6.14	6.83	7.49	7.56	7.63	1.1
Net Dependency Rate of Saudis*	4.67	4.7	4.1	3.7	3.3	-

* Net dependency rate+ (No. of Saudi population)/(No. of Saudis employed)

Reference: The ninth Development Plan 2010-2014, Ministry of Economy and Planning, the Kingdom of Saudi Arabia (Data source: Central Department of Statistics and Information)

Figure I.1-3 Riyadh City, ArRiyadh Development Authority

2. Managing rural-urban linkages

The National Spatial Strategy 2001 aims to achieve sustainable and balanced development in the Kingdom of Saudi Arabia. Sustainable and balanced development in the country also implies reducing regional disparities by attracting private investment particularly to less developed regions, and mitigate pressures on the major cities including Riyadh, Macca, Medina, Jeddah and Dammam due to concentration of economic activities and internal migrations from rural areas.

To achieve balanced development, it is critical to strengthen linkages between urban centers and surrounding rural areas as well as to enhance absorptive capacities of medium and small cities, so that excessive concentration of economic activities and population on major cities can be mitigated. Improving the functions of medium and small cities can also significantly contribute to creating a more balanced hierarchy of cities, towns and villages, particularly within development corridors identified in the National Spatial Strategy (Figure I.1-2).

In an effort to strengthen urban and rural linkages, the Government of Saudi Arabia has committed to improve infrastructure and public service delivery all regions of the country. For instance, a number of national development policies, including the ninth Development Plan and the National Spatial Strategy, involve expansion of national energy network and improvement of road infrastructure that aims to link locations of key development corridors. Improvement of infrastructure is also strongly connected to the concept of creating a balanced hierarchy of cities, towns and villages in the country as outlined in the National Spatial Strategy.

Internal migration from rural to urban areas remains as a major challenge in achieving sustainable and balanced development in Saudi Arabia. The rural-urban migration has resulted in huge economic, social and environmental pressures onto the major cities, which required increasing amount of public financial resources to be used in these cities to improve their urban infrastructure. Stimulating economic activities in the least developed regions in the country based on their specific contexts and comparative advantages and thereby preventing further internal migration is therefore one of the top priorities in the country.

The National Spatial Strategy acknowledges that upgrading urban infrastructure of small and medium cities enhances the capacity of these cities to absorb larger population and also promotes economic activities. The diversification of economic foundation using medium and small cities will also enhance urban-rural linkages and results in a higher rate of national economic growth in the long run. Moreover, costs required for upgrading infrastructure in medium and small cities are relatively affordable compared to those required for the major cities.

In line with the National Development Strategy, respective regions were tasked to develop their own Regional Spatial Strategies to achieve balanced development throughout the Kingdom of Saudi Arabia. Figure I.2-1 shows the concept of functional classification of urban community in Al Madinah region, which builds hierarchies of cities, towns and villages in the region based on identified urban centers, village centers and villages. Figure I.2-2 shows how urban-rural linkages and hierarchies are structured in the region, and Figure I.2-3 indicates improvement of road networks that contributes to enhance the urban-rural linkages through ground transportation.

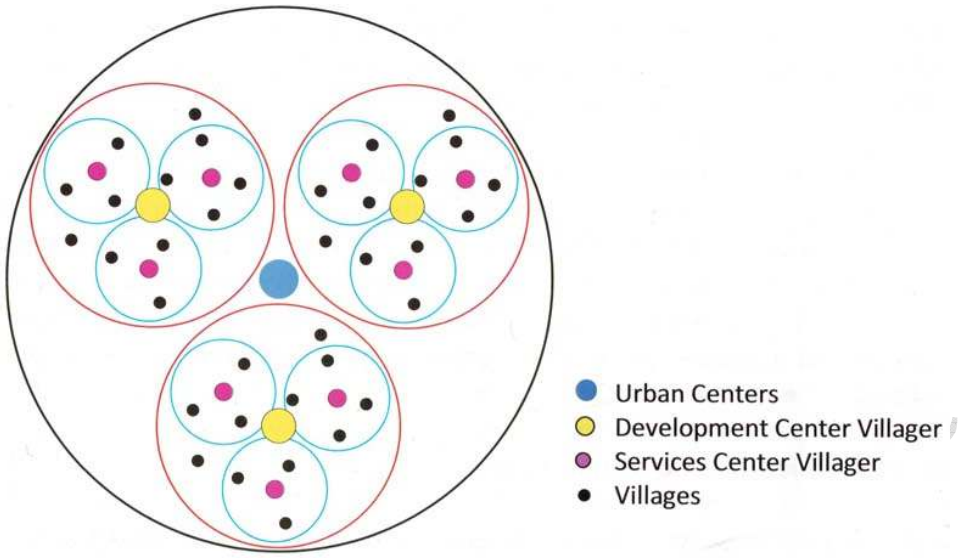


Figure I.2-1 Functional classification and hierarchy of urban communities

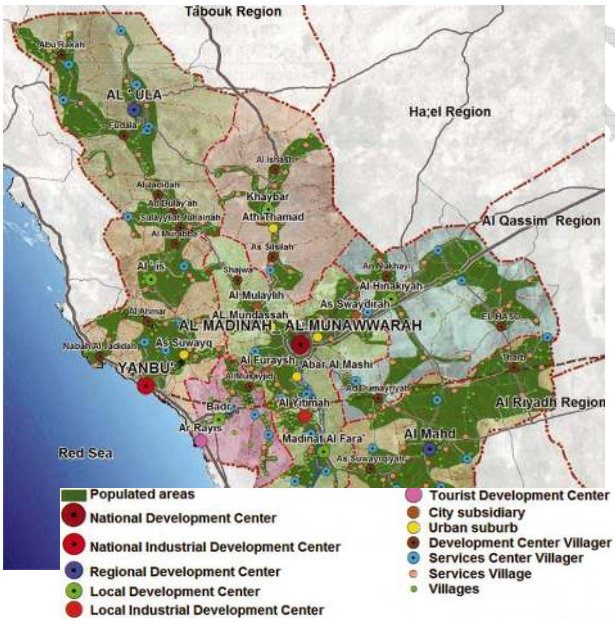


Figure I.2-2 Development centers in Al Madinah region Al Madinah Regional Development Strategy

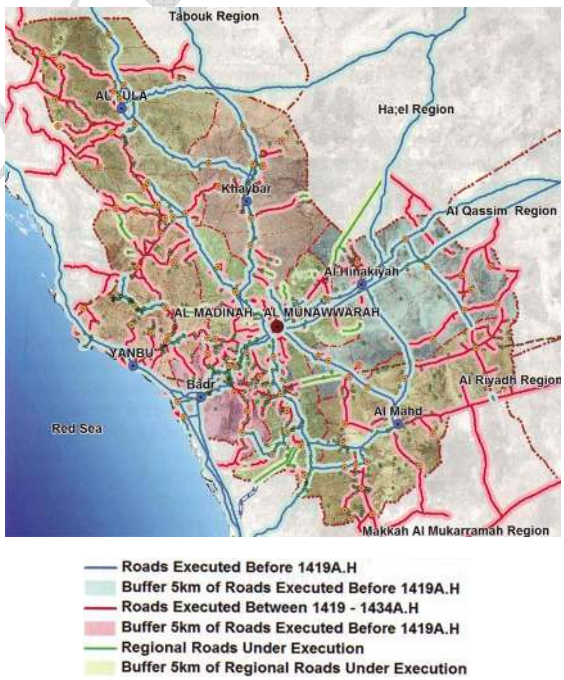


Figure I.2-3 Road network development in Al Madinah region (1999-2009) Al Madinah Regional Development Strategy

3. Addressing needs of urban youth

The Kingdom of Saudi Arabia has been going through changes in social, economic and cultural aspects of life. Youth represent an important factor in this development.

In 2012, population under the age of 15 constituted 30.4% of total population of 29.2 million (Table I.3-1). The percentage of youth under 15 within the Saudi population is much higher than that of non-Saudi population within the country. Such high percentage of youth poses challenges for the Government of Saudi Arabian as well as civil society in the country in meeting the education, training, employment, health, and recreation needs of the youth.

Based on this context, societal concerns related to youth are wider and more pervasive than those related to mere population size. These concerns are multi-sectoral, involving both economic and social dimensions. Lack of sufficient recreational opportunities and facilities for youth and the need to improve quality of existing facilities are ranked top priorities among needs of urban youth. In response to such needs, the Government added a new chapter on youth in the ninth Development Plan to address issues related to youth based on a holistic approach that involves economic, social and cultural dimensions of development, taking into account various roles played by youth and their needs. The plan indicates the 5-year budget of 7.2 billion Saudi Riyal for implementing various programmes and activities for youth.

As stated in the ninth Development Plan, the General Presidency for Youth Welfare is the government agency responsible for coordinating youth sports and social activities in over 107 towns and villages through 123 government facilities. These facilities include sports cities, youth hostels, sport centers, stadiums, gymnasiums and public squares. the General Presidency for Youth Welfare liaises with other government bodies and departments, particularly the Ministry of Social Affairs and the Ministry of Culture and Information, to conduct its activities.
The Ministry of Municipal and Rural Affairs provides urban services to youth at the municipal level by developing infrastructure and hosting cultural events targeting youth, such as municipal arenas and walking/running tracks as well as theatre productions and art exhibitions. For example, the Riyadh Municipality implemented an initiative that establishes 100 municipal arenas in various districts of the city during 2007–2009 period, with the aim of creating facilities for youth where they can enjoy sporting activities within their residential neighborhoods.

In 2013, the Ministry of Economy and Planning developed the National Youth Strategy for the Kingdom of Saudi Arabia to enhance participation of youth in the national development processes. The National Youth Strategy is a notable measure taken by the Government to strengthen the role of youth in achieving national development. As of 2014, the strategy is being reviewed by the Council of Ministers to be officially endorsed.

The National Youth Strategy identifies the priorities, directions and practical activities in support to the development of youth. As an official government strategy, it raises the profile of youth and serves as a national vision, framework, and common understanding on how youth should be involved in national and regional development of the country.

Figure I.3-1 Youth study visit to ArRiyadh Development Authority (ArRiyadh Development Authority)

Table I.3-1 Population structure in 2012, the Kingdom of Saudi Arabia

Age group	Population (2012)					
	Total	%	Male	%	Female	%
Total	29,195,895	100.0	16,543,836	100.0	12,652,059	100.0
0-4	3,167,691	10.8	1,633,572	9.9	1,534,119	12.1
5-9	2,952,321	10.1	1,513,790	9.2	1,438,531	11.4
10-14	2,747,749	9.4	1,400,265	8.5	1,347,484	10.7
15-19	2,522,817	8.6	1,272,690	7.7	1,250,127	9.9
20-24	2,367,651	8.1	1,205,747	7.3	1,161,904	9.2
25-29	2,531,191	8.7	1,407,320	8.5	1,123,871	8.9
30-34	2,977,277	10.2	1,829,598	11.1	1,147,679	9.1
35-39	2,869,678	9.8	1,806,034	10.9	1,063,644	8.4
40-44	2,242,581	7.7	1,456,742	8.8	785,839	6.2
45-49	1,616,863	5.5	1,091,008	6.6	525,855	4.2
50-54	1,142,848	3.9	750,777	4.5	392,071	3.1
55-59	774,226	2.7	483,991	2.9	290,235	2.3
60-64	486,001	1.7	281,396	1.7	204,605	1.6
65-69	314,687	1.1	166,489	1.0	148,198	1.2
70-74	206,964	0.7	104,259	0.6	102,705	0.8
75-79	130,712	0.4	65,183	0.4	65,529	0.5
80+	144,638	0.5	74,975	0.5	69,663	0.6
(Under 15)	8,867,761	30.4	4,547,627	27.5	4,320,134	34.1

Reference: 2012 Demographic Yearbook, the UN Department of Economic and Social Affairs

Figure I.3-2 Children attending an Urban Workshop (ArRiyadh Development Authority)

4. Responding to the needs of the elderly

Support to elderly people is an important factor for family and society in general. The support system to elderly in the Kingdom of Saudi Arabia has three interlinked dimensions: The first is healthcare provided by health institutions; the second is social support provided by competent state institutions; and the third is sustainable support provided by family members. In the Kingdom of Saudi Arabia, communities are generally respectful to older people, willing to provide care and support. In urban areas, universal design is widely adopted in basic infrastructure, particularly in those that are constructed in recent years. Still, there are many facilities that are not friendly for older people.

Planning and implementing social support and services to meet needs of older people requires development of mechanisms to systematically measure and evaluate performance of such services, which should be conducted by research institutions with appropriate expertise and competencies under the supervision of the Ministry of Social

Affairs. Improvement in the quality of social support to older people should also be based on a participatory approach that links the work of the government authorities with that of civil society organizations. While active role of civil society organizations is essential in providing social support to older people, as traditionally seen in the Kingdom of Saudi Arabia, introduction of systematic performance evaluation mechanism is a key in achieving effective social services.

5. Integrating gender perspectives into urban development

Historically, active participation of women in social and economic activities has not been common in the Kingdom of Saudi Arabia. However, circumstances surrounding women in the country have changed drastically in the past decade. Recently, the Government added a new chapter on women to the ninth Development Plan, which is considered as a turning point that catalyzed active participation of women in the society of Saudi Arabia. This new chapter of the Development Plan also calls for coordination mechanisms between different government entities that enable effective integration of different frameworks outlined in the plan, aiming to ensure social cohesion.

To date, female participation in the labour market has been concentrated on the education sector, where 77.6% of female labour force, of which 84.8% with a bachelor degree, belongs. It is clear that employment opportunities for educated females are mostly available in teaching. Therefore, in recent years, Saudi women have made rational choice to specialize in education, where job opportunities for women are concentrated. However, with the gradual saturation of education sector, it is foreseen that graduates with degrees in education may face increasing difficulties in finding jobs that meet their aspirations.

In this context, the ninth Development Plan sets key objectives to promote women's participation in society, including those related to urban development:

- Enable Saudi women to participate in achieving development goals;
- Improve status of women and their influence within family and society;
- Enhance women's participation in providing community development and social care;
- Promote women's participation in economic activities and provide facilities required to increasing their participation;
- Enhance quantity and quality of education for girls at all stages;
- Improve quality of services provided to beneficiaries of social security services;
- Develop effectiveness and efficiency of government bodies and performance of civil society organizations in development and social care; and
- Support social research and development agencies in the country.

The role of women in governance has also been reexamined recently. In September 2011, the King of Saudi Arabia announced that women would be granted the right to both vote and stand for election from 2012, which means that women can participate in the municipal elections. To enhance women's participation in municipal elections, numbers of support programme were launched with the support of the Government.

For instance, 'Sharika' programme aims to strengthen and promote full and effective political participation of Saudi women in Municipal Councils. The programme encouraged representatives of media to join as a strategic partner, based on an understanding that participation of media is vital in raising awareness of the importance

of empowering Saudi women. Saudi women's participation in the municipal election is planned to take place starting from 2015 election. Another example of women's participation in governance is that women had been allowed to hold positions on boards of chambers of commerce. In 2008, two women were elected as the board member of the Jeddah Chamber of Commerce and Industry.

6. Challenges faced and lessons learned

In the 1990s, the Government recognized that one of the key challenges faced by the Kingdom of Saudi Arabia is to achieve balanced and sustainable development while going through rapid population growth. Major cities, particularly Riyadh, Makkah, Madina, Jeddah and Dammam, were receiving influx of people from rural areas seeking for job opportunities and better quality of life. Demands for urban infrastructure, public facilities and housing in the major cities increased as the population grew, but the Government was not able to respond to such rapid change. The Government acknowledged that it is critical to control population influx into major cities to solve regional disparities. For this purpose, the Government started enhancing capacity of medium and small cities, including support to local economy, expansion of job markets and improvement of living standards.

To achieve balanced and sustainable development, a comprehensive and long-term spatial development strategy, consisting of spatial guidelines and policies in line with the national development goals, was needed. The Ministry of Municipal and Rural Affairs developed the first National Settlement Strategy 1980-2000, which was later enhanced and redesigned into the first National Spatial Strategy in 2001. The National Spatial Strategy identified key development corridors, growth centers at national, regional and local levels, and plans to link growth centers to eliminate regional disparities and to achieve sustainable development throughout the country. The concept of growth centers and linking them was also adopted in spatial plans developed at the regional level. Public investments were planned based on these spatial plans so that the investments made will directly contribute to reduce regional disparities and the resulting internal migration.

The recent periodical review of the Development Plan identified additional challenges faced by the country, notably youth, elderly and gender issues. Recognizing the importance of addressing these issues, the ninth Development Plan includes chapters on youth and women, respectively. The chapter on youth stipulated that the Government should note high proportion of youth in the overall population, and resulted in the development of the National Youth Strategy. The chapter on women highlights the importance of promoting women's participation in social and economic activities as well as policy-making and governance processes. The need to support elderly was also addressed in the ninth Development Plan, advocating for improvement of building standards and enhancement of social services.

7. Visions for the future

In response to challenges faced, the Government of Saudi Arabia aims to address the following issues:

(i) Achieve balanced development and strengthen linkages between cities, towns and villages

- While population growth in major cities is still relatively high, the rate and speed of growth has decelerated and became close to other regional capitals. The Government continues to enhance capacity of medium and small cities by investing on public infrastructure and facilities that attract private investments and vitalize local economy, which will lead to creation of job opportunities.
- The public investments will be planned and implemented in ways that will strengthen linkages between cities, towns and villages. This will be achieved by providing and improving road infrastructure, public transportation and basic services to prevent outflow of rural population to major cities.

(ii) Respond to emerging needs accompanying the change in population structure

- In 20 years, a significant proportion of youth population will move up to another age group, creating needs for different types of housing and public services. The Government will carefully forecast the shift in population structure and address emerging needs of different age groups and geographical locations in order to achieve balanced development in the country.
- There are number of policies that may affect future population structure of the country. Reducing numbers of expatriate workers and increasing job opportunities for Saudis will definitely influence future population structure and associated needs.
- The Government will lead public investments taking into consideration changes in population structure.

(iii) Implement mechanism for new national social strategies

- The Kingdom of Saudi Arabia has been going through dynamic social changes, partially resulting from rapid population growth. The Government encourages youth to take increasingly active role in communities and policy-making processes, as endorsed in the ninth Development Plan as well as the National Youth Strategy.
- The Government also supports women to play more active role in communities and policy-making processes, as also endorsed in the ninth Development Plan.
- The Government is in a process of developing new social strategies to support youth and women. A mechanism that monitors and evaluates the progress and achievements of such strategies need to be built to ensure transparency and accountability of the activities.

II. Land and Urban Planning:

1. Ensuring sustainable urban planning and design

The Kingdom of Saudi Arabia is experiencing rapid urban growth, which results in increasing energy consumption in the country. Population growth and rapid urbanization under combined with severe desert climate throughout the country made Saudi Arabia one of the world's largest energy consumers. It is estimated that the national annual energy consumption in the Kingdom of Saudi Arabia is three times higher than the global average. Large energy consumption in cities imposes negative impact on the national economy and accelerates global warming as a result of increasing CO_2 emission. For sustainable urban development, limited energy resources must be used efficiently and wisely. The rapid urban growth in the Kingdom of Saudi Arabia and the subsequent energy consumption inevitably made the country consider the need for major strategies for conservation of resources.

Key issues that are strongly related to urban energy consumption in cities include urban structure, urban transport, public spaces, urban infrastructure and building design/technology. In 2013, the Ministry of Municipal and Rural Affairs and other line ministries developed "Sustainable Urban Planning Guidelines for Urban Growth" in the Kingdom of Saudi Arabia, which addresses these key issues to achieve sustainable urban planning and community design and thereby aims to reduce energy consumption.

The Sustainable Urban Planning Guidelines consist of two major parts, primarily targeting communities with the size of several building blocks that accommodate 2,000 to 5,000 populations that but also able to respond to neighborhood. The guidelines specifically aims for:

- Reduction of transportation-related fuel consumption through smart growth, applicable density, mixed-use and transit-oriented development; and
- Reduction of energy consumption at the municipal level through district cooling, water conservation and building energy efficiency.

These guidelines should be applied through two processes: First, neighborhood unit should be designed and planned in line with the guidelines. Neighborhoods are categorized into four different types, i.e. low-density, mid-density, high-density and urban city center, based on their urban form and transportation infrastructure characteristics, as listed in Table II.1-1. Second, multiple units of the neighborhood building blocks should be designed in line with the neighborhood mix guidelines. The standards for each neighborhood type are outlined in the guidelines using the following criteria:

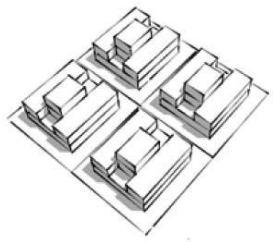
- Density of land use;
- Diversity of land use;
- Neighborhood location in relation to existing urban centers;
- Availability of public transportation system and station amenities;
- Streets designed for transit and non-motorized transportation; and
- Parking design.

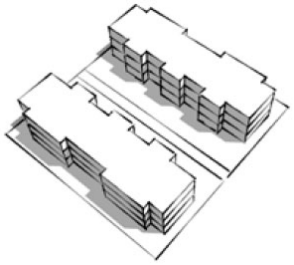
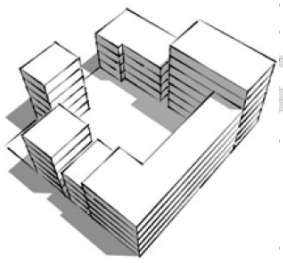
The guidelines provide generic performance standards for each neighborhood type, not the design specifications. For example, the guidelines recommend target density and minimum floor area ratio for each neighborhood type. The specific building designs, including setback, block size, etc. that are used to achieve those recommended density, are not mentioned in these guidelines. Therefore the guidelines are the most suitable to be used at the initial phase of planning to build a new community.

The newly built communities should take the form of Transit Oriented Development, with groups of higher density neighborhoods clustered around higher capacity transit services and lower density neighborhoods more dispersed. Within each neighborhood, the walkability and diversity guidelines must be met. The urban form and transportation investment guidelines are also required to lead new urban development in the country. Such guidelines should be applied at the community level in cities or new development areas with population ranging from 5,000 to 300,000 or more.

The Sustainable Urban Planning Guidelines for Urban Growth will be integrated into the standards on planning permission and development control, which is under the review by the Ministry of Municipal and Rural Affairs as of 2014.

Table II.1-1 Urban Planning and Transport Guidelines for Sustainable Development

Place Type	**Land Use Criteria**	**Transportation Investment Criteria**	
Neighborhood Type	Density, Diversity, Location	Service, Stations, & Vehicle Sharing	Auto Infrastructure, Parking, & NMT
1. Low Density Development Guidelines • Low-density neighborhoods mostly consist of individual housing units that accommodate single family per unit, disconnected with each other, in an automobile-oriented transport design.			
Individual housing units detached with each other 	• 4-8 HH/Hectare • 1,000-3,999 people/ km2 • Local mosque, local retail, local park within 500 m • Juma mosque, schools, commercial, municipal offices within 1500 m • Infill or adjacent	• Para-transit or shuttle service • Bus stations within 2 km for employer and other long distance trips • Shaded station pavilions in employer pick-up areas	• Pedestrian cut-through to allow more direct access to destinations • Sidewalks are even and not disconnected in any areas • Parking requirements reduced 50% or eliminated for all development and priced residential parking passes required • Priced residential parking passes considered • Separated bike lanes on major roads
2. Mid-Density Development Guidelines • Mid-density suburban or urban edge development with 3-4 story housing units, accommodating either multiple families or zero lot line single families. Public transit- and pedestrian-friendly design with some mixed land use.			
Suburban or urban edge devel 	• 9-14 HH/hectare • 4,000-6,999 people/ km2 • 500-600 m2 lot sizes • Local mosque, local retail, local park within 400m • Juma mosque, schools, commercial, municipal offices within 1300 m • 15-20% mixed-use by land area • Infill or adjacent and within 2km of Downtown place type	• Transit service with <15 minute headways during peak periods • Bus, BRT, Trolley or streetcar • Dedicated transit ROW on major corridors • Transit stops within 500m of all households • Real-time bus updates and signage	• Crosswalks and pedestrian paths are available through neighborhoods and to access commercial areas • Raised pedestrian crosswalks, built with a separate material than streets • Multi-family residential parking unbundled and shared with commercial parking • Higher costs for 2nd residential parking pass • *Separated bike lands on 50% of roadways

			• *Bike parking facilities near transit stations (* Recommended for campuses and within neighborhoods or smaller communities)
3. High Density Development Guidelines • High Density Downtown center or inner city neighborhood with taller housing units and commercial buildings; > 5 story buildings generally developed as nodes around fixed guide-way transit stations. Has pedestrian-friendly street design with many parcels of mixed use, with commercial facilities on the ground level.			
Mixed-use urban neighborhoods near center city 	• 15-20 HH/hectare • 7,000-9,999 people/ km2 • FAR 1.5 minimum • Local mosque, local retail, local park within 300 m • Juma mosque, schools, commercial, municipal offices within 1000 m • 35-40% mixed-use by land area • Infill or adjacent to larger urban area	• Transit service with <10 minute headways during peak periods • Bus, BRT, LRT, Commuter rail, PRT • Dedicated transit ROW on major corridors • Transit stops within 500m of all households • Real-time bus updates and signage	• Shaded pedestrian walkways per street design • Pedestrian crossings • 25% Auto friendly streets • 50% Shaded Transit/Pedestrian Friendly streets • 25% Shaded Transit/Pedestrian Only streets • Multi-family residential parking unbundled and shared with commercial parking • No surface off –street parking • Pricing by hour of day for non-residents in commercial areas • *Bicycle paths per street design • *Bike parking facilities every 500m (* Recommended for campuses and within neighborhoods or smaller communities)
4. Urban City Center Development Guidelines • Urban city center with many high-rise buildings that are closely spaced around extensive fixed guide-way transit or subway. Most buildings are mixed use with commercial facilities on the ground level.			
High density mixed-use, transi cente 	• 21+ HH/hectare 10,000+ people/ km2 FAR 2 minimum Local mosque, local retail, local park within 250 m Juma mosque, schools, commercial, municipal offices within 800 m >40% mixed-use by land area • Infill, core of city	• Transit service with <5 minute headways during peak periods • Bus, PRT, BRT, LRT, Heavy Rail (Metro) • Dedicated transit ROW on major corridors • Climate controlled transit stops within 500m of all households • Real-time bus updates and signage	• Indoor and shaded cut-through pedestrian walkways • Pedestrian crossings • 50% Shaded Transit/Pedestrian Friendly streets • 50% Shaded Transit/Pedestrian Only streets • Unbundled and shared residential parking • No surface off –street parking • Pricing by hour of day for non-residents in commercial areas • *Bicycle paths per street design • *Bike parking facilities every 500m (* Recommended for campuses and within neighborhoods or smaller communities)

Reference: Sustainable Planning Guidelines for Urban Growth in the Kingdom of Saudi Arabia (2013), MoMRA

Figur

Figure II.1-2 Riyadh City, Downtown Urban Regeneration (Housing Area), ArRiyadh Development Authority

2. Improving urban land management and addressing urban sprawl

The Government of Saudi Arabia developed its spatial plans in four different levels: national, regional, local and district levels. The National Spatial Strategy is the national-level spatial plan drafted by the Ministry of Municipal and Rural Affairs. Under the National Spatial Strategy, Regional Spatial Strategy was developed in every 13 regions in the country. Regional Spatial Strategy identifies geographic characteristics as well as hierarchies of cities, towns and villages, and provides guidance on overall structure of land use and infrastructure network in the respective region. At the local level, there are

two types of plans: one is Comprehensive Strategic Plan (Figure II.2-1, 2-4) developed by urban development authorities in major cities; another is Local Plan developed by municipal authorities in medium and small cities. In major cities, structural policy is prioritized than detailed land use zoning policy. Therefore, Comprehensive Strategic Plan identifies key spatial structures that are similar to that provided in Regional Spatial Strategy. In medium and small cities, Local Plan focuses more on detailed land use plans, including plans for basic infrastructure network and land use control such as zoning. Zoning plan in Local Plans specifies land use, building coverage, building setback and building stories (Figure II.2-5). At the district level, Action Plan is being prepared with the aim of clarifying detailed land use plans, including road construction, land subdivision, infrastructure, and size and layout of buildings. Action Plan is required to plan and implement certain level of development (Figure II.2-6).

In addition to Comprehensive Strategic Plans and/or Local Plans developed by Urban Development Agencies and Municipalities, the Ministry of Municipal and Rural Affairs sets Urban Growth and Development Boundaries called "Nitaque Omrani" to control urban expansion and to prevent urban sprawl in outskirts of cities without adequate urban infrastructure installments (Figure II.2-3).

As of September 2014, there are two Development Boundaries defined by urban development periods, titled "Phase I (up to 1435 AH)" and "Phase II (1435-1450 AH)" respectively. There is another Development Boundary titled "Urban Development Limit," which defines maximum development area in a given city. Recently, the Ministry of Municipal and Rural Affairs has proposed to divide the development boundary of Phase II into three periods in order to control urban extension more strictly and precisely. According to Comprehensive Strategic Plans and/or Local Plans, development projects should be located only within the territorial boundary of Phase I and II. However, national or regional development projects including industrial towns, universities, airports, recreational and touristic centers that are approved by line ministries, can be exceptionally located outside of the Phase I and II boundary if no appropriate location can be allocated for the projects within the set boundary.

Therefore, while all urban development proposals should be located within the development boundaries in principle, exceptions are allowed for development projects with special purposes that are approved by the Government. These development boundaries contribute to direct lead urban developments to locations closer to urban areas by imposing additional development standards.

The Ministry of Municipal and Rural Affairs had developed an operational manual on the Urban Growth and Development Boundaries, which stipulates a number of general development principles, to ensure different levels of spatial strategies are appropriately coordinated. The operational manual states that:

- Strategic development projects that are part of the spatial strategies, including major road and railway networks passing through private lands, should be the most prioritized than any other development projects;
- Development projects outside of the Urban Growth and Development Boundaries is only permitted with the approval of the Ministry of Municipal and Rural Affairs; and
- Large-scale development projects should follow specified detailed standards.

The manual also defines development standards that owner of land and/or development enterprises are obliged to comply with. These development standards are

Table II.2-1 Strategies and plans for urban land management in the Kingdom of Saudi Arabia

Spatial Plans/Land Management Plans			Tool	Responsible bodies
Spatial Plans	National Spatial Strategy 2001 (National)		National land use strategy	Ministry of Municipal and Rural Affairs (MoMRA)
	Regional Spatial Strategy (Regional)		Regional land use plan	Regional Offices
	Local Spatial Strategy (Local)	Comprehensive Strategic Plan for major cities	Land use plan and zoning linked to building codes and Urban Growth and Development Boundaries	Urban Development Authorities
		Local Plan for medium and small cities	Land use plan and zoning linked to building codes and Urban Growth and Development Boundaries	Municipalities
	Action Plan		Detail of development including arrangements of roads, buildings and infrastructure	Urban Development Authority/ Municipalities
Urban Growth and Development Boundaries (Municipal level)	Phase I (up to 1435 AH)		Development standards	MoMRA/Municipalities/Urban Development Authorities
	Phase II (1435-1450AH)	II-1 (1435-1440)		
		II-2 (1440-1445)		
		II-3 (1445-1450)		
	Urban Development Limit			

defined based on different strategic categories of national, regional and local centers identified in the National Strategic Plan as follows:

National Growth Centers
- Residential sub-division roads must be paved, asphalted and lit;
- Water supply and sewage system, telephone lines and electricity network must be installed and connected; and
- Rainwater disposal system must be installed and connected.

Regional Growth Centers
- Residential sub-division roads must be paved, asphalted and lit;
- Electricity network must be installed and connected;
- Water supply system must be installed and connected (if water source or a primary network is available); and
- Sewage system must be installed and connected in particular cities.

Local Growth Centers
- Residential sub-division roads must be asphalted; and
- Electricity network must be installed and connected.

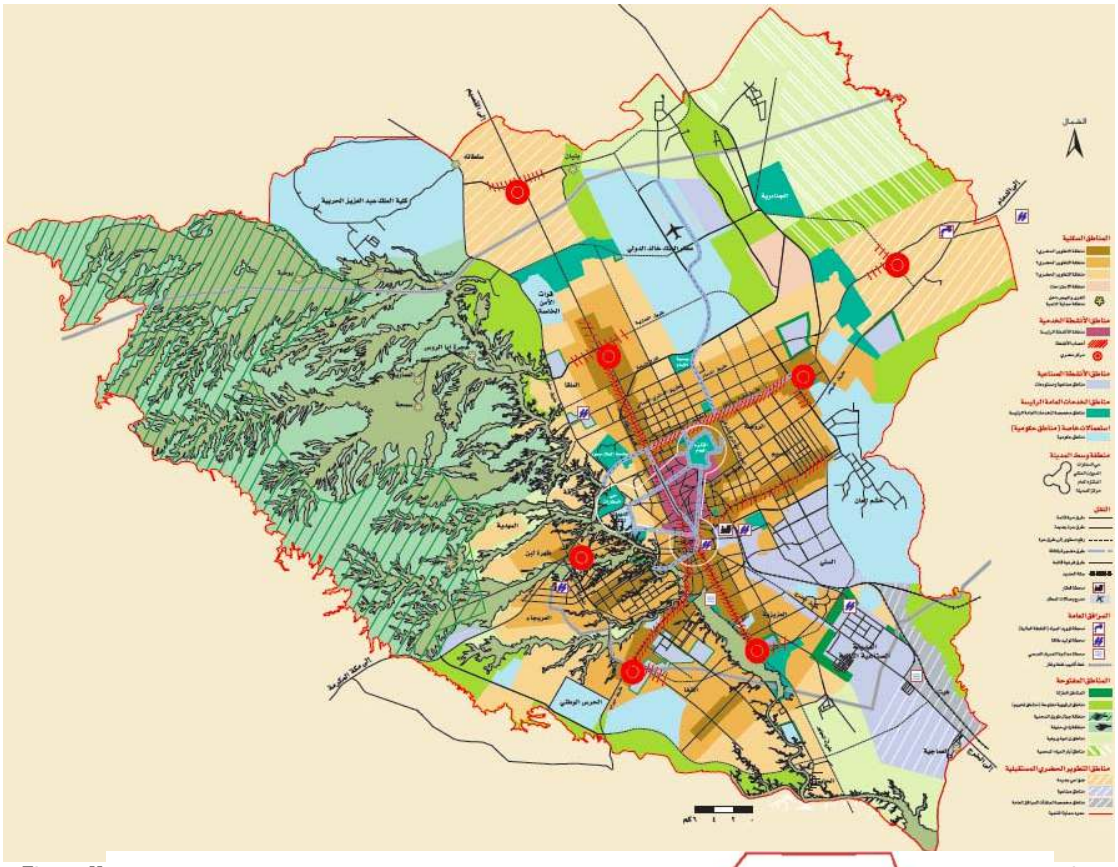
Other towns and villages (within the development boundaries)
- Sub-division roads must be asphalted.

In principle, the Government encourages development within the Phase I development boundary, in order to build compact cities that can offer effective and efficient public services including transport, power supply, water supply and sewage system and waste management. Additional development standards are imposed to landowners and/or development enterprises who plan to develop their land within the Phase II development boundary, when they develop their land before its development periods (1435-1440AH/1440-1445AH/1445-1450AH).

New development projects proposed before the development period in the Phase II are obliged to allocate certain percentages of their sub-divided plots to be used for buildings. Some parts of such allocated plots will be used for public purposes by constructing roads, footpaths, parks and other urban infrastructure. The percentage of sub-divided plots to be allocated for public purposes varies depending on the functional classifications of cities, towns and villages. For example, a development project in National Growth Center is obliged to allocate 50-75% of its entire sub-divided plots for constructions, whereas a development project in Regional Growth Center is obliged to allocate 25% of its entire sub-divided plots.

As described above, the concept of Urban Growth and Development Boundaries is strongly linked to development control process. An applicant who plans to develop a land needs to submit an application with relevant documents to *Amana* (13 regional governments and 4 metropolitan governments) in respective areas. The application must to include a land subdivision plan with detailed implementation plans for installment of required infrastructure. The applicant is obliged to install required infrastructure within the site, and to ensure that these infrastructure are connected to the local networks. The applicant may be requested to improve required infrastructure outside of the development site when the said infrastructure is not able to be connected the network, after consultation with the respective authorities.

In the first phase of the review process, Amana in respective area is responsible for assessing the applications and determine whether the application has complied the development standards as defined in the Urban Growth and Development Boundaries. After this initial phase, the application must also be submitted to the Ministry of Municipal and Rural Affairs for their review, particularly whether the plan has complied with development standards and building codes. Ultimately, the Ministry of Municipal and Rural Affairs has the authority to grant or refuse the application.



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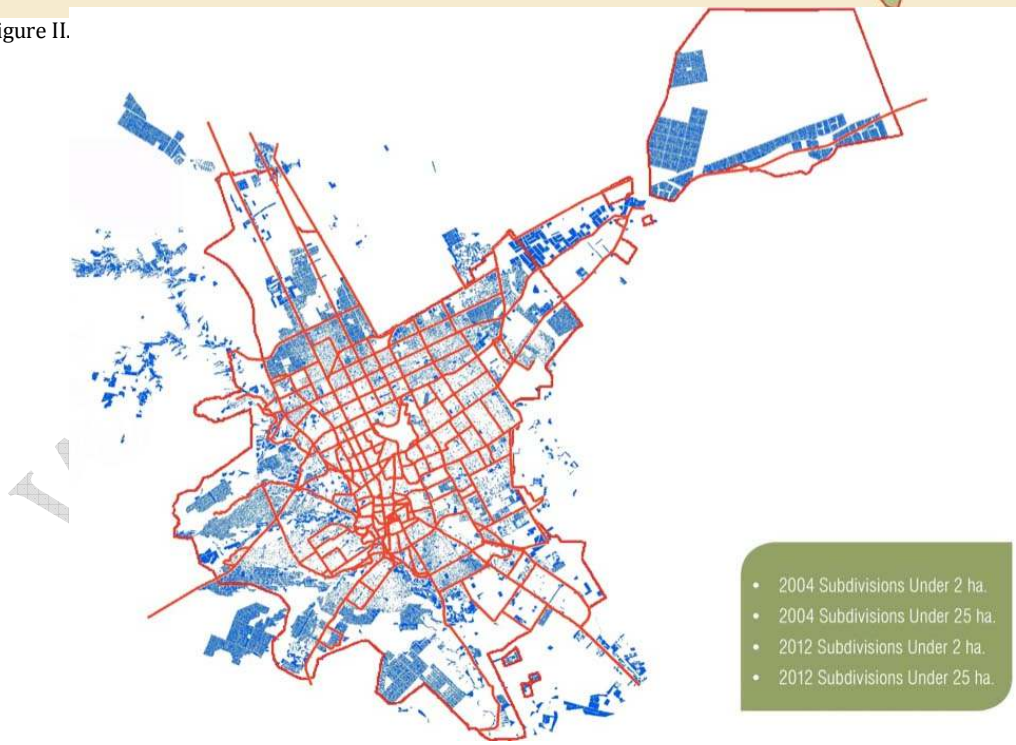


Figure II.2-2 Riyadh City Land Subdivisions, ArRiyadh Development Authority

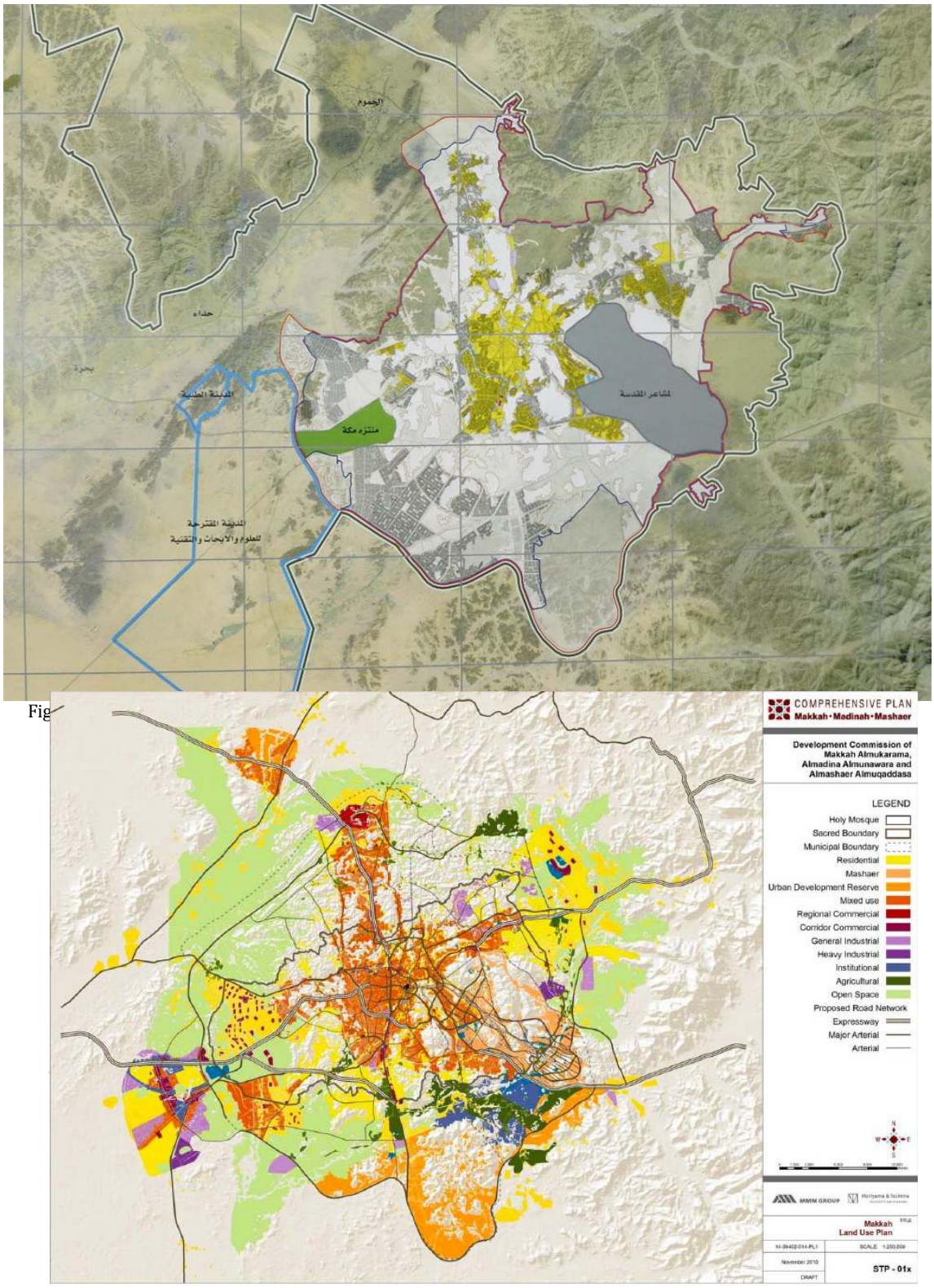
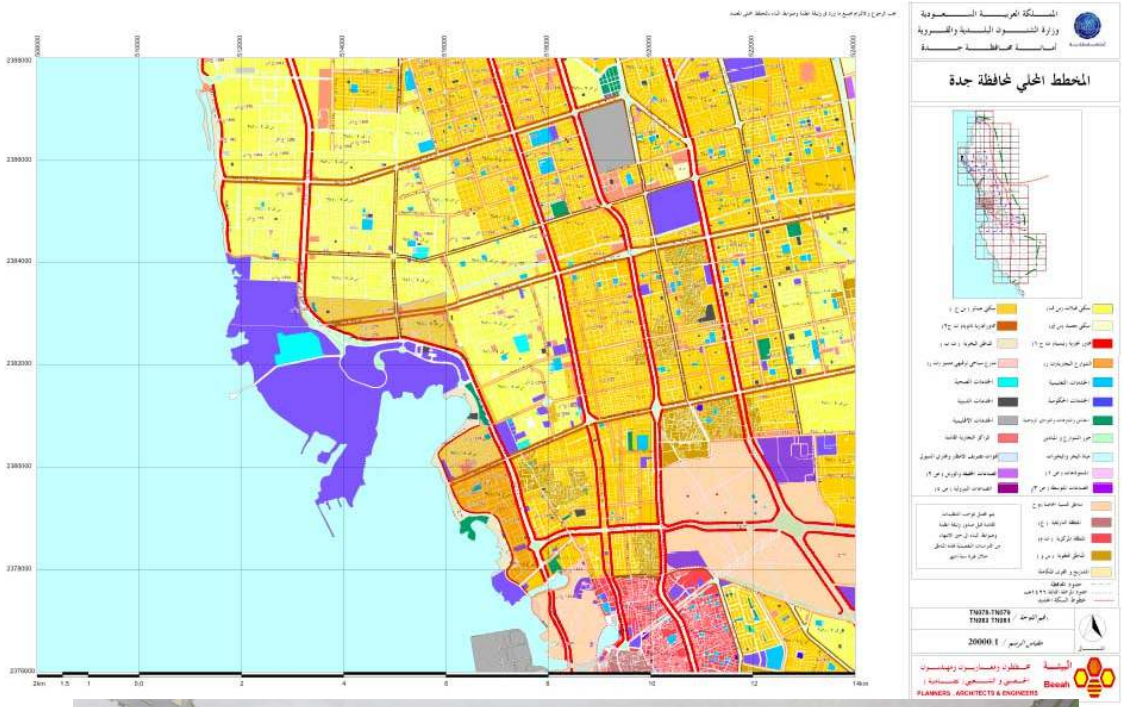


Figure III.2-4 Makkah City Comprehensive Strategic Plan (Land Use Plan), Makkah Almunawara



Figure

Figure I.1-6 Action Plan (Detailed Plan) in the Center of Buraidah City, Al Qasim region

3. Increasing food production in urban and peri-urban areas

In 2012, the size of cultivated lands in the Kingdom of Saudi Arabia was estimated to be approximately 972,000 hectares. These lands are scattered over the country, in regions where cultivable soil and irrigation water are available (Figure II.3-1 and II.3-2). Al Riyadh, Al Qasim and Al Jawf accounts for 26.4%, 15.3%, and 14.9% of the cultivated lands, respectively, which add up to 56.6% of the entire agricultural land in the country. On contrary, agricultural lands in other regions remain small in their size and portion. In particular, regions of Northern Borders and Al Bahah have only 1% of the entire agricultural lands.

In terms of food production, Al Riyadh, Al Qasim and Ha'il regions altogether accounts for 84.1% of wheat, 72.1% of vegetables, 58.3% of dates and 51.4% of fruits produced in the country. As for dairy products, Al Riyadh, Ha'il, Al Qasim and the Eastern regions produce 72.5% of milk consumed by the entire population of Al Riyadh region. Al Riyadh, Makkah, and Qasim regions produce 74.4% of poultry in the country. The statistics show that most of food and dairy products are produced in the regions where the major cities are located. This indicates that peri-urban areas surrounding the major cities supply food production to the cities in the Kingdom of Saudi Arabia.

Historically, development plans formulated by the Ministry of Economy and Finance every five years aimed to strengthen agricultural sector to diversify economic base of the country, and also to promote efficient use of natural resources to ensure sustainable agricultural development. This is also the case for the latest development plan, which aims to strengthen agricultural sector to enhance its role in economic, social and environmental development of the country. Furthermore, the development plan aims to enhance production of highly water-efficient crops, develop and improve efficiency of agricultural markets, and scale up support for small farmers, in particular towards sustainable management and development of agricultural land. The development plan also states that it encourages investment in the agricultural sector as well as in the agricultural value chain, promotes national investment in the agricultural sector abroad, and continues to facilitate regional and international cooperation and partnerships in order to ensure food security and preservation of natural environment and resources.

The agricultural sector achieved an average annual growth rate of 1.4% at 1999 constant prices, increasing from approximately 37.9 billion Saudi Riyal in 2004 to approximately 40.6 billion Saudi Riyal in 2004, given the rise in domestic agricultural, forestry and fishery production. However, this growth rate in the agricultural sector was less than the rate of overall economic growth.

Consequently, the contribution of the agricultural sector to GDP decreased during this period from 5.2% to 4.7%. Its contribution to non-oil economy also fell from 7.6% to 6.2%. This decline was primarily due, to rationalization of water use implemented under the eighth Development Plan, which resulted in the decrease of planted areas at the average annual rate of 4.9%.

The Ministry of Agriculture took initiative to improve productivity and efficiency of agricultural activities, especially of agricultural-related services. The ministry also focused on plant protection and disease control by using advanced technologies such as aerial spraying, and by developing a comprehensive geographic database (GIS).

Figure II.3-1, Dates planting in Riyadh region, ArRiyadh Municipality

Table II.3-1 Distribution of Agricultural Land and Crops over the Regions, the Kingdom of Saudi Arabia

Region	Total Crop Area	Wheat (%)		Fodder (%)		Vegetables (%)		Fruits (%)	
		Area	Production	Area	Production	Area	Production	Area	Production
1. Al Jawf	14.9	26.3	32.8	7.9	8.9	3.1	3.2	10.7	7.6
2.Northern Borders	0.01	-	-	0.1	0.1	0.1	0.1	-	-
3. Tabuk	5.2	7	7.8	6.1	6.5	3.4	4	4.8	7.2
4. Ha'il	11	12.9	14.6	6.8	7.3	10.8	12.6	9.9	10.6
5. Al Madinah	2.9	0.2	0.1	2.3	2.3	1.4	1.1	10.8	10.6
6. Al Qasim	15.3	18.8	16.2	13.3	13.3	11.7	12.6	18	14
7. Makkah	3.9	-	-	3.8	2.6	11.1	8.1	6.7	6.9
8. Al Riyadh	26.4	24.2	20.5	46.1	46.2	46.5	43.7	21.5	19.2
9.Eastern Region	6.3	9.4	7.4	2.6	2.5	4.4	7.5	7.1	12.4
10. Al Bahah	0.4	-	-	0.1	0.1	0.2	0.2	1.5	1.8
11. Asir	2	1	0.5	1.3	1.3	2.4	3.2	3.7	4.1
12. Jizan	10.6	-	-	8.1	7.6	3.2	2	2.5	2
13. Najran	1.1	0.2	0.1	1.5	1.3	1.7	1.7	2.8	3.6
Saudi Arabia	100	100	100	100	100	100	100	100	100

Source: Ministry of Agriculture, Ministry of Economy and Planning (The ninth Development Plan)

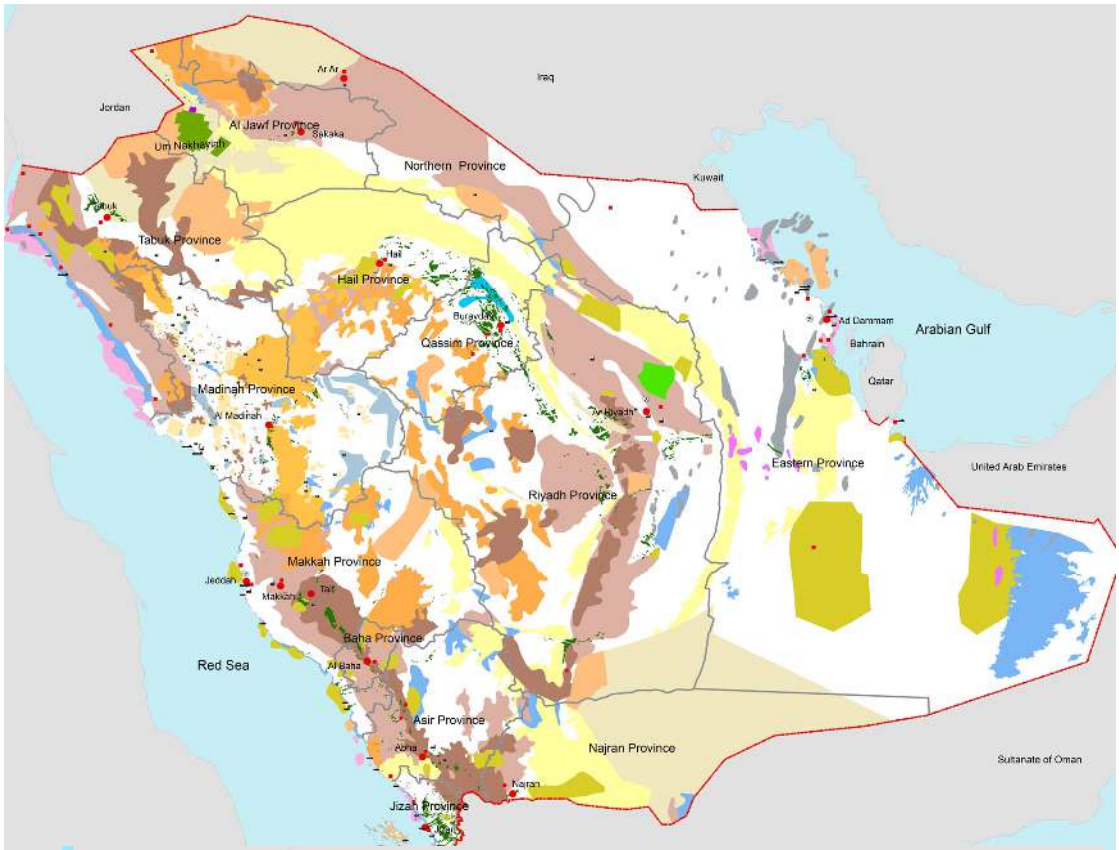


Figure Strategy

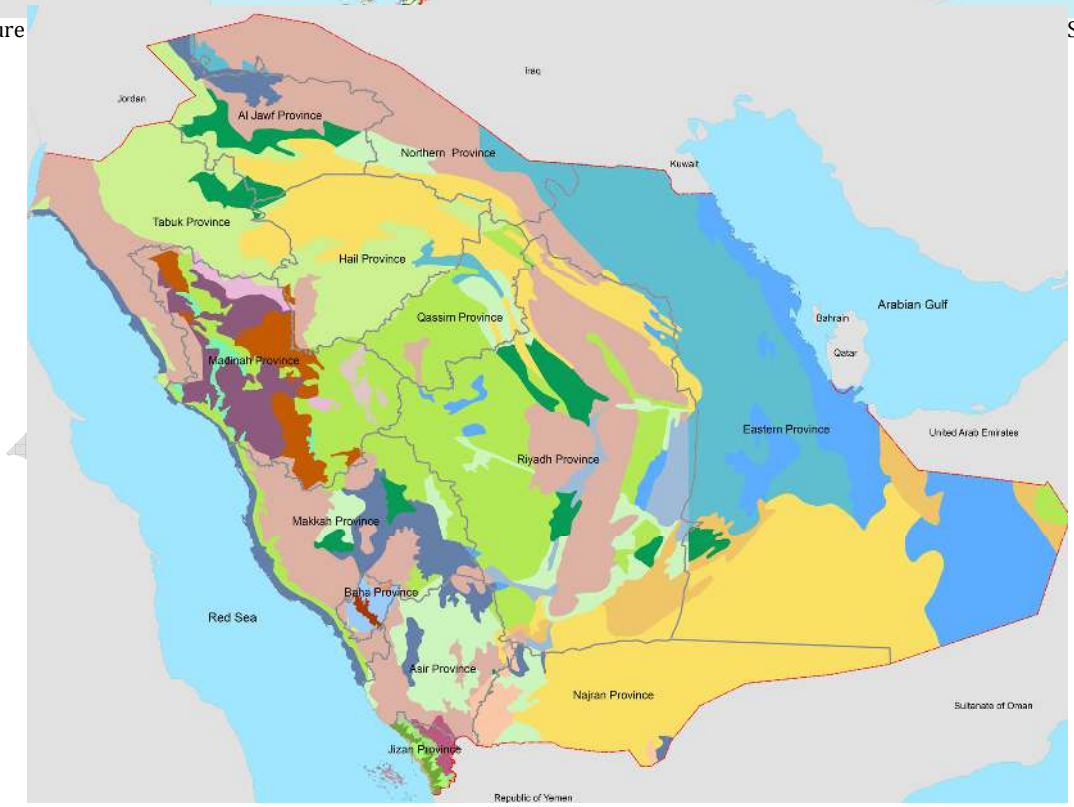


Figure II.3-3 Soil Classifications, the Kingdom of Saudi Arabia (2010), National Spatial Strategy

4. Addressing urban mobility challenges

Over the past decades, the transport sector has been a key challenge in the Kingdom of Saudi Arabia. The Government has been aiming to develop an advanced transport network both within and among Saudi cities. On the other hand, the average rate of car ownership, geographical density of roads, and numbers of development projects implemented across the country had risen, resulting in 29% increase of the national mobility during the period of 1999–2008. As of 2009, private cars occupied 64% of total road transport, while light vehicles occupied 32%.

The Saudi Public Transport Company provides transport services with 3,000 modern buses serving in 382 cities and villages as well as to and from 30 international destinations. In 2008, approximately 6.9 million passengers travelled between cities and approximately 11.9 million passengers travelled within cities, including approximately 5.5 million passengers using the service particularly for the purpose of Hajj and Umrah, using the service of the Saudi Public Transport Company.

As of September 2014, the railway network is used to transport passengers and freight on a route connecting Dammam and Riyadh. 1,107,000 passengers used railway network in 2008, and the number of passengers showed 8% increase annually during the period of 2004-2008.

In order to address the national transport challenges, including on urban mobility, the Ministry of Transport developed National Transportation Strategy in 2011. The strategy aims to develop and maintain a multi-modal transportation system that serves the needs of society by ensuring a safe, efficient and technologically advanced transportation system that promotes social and economic development and international competitiveness of the country and ensures a healthy and secure environment for its citizens.

The strategy identifies six goals that present a comprehensive and balanced approach to address the development needs of the country. The strategy also focuses on : (i) shared responsibilities for transportation sector development among stakeholders; (ii) public and private sector partnership; (iii) regional integration and participation in global markets; and (iv) integrated development and operation of transportation infrastructure.

Goals of the National Transportation Strategy

- Efficiency: Ensure the transportation sector's technical, economic and financial sustainability by improving overall performance of public and private transportation service providers, reducing government's involvement in tasks that can be more efficiently executed by the private sector, and rationalizing existing pricing and cost recovery schemes.
- Socio-economic development: Support the country's economic growth and competitiveness, both domestically and internationally, and ensure access to transportation services and mobility by all people in the country.
- Safety: Develop and implement a coordinated and comprehensive set of safety improvement measures addressing all aspects of the transportation system to reduce the number of transportation-related deaths, the number and severity of transportation-related injuries, and economic and productivity losses caused by accidents.
- Environment: Minimize the transportation sector's negative impact on environment and raise environmental awareness in the country.

- National defense and security: Provide a transportation system that is capable to meet the mobility needs of national defense and security, and also respond to natural and man-made disasters.
- Hajj transportation: Provide a well-coordinated multi-modal transportation system that meets the unique and special travel needs of Hajj in a safe and efficient manner.

The National Transportation Strategy identified six action plans that take key transport issues into consideration. In principle, the action plans on transportation infrastructure, freight transportation and passenger transportation were developed separately, and the remaining three action plans address inter-sectoral issues of traffic safety, environmental protection and Hajj and Umrah transportation, which is very particular in the Kingdom of Saudi Arabia. The six action plans have 28 different action points that are allocated to responsible government agencies to be implemented.

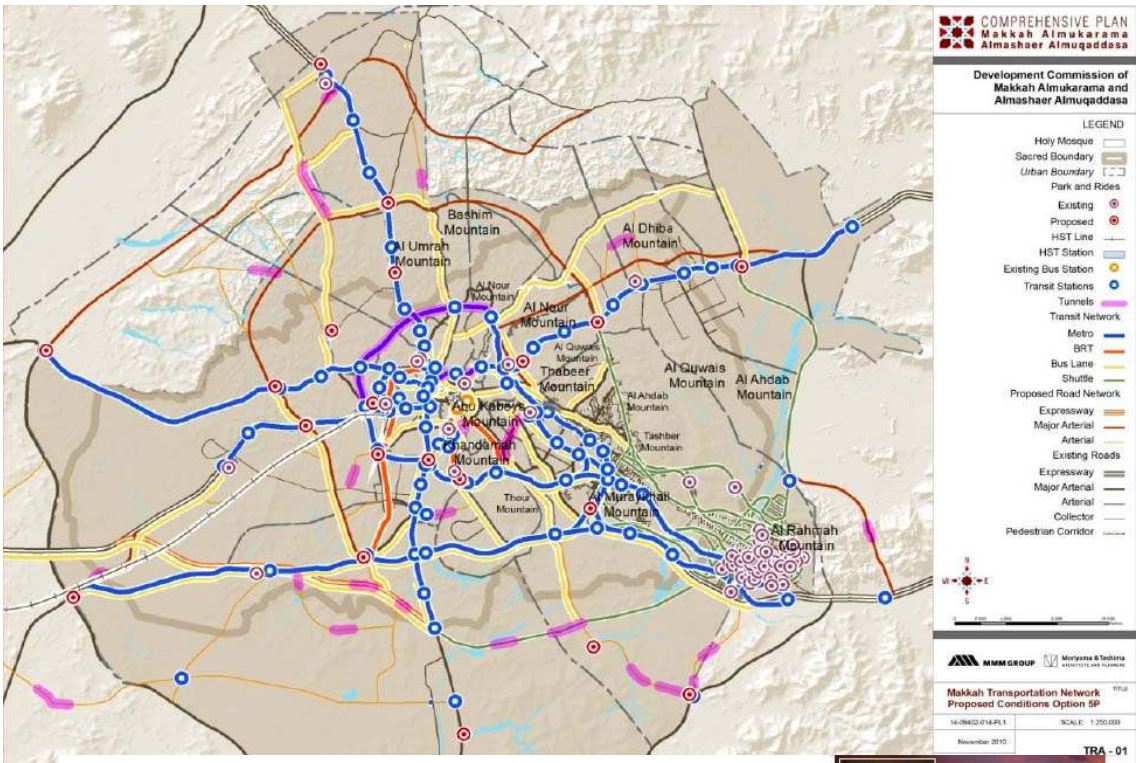
While there is a component on transportation plan under the Comprehensive Strategic Plan, more detailed transportation plan including operation and management of multi-modal public transportation was needed. In response to this need, the National Transportation Strategy recommended the establishment of Integrated Urban Transportation Master Plans at the municipal level. The Urban Transportation Master Plans are expected to serve growing populations, enhance quality of people's lives, and maintain economic viability of cities. The Transportation Agency, which is expected to be established under the National Transportation Strategy, will undertake transportation master planning to provide a vision for multi-modal, smart and modern transportation system by taking into account development needs as well as economic, social and ecological conditions of the country, by specifying implementation schemes, timelines and enforcement needs, and by identifying responsibilities of relevant bodies and funding needs. Plans at several different levels form a hierarchy and will be implemented in a structured and continuous cycle.

Infrastructure plans will be integrated into land use plans: the spatial distribution, density and type of land use determine the volume and direction of transportation. Conversely, accessibility of the site developed will have a major impact on land values and the type of the planned land use. Public transportation service plans should be both geographical (covering all modes within a district) and modal (focusing on railway, bus or taxi).

Table II.4-1 Key components of Integrated Urban Transportation Master Plan, the Kingdom of Saudi Arabia

Integrated Urban Transportation Master Plan	Planning period (Years)	Review period (Years)
1. Policies and objectives including target public/private modal transportation	10-15	3-5
2. Strategies to achieve objectives	5	3
3. Transportation infrastructure plan integrated into land use plan	15-20	3-5
4. Public transportation service plans by area and by transportation mode	5	2
5. Regulatory framework for procuring private operators to implement service plans	2	1

Source: The final report on National Transportation Strategy, Ministry of Transport



Figure

Figure II.4-2 Makkah City Comprehensive Strategic Plan (Inter-connecting the Holy Sites), Makkah Almunawara

5. Improving technical capacity to plan and manage cities

Acquiring accurate and updated information is crucial for urban planners and decision makers who plan, develop, manage and monitor cities. Considerable amount of statistic and geographic information, including Geographic Information System (GIS), is available in the ministries and government institutions, which is utilized within respective organization for their own purpose. The Central Department of Statistics and Information as the key organization to manage national statistic information owns basic statistical data on the country, including population, housing, labour, agriculture and fishery, energy, trade, transportation and communications, economy and public services. However, as of September 2014, there is no GIS data available in the Central Department of Statistics and Information and therefore statistical information cannot be visualized into spatial maps.

Based on this context, municipalities and/or Urban Development Agencies in the major cities in the Kingdom of Saudi Arabia, who are responsible to plan, develop, manage and monitor cities, are recommended to formulate spatial information system that visually show various kind of information on maps. Such spatial information can be of significant help in discussing and determining future vision and direction of Saudi cities. The Kingdom of Saudi Arabia decided to adopt the idea of Global, National, and Local Urban Observatory, which was established by UN-HABITAT to assist institutional set-up for urban information system. With the support of the Global Urban Observatory in UN-HABITAT, the Government started to develop a system for urban data formulation, based on specific context of the country and also in line with the global standard.

For example, the city of Riyadh, the capital and the largest city of the Kingdom of Saudi Arabia that is experiencing incremental growth and continued expansion, was in urgent need for an establishment of spatial information system to enable effective management of the city. The Riyadh City Urban Observatory was established in response to such urgent need, under the High Commission for the Development of ArRiyadh (HCDA) in ArRiyadh Development Authority, which plans, develops, manages and monitors urban development and policies in the Riyadh City.

In practice, Riyadh City Urban Observatory aims to observe the progress of a variety of aspects related to urban development by developing comprehensive urban indicators that helps development of policies and programmes that are in line with the overall strategic plan of the city. Equipped with such indicators, Urban Observatory enables different sectors to monitor and evaluate performance of their activities.

The Urban Observatory has been formulating information framework for Riyadh City Urban Profile to translate spatial information and data to a package of urban indicators. These urban indicators show the impact of evolving urban development and rapid urban changes, and allow effective monitoring of performance of urban plans and policies in the city. The Urban Observatory is a valuable tool to address problems and challenges stemming from urban development. It also contributes to coordinate and link information from various sources to effectively collect, analyze, and manage data.

Executive body of the Riyadh City Urban Observatory is the council comprised of 14 members from HCDA. Under the council, working groups comprised of representatives from various stakeholders have been established. Working groups are responsible for reviewing and collecting data for indicators and for monitoring the implementation of the Urban Observatory. At the operational level, the Urban Observatory Technical Units were established to be responsible for development of the Urban Observatory indicators and identification of analytical methodologies.

Urban indicators are measurement tools identified by UN-HABITAT, which summarize key information on different urban topics. Urban indicators provide a clear picture of the situation faced by cities, and allows for evaluation of performance. It also identifies general trend in the city and provides forecast on future situation. In case of Riyadh, calculation and formulation of urban indicators are implemented in line with the *Global Urban Observatory Manual for Data Collection and Analysis*, which was developed to standardize indicators calculation methodology and to enable comparative analysis f cities at both international and local levels. In the Kingdom of Saudi Arabia, number of cities had committed to develop Urban Observatory as a technical tool to plan and manage cities (Table II.5-1).

Table II.5-1 Establishment and operation of Urban Observatories in the Kingdom of Saudi Arabia

Region	City	Status	Responsible Authority
1. Riyadh	• Riyadh	At an advanced stage of producing indicators and periodic reports and establishing local observatories	ArRiyadh Development Authority
2. Al Madinah	• Madinah • Khaiber • Alees • Yanbu • AlUla • AlMahd • AlHinakiyah • Wadi AlFar'e • Badr	At an advanced stage of producing indicators and periodic reports and establishing local observatories	Municipality
3. Makkah	• Makkah • Jeddah	At an advanced stage of producing indicators and periodic reports and establishing local observatories	Municipality Municipality
	• Taif	Stage 3, established and operated in collaboration with consultants	Municipality
4. Qasim	• Burayda	Stage 3, established and operated in collaboration with consultants	Municipality
5. Asir	• Abha	Stage 2, established and operated in collaboration with consultants	Municipality
6. Albaha	• Albaha	Stage 3, established and operated in collaboration with consultants	Municipality
7. Eastern Region	• Dammam	Stage 5, established and operated in collaboration with consultants	Municipality
	• AlAhsa	Stage 1, established and operated in collaboration with consultants	Municipality
	• Hafr AlBaten	Stage 3, established and operated in collaboration with consultants	Municipality
8. Najran	• Najran	Stage 1, established and operated in collaboration with consultants	Municipality
9. Hayel	• Hayel	Stage 2, established and operated in collaboration with consultants	Hayal Development Authority
10. Northern Borders	• Arar	Stage 1, established and operated in collaboration with consultants, as GIS project was transferred to Urban Observatory	Municipality
	• Quraiyat	Stage 1, established and operated in collaboration with consultants	Municipality
11. AlJouf	• Skaka	Stage 3, established and operated in collaboration with consultants	Municipality
12. Tabuk	• Tabuk	Stage 1, established and operated in collaboration with consultants	Municipality
13. Jazan	• Jazan	Municipality is being urged to launch Urban Observatory project	Municipality

Source: Ministry of Municipal and Rural Affairs

6. Challenges faced and lessons learned

Land and urban planning in the Kingdom of Saudi Arabia has drastically changed since the first National Spatial Strategy. The Ministry of Municipal and Rural Affairs led the setup of spatial planning system comprised of strategies at four different levels: i) National Spatial Strategy at the national level; ii) Regional Spatial Strategy at the regional level; iii) Comprehensive Spatial Strategy for major cities and Local Plans for medium and small cities at the local level; and iv) Action Plan at the district level. Urban Growth and Development Boundaries, which sets additional standards for land subdivision in suburban areas, were also determined for each city to control urban expansion. With these strategies and standards in place, particularly Comprehensive Spatial Strategies for major cities, peri-urban agricultural lands will not penetrated by ad hoc urban development, and transportation planning will be fully integrated to spatial plans.

However, as of September 2014, there are only three Development Boundaries in effect. Other existing standards on suburban developments are not strict enough to control and manage land development in suburban areas. On the other hand, in urban areas and particularly in major cities, land acquisitions have become increasingly difficult as landowners are reluctant to release their land to be used for public investment. These challenges in urban and suburban areas combined are resulting in numbers of affordable housing projects implemented by municipalities in suburban areas where basic infrastructure is not adequately installed. Given the difficulty of land acquisition as well as extremely high land price in urban areas, and absence of strict standards on suburban development, municipalities are inclined to implement housing projects in suburban areas despite inconveniences and absence of basic infrastructure. While establishment of spatial planning system contributed significantly to improve overall land management in the country, issues such as high land price, procedures for land acquisition, and standards for medium and small scale development projects in suburban areas still need to be addressed.

The government officials and policymakers have also acknowledged the importance of building technical capacity within the country on land management. Urban Observatories, which provide key urban indexes to show dynamics of social, economic and environmental changes in cities based on statistical and geographical data, has been developed as one of the measures for capacity building. On the other hand, challenges remain in ensuring transparency and accountability of the spatial planning process. Criticisms highlight that spatial plans are solely developed by experts and government officials without involving citizens, stakeholders and affected population.

7. Visions for the future

In response to challenges faced, the Government of Saudi Arabia aims to address the following issues:

(i) Ensure transparency and accountability of the urban development process and promote better understanding of spatial plans.

- Establishment of spatial planning system based on four different levels of strategies as well as Urban Growth and Development Boundaries play important role in managing and controlling development. To enhance their values and gain wider acceptance, the Government will facilitate awareness-raising among citizens on spatial planning system and strategies.
- With support of UN-HABITAT, the Government will increase transparency and accountability of the spatial planning process so that citizens can better understand about developments in their cities and build sense of ownership, and to further improve qualities of plans.

(ii) Revisit Urban Growth and Development Boundaries and development standards to better control suburban development.

- As of September 2014, the Government is revisiting Urban Growth and Development Boundaries to develop better development control system that integrates *Sustainable Planning Guidelines for Urban Growth in the Kingdom of Saudi Arabia*, drafted by the Ministry of Municipal and Rural Affairs.
- The Government will also improve development control standards for suburban development to regulate unplanned development in urban peripheries. Development Boundaries will also be reviewed to assess whether urban areas as designated in the Development Boundaries can absorb future population growth in a sustainable manner.
- With support of UN-HABITAT, the Government will review Urban Growth and Development Boundaries to promote feasible and context-specific spatial planning.

(iii) Enhance capacity of institutions and staff on spatial planning and urban information management.

- Based on common understanding that urban information helps spatial analysis and provides better understanding of the situation to urban planners and decision makers, numbers of municipalities have started to develop Urban Observatory to provide updated statistical and geographical analysis to be utilized for development of spatial plans as well as decision-making process.
- With support of UN-HABITAT, the Government will enhance capacity of institutions and staff on spatial planning and urban information management, which will also contribute to better operation of Urban Observatory.

III. Environment and Urbanization

1. Addressing climate change

Majority of the Kingdom of Saudi Arabia is categorized as a desert climate, with exception of the Red Sea coastal area in Asir region. One of the key characteristics of the desert climate is high temperature during day that drops sharply during the night. The average temperature in the Kingdom of Saudi Arabia during summer is approximately 45°C, although the temperature often rise higher than 50°C. In winter, temperature sometimes drops below 0°C. The average temperature in spring and autumn is approximately 29°C. As in other regions of the world, the climate of the Kingdom of Saudi Arabia had changed incrementally over the decades and became unstable, resulting in more natural disasters such as heat waves, floods and sandstorms than in the past.

The Kingdom of Saudi Arabia ratified the UN Framework Convention on Climate Change (UNFCCC) in December 1994. The UNFCCC aims to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. As a party of the UNFCCC, the Kingdom of Saudi Arabia participates in the Conference of Parties to assess progress in responses to climate change. In 2005, the Government of Saudi Arabia ratified the Kyoto Protocol, which is a legally binding obligation for developed countries to reduce their greenhouse gas emissions.

Based on these developments, the Presidency of Meteorology and Environmental Protection (PME) was established in 2001. The PME is responsible for environmental protection, climate change adaptation and conservation of natural resources in the Kingdom of Saudi Arabia, and actively participated in global initiatives on climate change including following-up conferences on UNFCCC and United Nation Conferences on Sustainable Development called Rio+20.

In 2005, the PME developed the first national report for UNFCCC, which assessed impact of climate change in the Kingdom of Saudi Arabia and identified key challenges in climate change adaptation. The report stated that most of the territory in the Kingdom of Saudi Arabia has sensitive ecosystem for any level of climate change, especially desertification. Assessment of these impacts clearly indicated that most regions of the Kingdom of Saudi Arabia are highly vulnerable to desertification. The rise in temperature as a result of climate change is forecasted to elevate the level of reference evapotranspiration by 1% to 4.5% with 1°C rise in temperature, and by 6% to 19.5% at 5°C rise in temperature in most regions of the country. The expected yield losses of different types of field crops including cereals, vegetables and forage crops, and fruit trees including date palms are expected to range between 5% and more than 25%.

Climate change may negatively impact national economies not only directly through extreme weather events and damage on agricultural sector, but also through the cost of adaptive measures. Given the sensitive ecosystem of the country, the Government of Saudi Arabia recognizes climate change mitigation and adaptation as one of its top priorities. Various types of measures have been taken by different governmental agencies, especially in the past decade, to decelerate desertification process and to mitigate its negative impacts on soils, agricultural crops and natural plantation. These measures include:

- Assessment of natural resources, including surveys on soil classification, distribution of flora, climate atlas, range lands and forests, impacts of protection measures on wild life and plants, and production of agricultural crops in the country.
- Studies on measures to fight sand encroachment on agricultural and urban facilities and to prevent desertification.
- Implementation of a comprehensive agricultural development programme, especially since 1974. With support of the Government, the cultivated areas in the Kingdom of Saudi Arabia increased from less than 200,000 hectares in 1970 to more than 1.2 million hectares in 2004. Vast areas of desert lands have been converted into green areas. These new cultivated areas are expected to help improve the climatic conditions in terms of temperature, humidity and rainfall in these areas.
- Management and development of rangelands in different regions to help protection of these lands and to decelerate desertification.
- Development of national parks and plantation of millions of trees every year in different regions including Aseer, Al-Hassa, Al Baha, and Khorais.
- Development and implementation of regulations for the protection of soil, natural plantation, rangelands, forests and wild life.

Under the ninth Development Plan, the Ministry of Agriculture is responsible for fighting desertification and sand creeping while preserving the desert environment and the biodiversity therein. The Ministry of Agriculture is also working towards raising public awareness of the importance of community engagement in implementing national action programmes to fight desertification.

As described in Chapter II-1 on this report, the Kingdom of Saudi Arabia is one of the highest energy consumption countries in the world with large amount of greenhouse gas emission, given severe desert climate in the country combined with rapid increase of population. In 2013, the Ministry of Municipal and Rural Affairs, together with other line ministries and government institutions, developed *Sustainable Planning Guidelines for Urban Growth in the Kingdom of Saudi Arabia* to reduce energy consumption and adverse impacts on climate.

Furthermore, in addition to urban planning and public transportation standards outlined in the previous chapter, these guidelines proposed to introduce new standards on district cooling and energy efficiency building to reduce energy consumption and greenhouse gas emission.

District cooling involves the provision of cooling to multiple buildings or facilities from one or more central cooling plants that are interconnected to the cooling users via network of supply and return piping. This system helps to protect environment as it increases energy efficiency and reduce greenhouse gas emissions and air pollution.

The *Sustainable Planning Guidelines for Urban Growth in the Kingdom of Saudi Arabia* also introduced building energy codes, which set a minimum level of energy efficiency for residential buildings. This can reduce the need for energy generation capacity and new infrastructure while reducing energy bills. The Government will update existing building codes and adopt new codes, expecting to achieve substantial energy and financial impact. Given that energy consumption is expected to rise in the residential sector by 2020, enacting of new building codes is a key strategy for reducing energy consumption and tackle climate change across the buildings sector.

2. Disaster risk reduction

Even though the Kingdom of Saudi Arabia has experienced a number of natural disasters in its history, disaster risk reduction has not attracted much attention from the Government and the people in the past. However, increasing frequency and severity of natural disasters over the past decade is gradually raising awareness of importance of disaster risk reduction in the country.

During the period of 1980-2010, the Kingdom of Saudi Arabia had gone through 14 natural disasters, which resulted in 484 causalities and affected more than 30,000 people. The total economic damage caused by these disasters is estimated to be 135 billion US Dollars (43.5 million US Dollars per year). Despite the dry climate, flood is the most common natural disaster in the Kingdom of Saudi Arabia. In terms of number of people affected, floods in 2003 and 2009 were most notable. Given the significant damages on both the people and the national economy, the Government started to commit itself to disaster risk reduction, through assessing and managing potential risks and developing early warning system to minimize negative impacts of natural disasters.

Table III.2-1 Disaster Statistics in the Kingdom of Saudi Arabia (1980-2010)

Rank	Affected People (No.)			Killed People (No.)			Economic Damages (USD*1,000)		
	Disaster	Year	Affected	Disaster	Year	Killed	Disaster	Year	Cost
1	Flood	2003	13,000	Flood	2009	161	Flood	2009	900,000
2	Flood	2009	10,000	Epidemic	2000	76	Flood	1985	450,000
3	Flood	1985	5,000	Epidemic	2000	57	Storm	1982	-
4	Flood	2004	430	Epidemic	2001	35	Epidemic	2000	-
5	Epidemic	2000	329	Flood	2005	34	Epidemic	2000	-
6	Epidemic	2000	168	Flood	1985	32	Epidemic	2001	-
7	Flood	2010	85	Flood	2005	29	Flood	2002	-
8	Epidemic	2001	74	Flood	2002	19	Flood	2003	-
9	Flood	2005	67	Flood	2010	14	Flood	2003	-
10	Flood	2003	50	Flood					

Source: Disaster Statistics, Prevention Web, UNISDR

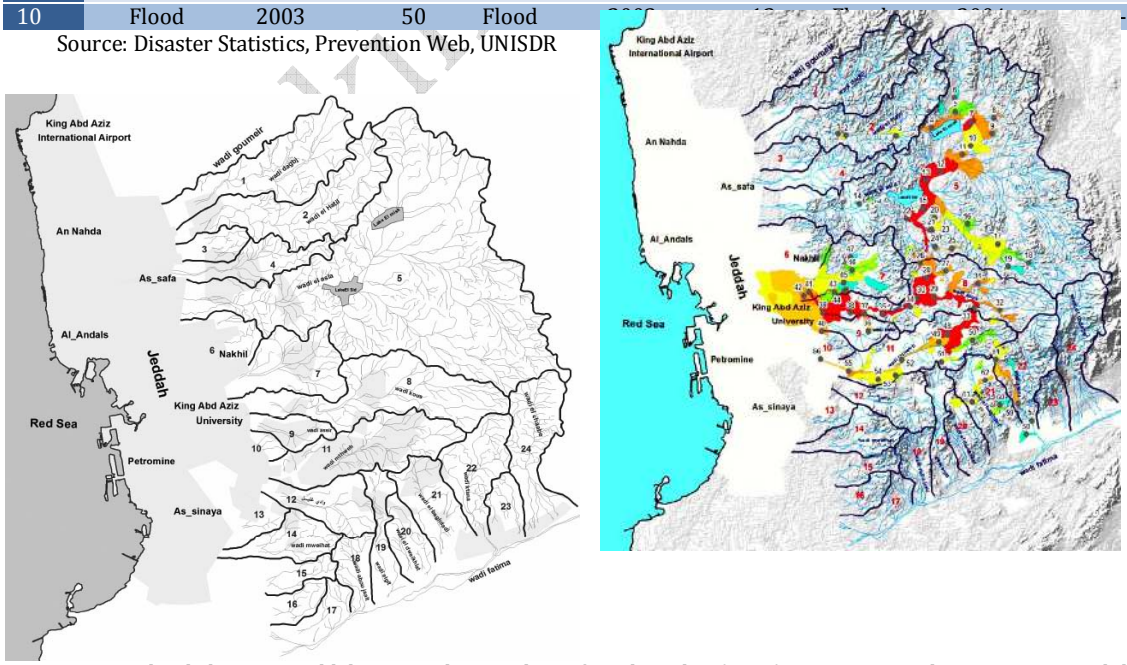


Figure III.2-1 Flooded zone in Jeddah region, the Kingdom of Saudi Arabia (2009), Space Research Institute, King Abdel Aziz City for Science and Technology

The Kingdom Saudi Arabia has participated in a number of international and regional initiatives on disaster risk reduction, including Rio+20, Islamic Conferences on Environment Ministers, and the United Nations International Strategy for Disaster Reduction (UNISDR) Regional Conference on Disaster Risk Reduction. In 2010, the Government had ratified the *Strategy on Management of Disaster Risks and Climate Change Implications in the Islamic World* and the *Arab strategy for disaster risk reduction 2020*.

As of September 2014, the Government is developing a long-term strategy on disaster risk reduction in cooperation with the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR) to manage and mitigate the impacts on natural disasters.

Major cities are also implementing studies and projects on disaster risk reduction. For example Jeddah City, located in an area vulnerable to flood where amount of annual rainfall is much higher than the rest of the regions of the country, has conducted flood risk assessment and a project that bypasses rainfall water from the mountain areas to the Red Sea without affecting the city.

Integration of comprehensive flood hazard management plan, including a variety of infrastructure engineering, into urban planning is the most effective measure to address, manage and mitigate the risk of flood. The Government recognizes the significance of integrating disaster risk management into urban planning, as it can substantially contribute to prevention and reduction of the impact of natural disasters. Furthermore, the Ministry of Municipal and Rural Affairs underscores the importance of site selection for each urban development in its *Sustainable Planning Guidelines for Urban Growth in the Kingdom of Saudi Arabia*. According to these Guidelines, new development projects should not be located in areas that are prone to severe flooding, seismic activity or pollution of air, water or soil. Sites that are contaminated can be remediated, however, and be made suitable for development projects in the future.

3. Reducing traffic congestion

In the past decades, the national road networks have been continuously expanded. The total length of completed roads as of 2012 was 59,143km, of which 14,956km is highways linking main regions of the county as well as international borders.

In 2010, an estimated number of registered vehicles actually operating on the roads reached 5.36 million, with private cars and light trucks constituting 96% of the total figure. Road transportation using private vehicles is the most popular means of transportation in the Kingdom of Saudi Arabia, accounting for 85% of all transportations. The number of daily car trips reached 6 million (with an average duration of 19 minutes), increasing from 5 million daily trips in 2006 and approximately 1 million in 1987. In 2007, urban indicators estimated an average ownership of 1.72 cars for each family.

The Kingdom of Saudi Arabia has an advanced road network, both in terms of coverage and quality. Major Saudi cities have modern, fast and dual-carriage highways as well as ring roads to bypass urban centers and thereby reduce traffic loads. However, growth in numbers of freight and passenger traffic along with exclusive use of private cars in cities have been causing severe traffic congestions, particularly during peak commuting hours in major cities.

In Riyadh City, where severe traffic congestions are major problem, the ArRiyadh Development Authority implemented a survey on road network and transportation system from 2012 to 2014. The main objective of the survey was to identify traffic bottlenecks and other problems causing congestions, and to define measures to increase efficiency and safety through better traffic management and application of innovative technology. Prior to this survey, the ArRiyadh Development Authority had installed the first intelligent transportation system in the Kingdom of Saudi Arabia called Smart Mobility Road Suite on King Abdullah Road in Riyadh. Riyadh City benefit from the smart transportation management system that provides real-time information on traffic conditions on the expressway and enables timely response in case of road incidents. With this system, drivers can get real-time information on traffic and select the fastest route by avoiding heavy traffic roads.

There are number of factors that induce traffic congestion in major cities in the Kingdom of Saudi Arabia, and one of the critical factors is the lack of public transportation system. As of September 2014, projects to construct advanced public transportation system are ongoing in four major cities of Riyadh, Makkah, Madinah and Jeddah. Details of these projects are described in Chapter VI of this report.

Other factors that cause traffic congestions in major cities are the parking problem, poorly coordinated traffic signals, and drivers' misbehaviors. Among those factors, parking problem is particularly crucial in city centers. The regional governments are constructing parking facilities, leasing the required lands for a pre-determined period and commissioning private sector to develop multi-story parking facilities as part of the commercial facilities. The authorities are also allowing private sector to use publicly owned lands to that benefits the best utilization of parking on main roads such as the commercial zones, hubs and downtown areas with high traffic densities, against payments from the private sector to the public sector.

Figure III.3-1 Traffic congestion in peak commuting hours at King Abdullah Road in Riyadh, ArRiyadh Development Authority

4. Air pollution

Due to rapid population growth, urbanization and industrialization and concentration of population in major cities, air pollution has increasingly become one of the major problems in the Kingdom of Saudi Arabia over the past decades. Air pollution negatively affects the environment indicator of the country and cities, being reflected as a component of the Quality of Living Index.

The ninth Development Plan underscores the importance of policies and guidelines to address air pollution and mitigate negative impacts on environment, and prioritizes environment-friendly projects in various development sectors. It also stresses the need for operationalizing Environmental Law to reduce damages on environmental that will be caused by population growth and expansion of development activities. the Presidency of Meteorology and Environmental Protection (PME) is the governmental body responsible for enacting and implementing the General Environmental Law approved in 2001. The PME is also responsible for coordinating with the relevant ministries and agencies to protect environment. In this effort, the PME promulgated the rules for implementation of the General Environmental Law in 2006, and started developing the environmental standards and guidelines to improve air and water quality.

To tackle the problem of reducing air pollution in industrial zones and urban areas, the PME, in collaboration with scientific research centers in the Kingdom of Saudi Arabia, implemented a set of measures including identification of the types of pollutants and the

level of their concentration in the ambient air of polluted and populated areas, studies to establish an inventory of emissions and identify their sources, assessment of the health and economic cost of air pollution, and identification of the best policies for pollution reduction.

The PME also launched the Saudi Arabia Award for Environmental Management to improve environmental management in the Arab States. The award, which is offered every two years by the Arab Organization for Administrative Development of the League of Arab States, aims to establish practice of environmental management in the Arab States, stimulate interest in sustainable development, publicize distinguished Arab environmental management efforts and successful practices, and encourage environmental practices and activities in the Arab States.

Under the ninth Development Plan, periodic inspection of gas, washing and lubrication stations has been implemented by the PME. The PME also encourages the private sector to expand their use of the inspection tool, as part of the efforts to introduce advanced technologies and training Saudis for this work with the aim of reducing pollution resulting from the operation of such stations.

To raise environmental awareness among the public, the PME, in collaboration with various stakeholders, implemented a package of measures including establishment of the first environment satellite TV channel, launch of awareness-raising campaigns on environmental issues, workshops on environment and development, and establishment of the National Centre for Environmental Awareness.

Aiming to develop a framework for preventing pollution and environmental degradation, providing a healthy and clean environment, and developing national capacity to protect environment, the National Strategy for Health and Environment was adopted by the Council of Ministers in 2008. It covers a variety of issues related to health and environment including air quality, portable water, management of solid waste and hazardous waste, safe use of chemicals, and radioactive contamination.

5. Challenges faced and lessons learned

Continuous rapid urbanization over decades under the severe desert climate made the Kingdom of Saudi Arabia as one of the highest energy consumption countries in the world. This caused high rate of building energy consumption and car-dependent urban form. High energy consumption and the resulting greenhouse gas emission are regarded as one of the root causes of global warming and climate change.

The Government has been actively engaged with international initiatives to address climate change and to reduce energy consumption and the subsequent greenhouse gas emission, including the UNFCCC. The Government also aims to improve energy plants in the country as well as to utilize renewable energy such as solar energy. A number of pilot initiatives have been integrated into new urban development projects, such as district cooling system or energy efficient building technologies. Revisiting historical urban structure in the country, such as building narrow roads that creates shadow and keeping the temperature low, and introducing micro climate zoning that allows physical urban structure to brings natural wind that keep the temperature of the district low, are notable attempts undertaken to reduce energy consumption. These ideas are conceptualized in the *Sustainable Planning Guidelines for Urban Growth in the Kingdom of Saudi Arabia* and will be used as a reference for urban development in the future.

The Government has been introducing integrated public transportation system, particularly in major cities, and is aiming to reduce number of private vehicles in the cities. Increased use of public transportation is not only helpful to reduce energy consumption but also to mitigate air pollution.

The Kingdom of Saudi Arabia has been vulnerable to flood, and the frequency and severity had increased in recent years. This is strongly correlated to lack of appropriate urban infrastructure in cities to manage water, such as sewage and rainwater collection system. In many cities including Jeddah and Makkah, the municipal authorities conducted disaster risk assessment and introduced mitigation measures.

To sum, the Government has been aiming to reduce negative impacts on environment by promoting effective use of energy, and is starting to better prepare itself for climate change and increasing natural disasters.

6. Visions for the future

In response to challenges faced, the Government of Saudi Arabia aims to address the following issues:

(i) Promote effective use of energy sources and application of advanced technologies and methodologies to reduce energy consumption.

- While various advanced technologies and methodologies that enable effective use of energy sources were introduced through pilot initiatives such as district cooling, micro climate zoning, renewable energy and energy efficiency building, these technologies and methodologies are yet to be mainstreamed. High cost of mainstreaming new technologies and methodologies are not broadly accepted.
- The Government will promote effective use of energy and seek ways to introduce these technologies and methodologies on a commercial basis.

(ii) Promote disaster-resilient cities through integration of disaster risk management measures into spatial planning.

- Risks of natural disaster should be taken into consideration when development sites are selected. High hazard areas should be avoided not only for public development projects but also for private construction.
- The Government will implement disaster risk assessment and examine the capacity of existing urban infrastructures in responding to natural disasters. Hazard map of natural disasters, with special attention on flood and earthquake, should be developed as an outcome of such disaster risk assessment.
- With support of UN-HABITAT, the Government will promote the concept of disaster-resilient city, which will be achieved by integrating hazard maps into spatial planning process, and by restricting new development projects in high hazard areas.

(iii) Changing people's behaviors through environmental education.

- Most of the energy consumption is a result of daily use of energy by the individuals and families. Appropriate understandings of climate change and impact of high energy consumption helps reducing energy consumption at the national level.
- Raising awareness of negative environmental impacts of energy consumption can also contribute to mitigate burdens on public services such as waste collection and solid waste management.
- The Government will promote environmental education in schools and in public to positively change people's behaviors on issues related to environment.

IV. Urban Governance and Legislation

1. Improving urban legislation

The Kingdom of Saudi Arabia is an Arab Islamic country, adopting the Islamic Sharia law in its judicial system. The executive and legislative are under the King and the Council of Ministers, in accordance with the teachings of Islam. The Consultative Council was established to provide advice to the King and the Council of Ministers on matters related to the Government and its policies. Those who are elected as regional municipal councils are also responsible for taking part in the decision making process at the regional level.

As described in Chapter II, the Government had established a spatial planning system comprised of strategies at four different levels: i) National Spatial Strategy at the national level; ii) Regional Spatial Strategy at the regional level; iii) Comprehensive Spatial Strategy for major cities and Local Plans for medium and small cities at the local level; and iv) Action Plan at the district level. In addition, Urban Growth and Development Boundaries identify development limits in different development periods at the local level. For example in Riyadh City, its Comprehensive Strategic Plan outlines legislative components on development control, including land use zoning that strictly indicates the standards for land use, land subdivision, bulk of building and arrangement of roads. There is also another guideline for development projects, titled *Sustainable Planning Guidelines for Urban Growth in the Kingdom of Saudi Arabia* as explained in Chapter II-1.

These strategies, plans and standards on urban planning and development are determined by the Council of Ministers, ministerial ordinances, instructions and manuals, rather than urban legislations. In other words, the Kingdom of Saudi Arabia does not have comprehensive law on spatial strategies, plans and policies. Furthermore, no legal instrument has been developed to ensure active public participation in the process of spatial planning. The spatial planning system currently in place was validated only after unofficial public consultation, which did help to secure a certain degree of transparency but could be improved.

Appropriate urban legislations must be introduced to ensure quality, transparency and accountability of spatial planning system. For instance, there are two types of spatial plans at the local level, i.e. Comprehensive Strategic Plan and Local Plan, but there is no clear legal instruction that distinguishes these two types of plans. As a consequence, some major cities had developed Local Plans not Comprehensive Strategic Plans, and some middle cities are planning to develop Comprehensive Strategic Plans not Local Plans.

Recently, the Government has led the process of drafting Planning Act, which includes law on spatial planning and local governance. The law on planning will provide legal background and clarification for spatial planning system and will contribute to improve and assure quality of strategies, plans and policies.

In parallel to providing legal background for spatial planning, the Ministry of Municipal and Rural Affairs with the support of UN-HABITAT has launched "Future Saudi Arabia

Cities Programme" in 2014 to shape advanced and comprehensive spatial planning system and to develop relevant and pragmatic spatial strategies and plans that respond to needs of cities in a sustainable manner.

In the Kingdom of Saudi Arabia, continuous population growth resulted in rapid urbanization throughout the country. The total number of cities, towns and villages has increased from 58 in 1963 to 258 in 2014. On the other hand, the Government lacks institutional capacity to operationalize urban legislations. The "Future Saudi Arabia Cities Programme" therefore focuses on providing technical support to the relevant government institutions to draft strategies and plans in 17 key cities and regions they belong to, which are strategically important to achieve sustainable balanced development as aimed by the National Spatial Strategy.

This hands-on experience in drafting spatial plans under the technical supported of UN-HABITAT will bring valuable ideas and issues to be consolidated as new planning act, and strengthen urban planning capacity at national, regional and local levels in the Kingdom of Saudi Arabia.

Table IV.1-1 Key Cities for "Future Saudi Arabia Cities Programme", the Kingdom of Saudi Arabia

No	Region	City	Population	No	Region	City	Population
1	Riyadh	Riyadh city	5,339,400	10	Aseer	Khamies mashie-Abha	892,544
2	Mekka	Mekka city	1,702,805	11	Najran	Najran city	334,169
3	Mekka	Jeddah city	3,513,717	12	Jazan	Jazan city	159,989
4	Mekka	Taif city	1,002,872	13	Haiel	Haiel city	419,038
5	Medina	Medina city	1,199,467	14	Shamaliya	Araar city	193,921
6	Tabuk	Tabuk city	578,359	15	Bahaa	Albahaa city	104,990
7	Sharkiya	Damam city	918,154	16	Qaseem	Brieda-eniza city	789,810
8	Sharkiya	Ihsa city	1,079,156	17	Al Gouf	Sakaka city	246,524
9	Sharkiya	Katief city	531,965				

Figure IV.1-1 The Holy Mosque and surrounding area in Makkah City, Makkah Almunawara

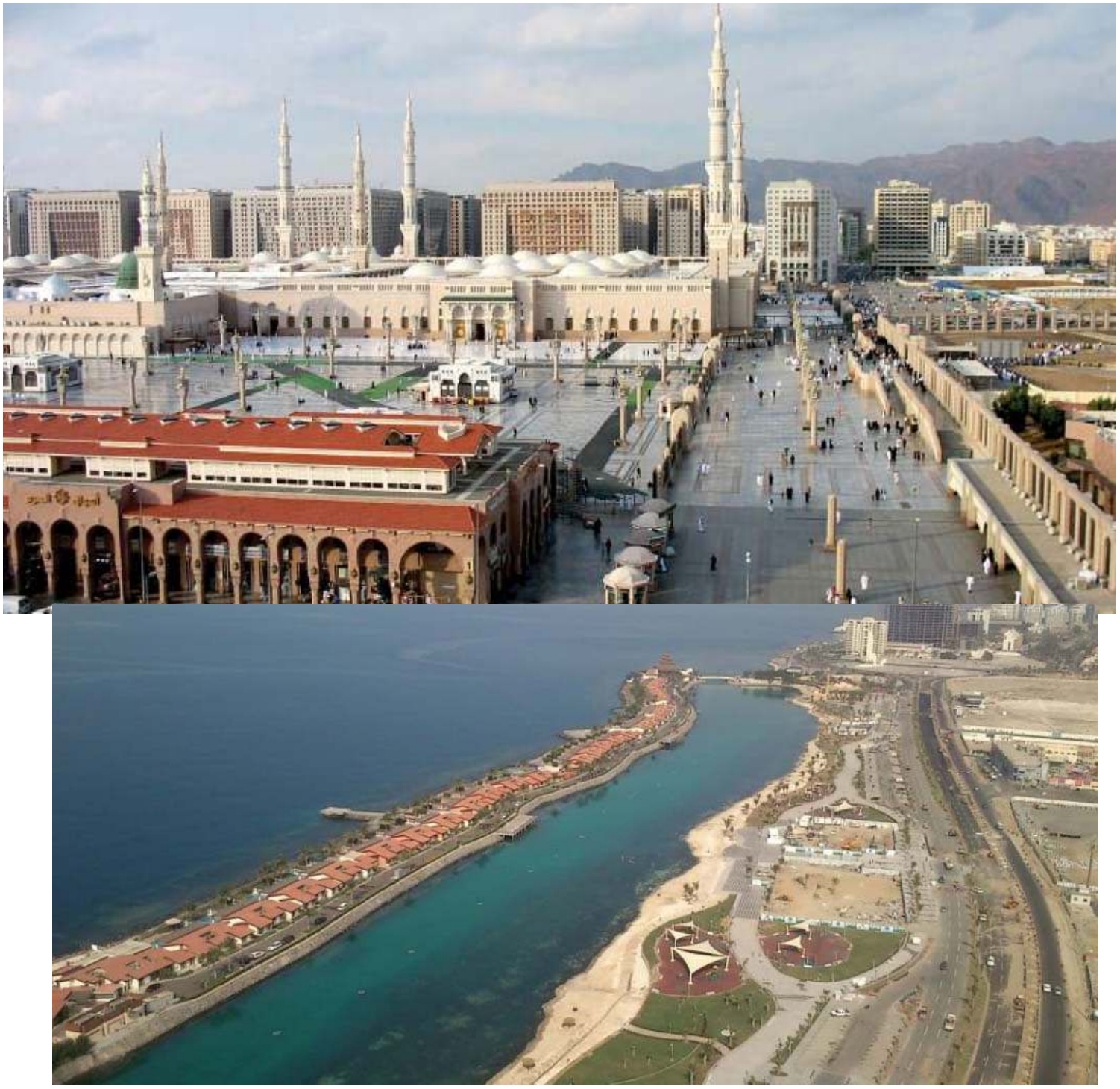


Figure IV.1-3 Seaside of Jeddah City, Jeddah Development & Urban Regeneration Co. (JDRUC)

2. Decentralization and strengthening of local authorities

Enhancing the capacity and expanding the coverage of municipal services is a key to implement the National Spatial Strategy, which aims to reduce regional disparities by achieving balanced and sustainable development throughout different regions of the Kingdom of Saudi Arabia.

In response to the increase in number of cities, towns and villages that has reached 258 in 2014, more than four times of in 1968, the Government established new municipal agencies and also strengthened institutional and staff capacities of the existing agencies.

The eighth and the ninth Development Plans aim to enhance the efficiency of local administrations. As a result, the municipal sector achieved significant institutional and organizational development during the past decade. The shift towards administrative decentralization was strengthened through expanding the participation of citizens in the management of local affairs and electing half of the members of municipal councils, as well as through establishing regional principalities (*Amanat*), to which local municipalities report to.

Municipal services and their geographical coverage also improved. In 2009, the Government expanded the classification of municipalities to five categories of A, B, C, D and E. Village clusters was abolished as an organizational form, with 44 villages being upgraded to category D municipalities and the remaining village clusters converted to category E municipalities. In parallel, two municipalities of Al-Taif and Al-Hasa Governorate were upgraded to Amanat. As a result, in 2010, there were 241 municipal agencies, increasing from 178 in 2005.

From technical point of view, the institutional capacity of Amanat and municipalities in all regions were enhanced through the provision of additional municipal buildings and IT equipment to ensure effective and efficient service by the Government. The Ministry of Municipal and Rural Affairs also provided researchers and useful information to the municipal agencies.

The Government has also been continuing to develop staff capacity, based on an understanding that modernization and improvement of municipal services is possible only with skilled, qualified manpower. There are a various kind of training programmes and scholarships that support large numbers of employees in all municipal agencies.

The framework for the privatization strategy of municipal services and activities was also a key to enhance their capacity. The Government identified that there are numbers of public services that could be privatized, including public transport services, collection of municipal revenues, cleaning services, waste management, and management of investment in municipal properties.

Table IV.2-1 Distribution of Regional Principalities (Amanat) and Municipalities by Regions in 2009

Region	Amanat	Municipalities					Total Municipal Agencies
		A	B	C	D	F	
1. Al Jawf	1	0	1	2	1	4	9
2. Northern Borders	1	0	0	2	1	5	9
3. Tabuk	1	0	1	4	1	4	11
4. Ha'il	1	0	0	2	8	6	17
5. Al Madinah	1	1	1	3	3	7	16
6. Al Qasim	1	1	3	4	7	8	24
7. Makkah	3	0	1	6	4	8	22
8. Al Riyadh	1	1	8	16	11	7	44
9. Eastern Region	2	2	3	2	4	8	21
10. Al Bahah	1	0	1	2	3	4	11
11. Asir	1	1	4	4	7	10	27
12. Jizan	1	0	2	3	7	8	21
13. Najran	1	0	0	1	3	4	9
Saudi Arabia	16	6	25	51	60	83	241

Source: Ministry of Municipal and Rural Affairs (The ninth Development Plan)

3. Improving participation and human rights in urban development

One of the top priorities of the Kingdom of Saudi Arabia is to achieve sustainable and balanced development throughout the country. Ensuring sustainability in spatial planning and development, involving citizens and stakeholders, are the key to achieve this goal. It strongly relies on decision-making process that is inclusive, accountable and transparent. Therefore, spatial planning process for sustainable development should go through various types of public consultations, including stakeholder meeting, public debate and public review, in order to ensure ownership and the inputs of stakeholders who will be affected by the spatial plan and development. In other words, public participation is a tool for communities that enables them to hold the government accountable for their decisions on spatial planning and development. Globally, public participatory process has been the center of spatial planning, particularly in developed countries, to protect rights of people.

Sustainable spatial planning and development should promote equity between generations and among different groups in the society. Promoting equity reduces disparities among the people and also secures transparency.

In the Kingdom of Saudi Arabia, the importance of public participation has been broadly acknowledged among its people. At the national level, the Consultative Council of Saudi Arabia called the *Shoura Council* has enlarged its role in public participation process as well as decision-making process. The Council members are selected from different regions among those with high-level educational background and advanced professional experience in different fields. In the 2005-2009 term, 70% of the members were holding Ph.D. and were from academia. The council has different professional committees to provide technical advice in specific fields. Yet there is no comprehensive committee on spatial planning, although experts as representatives of people can provide inputs to different sectors related to urban and spatial planning. As of September 2014, the council has 12 committees:

- Islamic, Judicial Affairs, and Human Rights Committee
- Social, Family, and Youth Affairs Committee
- Economic Affairs and Energy Committee

- Security Affairs Committee
- Educational and Scientific Research Affairs Committee
- Cultural and Informational Affairs Committee
- Foreign Affairs Committee
- Health and Environmental Affairs Committee
- Financial Affairs Committee
- Transportation, Communications, Information Technology Committee
- Water and Public Facilities and Services Committee
- Administration, Human Resources and Petitions Committee

In general, the council with 12 committees is responsible for providing public comments on government strategies, studying rules and regulations, discussing interpretation of laws, and reviewing annual work plans and reports prepared by the ministries.

At the local level, there should be number of opportunities that citizens are able to communicate their needs and demands during the process of drafting strategic plans, local plans and action plans. Such needs and demands may include request for development of public spaces and facilities where the citizens can use in their daily lives. There were number of cases where the municipal agencies held public participatory workshops in the process of urban development, yet these are only few exceptional cases among urban development projects led by the Government. As of September 2014, the Ministry of Municipal and Rural Affairs is planning to develop a new Planning Act that ensures participatory processes for spatial planning. "Future Saudi Arabia Cities Programme" implemented by the Ministry of Municipal and Rural Affairs with the support of UN-HABITAT has started to support spatial planning in 17 Saudi cities and is promoting public participatory process in the Kingdom of Saudi Arabia, raising awareness of importance on public participation and building sense of ownership in spatial planning and development in the country.

4. Enhancing urban safety and security

The Kingdom of Saudi Arabia is known for its low crime rate compared to most countries in the world. Still, number of crime has been increasing particularly in major cities, which could be attributed to a number of socioeconomic and cultural factors. In major cities, numbers of police vehicles are deployed on every corner, ensuring security and safety in the area. Public spaces are relatively visible from surrounding areas, indicating that the structure of cities in the country also contributes to low crime rate. On contrary, some residential areas that are not designed to be well-connected with the surrounding areas, or along relatively wide streets without appropriate street design with pedestrian walkway and street trees, tend to induce crime. In many cases, these poorly designed residential areas are the residential areas of low-income expatriate workers.

To ensure safety and security, the Ministry of Interior has been developing their capability to manage cities, and the Ministry of Municipal and Rural Affairs as well as municipal agencies conduct urban design assessment when new urban development project is proposed.

In regards to traffic safety, the number of traffic accidents on the road network rose to approximately 486,000 in 2008, from approximately 293,300 in 2004. Accidents in urban areas dominate 86% of the total number of the accidents. The rise in the number of traffic accidents on the roads and increasing fatalities as a result are considered as

crucial issues to be tackled in the country. In response to the increase in traffic accidents, new traffic regulations were issued and advanced ICT network system was introduced to monitor road traffic and record traffic violations.

5. Improving social inclusion and equity

It is a common understanding that the lives of people in the Kingdom of Saudi Arabia and the global competitiveness of the country had elevated in the past decades through the continuous efforts of both the people and the Government.

Currently, the citizen's demands on more transparent, accountable and participatory governance are highlighted as concerns for more inclusive development, accompanied with empowerment of vulnerable groups including minorities, women and migrant workers. While remarkable progress was made in building governance capacities in recent years, major challenges remain, particularly with regard to issues of transparency, accountability and participation, and human rights-based approaches for sustainable and balanced development throughout the country.

The Government with the support of the United Nations Country Team in the Kingdom of Saudi Arabia is committed to structure partnerships that can clarify roles and responsibilities of different actors for more effective development policies, decision-making and service delivery. Within the new structure, the Government has been seeking for practical measures to create social cohesion by more inclusive governance.

In promoting social inclusion and equity, civil society is an indispensable partner for achieving national development goals, with NGOs to convey the voice of the public and vulnerable group. The effective use of social media, by youth in particular, is a great opportunity to promote public participation and discussions about the future of development in a sustainable manner. Based on a human development approach, the Government with the support of the United Nations formulated economic and development policies that address issues of minorities, women and the poor. For example, the National Spatial Strategy aims to achieve inter-linkages between urban and rural areas and to solve inequalities between them.

The Government is also planning for measures to improve the situation of vulnerable groups within the country, including minorities, women and foreign workers. Along with other Gulf countries, the Kingdom of Saudi Arabia played a constructive role in passage of the new UN Convention on Domestic Workers in 2012.

Table IV.5-1 Public Review for Integrated Public Transport System in Riyadh, ADA

6. Challenges faced and lessons learned

The Kingdom of Saudi Arabia is operating under a unique system in terms of urban governance and legislations. For example, most of ministry's operations are based on resolutions of the Council of Ministers or ministerial ordinances, not laws and legislations, although the Government does sometimes adopt laws and legislations recently.

The Kingdom of Saudi Arabia successfully established a traditional setup of spatial planning and land management system based on various resolutions and manuals. As a result, there is a lack of comprehensive and systematic structure on spatial planning and land management underpinned by laws and legislations. Even though there are spatial plans in place, the quality and relevant procedures on drafting plans are not yet consolidated.

The Government has been working on decentralization process that accelerates sustainable and balanced development of the country. Simultaneously, the number of cities, towns and villages has been increasing. Given the current situation and challenge faced, regional and local authorities should be located under the comprehensive spatial planning mechanism that allow them to integrate different levels of plans and to ensure high quality of and transparent procedure for spatial planning.

The importance of ensuring public participation in policy-making process, and encouraging active involvement of women and youth as well as vulnerable people in such process, is clearly underscored in the ninth Development Plan. The Government is also encouraging empowerment of the people, which enable them to take an important role in urban governance. Numbers of progresses have been made in this area, offering citizens opportunities to take part in policymaking process at the national level. However, only few opportunities for public participation were given at the local level. One of the key lessons learned is that the role of public participation in urban governance should be secured officially.

The citizens should also be proactive in assuming roles and responsibilities in urban governance. For instance, neighborhood community can play an important role in enhancing security and safety in the districts where they live.

7. Visions for the future

In response to challenges faced, the Government of Saudi Arabia aims to address the following issues:

(i) Ensure legislative backup on spatial planning and land management system.

- The Government will revisit and assess resolutions of the Council of Ministers and ministerial ordinances that serve as basis of spatial planning and land management system that are currently in effect.
- The Government will analyze existing strategies, plans and policies on spatial planning, and propose a comprehensive structure of spatial planning and land management system that is relevant to the context of the Kingdom of Saudi Arabia.
- The Government will launch pilot projects to examine comprehensive planning system, particularly at the local level.
- With support of UN-HABITAT, the Government will ensure legislative process on spatial planning and land management system reflects global best practices as well as experience in the Arab States.

(ii) Ensure public participation in the process of policy making at national, regional and local levels, involving youth, women and vulnerable people.

- The Government has been promoting public participation in policy-making process, particularly at the national level, involving youth, women and vulnerable group.
- More opportunities for public participation should be offered at the local level where the citizens have the best understandings about the area.
- Measures and processes of public involvement should be examined to identify the most suitable approach in the context of the Kingdom of Saudi Arabia.
- Through spatial planning exercise supported by UN-HABITAT, the Government will ensure public participation is integrated into urban governance and spatial planning.

(iii) Empower civil society organizations and NGOs as active players in urban governance.

- Civil society organizations and NGOs should play active roles in urban governance, as recognized globally as well as in the Arab States.
- Emergence of civil society organizations and NGOs in the country should be encouraged, and their activities should be supported to enhance urban governance.
- The linkages between the government and civil society organizations/NGOs should be strengthened to improve the quality and efficiency of urban governance.

V. Urban Economy

1. Improving municipal/local finance

In the past decades, municipal services have improved substantially. The progress achieved is attributable to the financial support provided to the municipal sector by the Government, based on the recognition of importance of expanding public services and facilities in Saudi cities, towns and villages, and the development of the technical and administrative capacities of the municipal agencies.

Recently, the government service sector has grown at an annual rate of 2.7%, although the target growth rate in the eighth Development Plan was 3.8% for the period of 2005-2009. The Government has paid special attention to enhancing the capacities of the municipal agencies and allocated considerable proportion of government expenditures to strengthen municipal and local finance. As a consequence, investment in the government services sector has risen by 12.8% per annum. Municipal services and projects proposed by the government have fully met the targets as set in the eighth Development Plan.

These developments resulted in a remarkable improvement in coverage of municipal services in all administrative regions as well as in increase in the proportion of population covered by municipal services. All regions, especially those that were experiencing a shortage of services in the past, developed and updated their municipal services, which contributes to regionally balanced development of the Kingdom of Saudi Arabia.

Expansion of municipal services sector provided opportunities for local economy, particularly in the private sector. Various projects at the local level have been implemented, including physical construction work of road, infrastructure and public facilities, which had certainly contributed to local economy. There are other significant opportunities for the private sector, as the municipal agencies seek effective and efficient measures to improve their services by privatizing certain public services including public transport services, collection of municipal revenues, cleaning services, waste management, and management of investment in municipal properties.

The efforts of the Government are mostly focusing on less developed regions in order to reduce disparities among regions in terms of availability of municipal and public services and infrastructure, which are prerequisites for balanced economic and social development.

Table V.1-1 Approved Municipal Services Project by Regions (2005-2009), the Kingdom of Saudi Arabia

Region	Planning Studies	Rain water drainage	Roads and Streets	Parks	Markets	Municipal buildings	Environmental Health	Public Utilities	Enhance Municipal Services	Expropriation
1. Al Jawf	8	53	4	176	12	1	16	17	12	9
2. Northern Borders	2	60	4	139	16	2	17	23	10	1
3. Tabuk	9	59	1	219	16	2	13	20	15	3
4. Ha'il	12	71	2	304	14	15	25	34	25	3
5. Al Madinah	13	91	5	349	29	2	26	43	26	8
6. Al Qasim	3	91	1	429	37	25	63	55	23	14
7. Makkah	61	161	11	482	333	7	46	55	56	17
8. Al Riyadh	134	294	20	998	97	50	129	88	52	36
9. Eastern Region	20	104	14	449	49	11	44	75	35	7
10. Al Bahah	16	59	7	202	16	9	19	27	30	8
11. Asir	27	158	16	577	37	18	72	44	96	17
12. Jizan	18	121	7	374	40	14	32	63	38	21
13. Najran	9	58	3	132	19	5	16	21	20	1
Inter-regions (Cabinet Office)	193	23	25	10	0	0	10	3	8	0
Saudi Arabia	525	1403	120	4840	415	161	528	568	446	145

Source: Budget and Follow up Report, Ministry of Municipal and Rural Affairs

2. Strengthening and improving access to housing finance

Housing sector is one of the most important sectors in the Kingdom of Saudi Arabia. The Government has been strongly supporting housing provisions throughout the past decades, particularly by financing private housing constructions. The General Census of Population and Housing in 2004 indicated that approximately 60% of the 2.7 million Saudi households owned their homes. This ratio has increased slightly in recent years. Households living in villas and traditional houses constituted 46.2% and households living in floors or apartments constituted 47.4%. The vast majority of housing stock consists of small units. Residential units consisting of one or two bedrooms represent 64.3% of the total housing stock; those of three bedrooms 19.1%; and larger units (more than three bedrooms) 16.6%.

The Kingdom of Saudi Arabia has been facing continuous population growth, which also increases the housing demand in the country. For instance, during the period of 2005-2009, the housing market had to fulfill new housing demands of 1.25 million housing units, for which the area of land required 350 million m^2, assuming that the average total area required for each housing unit is 280m^2. The ninth Development Plan envisages to satisfy 80% of the demand by building one million housing units through the Public Housing Authority, Real Estate Development Fund and the private sector.

In 2007, the General Housing Authority was established with the aims to increase home ownership, increase supply of housing and residential land, build adequate housing for the needy, develop a comprehensive housing strategy, and propose regulations, systems, policies and organizations pertaining to housing. In order to enhance the Government's role on housing policy and provision, the Ministry of Housing was established in 2011.

The history of housing finance support in the Kingdom of Saudi Arabia is as old as the history of the Real Estate Development Fund, since its establishment in 1974. The Real Estate Development Fund was established to meet the needs of the citizens by providing no interest loans for private housing constructions. Since its establishment, the Real Estate Development Fund played an important role to ensure people's access to finance. Table V.2-2 shows that the Government is expected provide 62 % of public-led housing through the Real Estate Development Fund, which is approximately 11% of total housing provided during the period of 2005-2009. In order to meet the housing demand, the Government has been expanding the Real Estate Development Fund, providing 49.9 billion Saudi Riyal (equal to approximately 13.5 billion US Dollars) in 2008, 52.5 billion Saudi Riyal (equal to approximately 14.2 billion US Dollars) in 2009, 68.0 billion Saudi Riyal (equal to approximately 18.4 billion US Dollars) in 2009, and 87.4 billion Saudi Riyal (equal to approximately 23.6 billion US Dollars) in 2011. The Real Estate Development Fund had significantly expanded in 2012 with provision of 230 billion Saudi Riyal (equal to approximately 62.1 billion US Dollars) in 2013. As of September 2014, the Real Estate Development Fund provides no interest loan services through 33 branches. Despite the vast amount of Government investment through the Real Estate Development Fund, the Saudi's housing demand has not yet been fully met.

Recently, the Real Estate Development Fund has been seeking for advanced lending programmes in order to maximize the number of borrowers. The Real Estate Development Fund has also signed new agreements with private banks to help facilitation of loan disbursement and collection. The Government has also been working on the issuance of the law on mortgage that will encourage new capital to housing finance market. The Government is facilitating the establishment of the Saudi Mortgage Refinance Company, which is expected to give a positive impact on the housing finance market in the future.

Table V.2- 1 Housing Units by Types in 1992 and 2004 in the Kingdom of Saudi Arabia

Type of Housing Unit	1992		2004		Change 1992-2004		Average annual growth rate (%)
	Number	Share (%)	Number	Share (%)	Number	Share (%)	
Villa	454,365	16.4	729,780	18.3	275,415	22.6	4.0
Traditional House	909,005	32.7	1,114,456	27.9	205,451	16.9	1.7
Apartment	847,233	30.5	1,505,429	37.7	658,196	54.2	4.9
Part of Villa or building	241,317	8.7	386,911	9.7	145,594	12.0	4.0
Other housing	325,002	11.7	255,207	6.4	-69,795	-5.7	-2.0
Total number of Housing Unit	2,776,922	100.0	3,991,783	100.0	1,214,861	100.0	3.1

Source: Central Department of Statistics and Information

Table V.2-2 Distribution of Target Housing Units and New Demands in 2010-2014

Region	Target Housing Unit (2010-2014)* thousand units					Housing Demand (2010-2014)	
	Real Development Fund	Public Housing Authority	Private Sector Housing	Total Housing Units	Residential Land (Million m^2)	Number of Housing Units	Residential Land (Million m^2)
1. Al Jawf	3	6.5	9	18.5	5.1	13.5	3.8
2. Northern Borders	3	6	7.5	16.5	4.6	11.5	3.2
3. Tabuk	4.5	4	24	32.5	9.1	38.9	10.9
4. Ha'il	5	6	14	25	7	20.5	5.7
5. Al Madinah	9	6.5	50	65.5	18.3	81.2	22.6
6. Al Qasim	9	4	32	45	12.6	51.0	14.3
7. Makkah	20	4	229	253	71	370.0	103.0
8. Al Riyadh	23	4	198	225	63	325.0	91.0
9. Eastern Region	13.5	4	103	120.5	33.7	166.3	46.5
10. Al Bahah	3	4	11.5	18.5	5.1	17.3	4.8
11. Asir	7	4	52	63	17.6	83.1	23.3
12. Jizan	5	6.5	31	42.5	11.9	50.1	14.0
13. Najran	4	6.5	14	24.5	7	21.6	6.9
Saudi Arabia	109	66	775	950	266	1250.0	350.0

* Add to the total 50 thousand units build by government agencies for their employees on 14 million m^2 of residential land. Source: The 9th Development Plan, Ministry of Economy and Planning

Table V.2-3 Estimated Demand of Housing Units in 2010-14 in the Kingdom of Saudi Arabia

Housing Demands	Number of Units (thousand)
New housing unit for Saudis	800
New housing unit for Non-Saudis	200
Housing units to meet unsatisfied demand for housing carried over in 2005-2009 (the 8th Development Plan)	70
Housing units required for replacement	70
Reserve units to ease rent inflation (10%)	110
Total housing demands in 2010-2014	1250
Annual average number of units	250

Source: The ninth Development Plan, Ministry of Economy and Planning

3. Supporting local economic development

The expansion and development of infrastructure throughout different regions of the country including roads, railways, telecommunications, water and sanitation, and electricity, has significantly facilitated local economic development. The Government continues its efforts to achieve balanced development and develop institutional capacities of the agencies working in local level to improve the investment environment, to increase productivity, and to create more employment opportunities.

Degree of local economic development is linked to the geographic and economic characteristics of the area. National statistics indicate that the economic activities in private sector are highly concentrated in key urban and economic centers. In 2007, 31% of 695,000 operating businesses were in Riyadh region, 26% in Makkah region, and 17% in the Eastern region. These 3 regions out of total 13 regions of the country account for 74% of total business operations. Industries of the country are also concentrated in these 3 regions, accounting for 86% of all operating factories in 2008. Similarly, the

number of industrial jobs per 10,000 people was 314 in the Eastern Region, 289 in Riyadh Region, and 207 in Makkah Region.

Provision of infrastructure and services in various regions is essential for building a productive base utilizing their comparative advantages. Statistical data show significant discrepancies in economic activities and trade between regions, which may be attributable to limited demand for various economic activities in some regions. This means that mechanisms for directing economic activities towards the less developed regions must be introduced, in addition to providing grants to investors in the less developed regions in the form of tax incentives, in order to strengthen the production base and reducing the developmental gaps between regions.

Table V.3-1 Distribution of Developmental Credit by Region (As of 2008 in million US Dollars, where 1US Dollar =3.75 Saudi Riyal)

Region	Industrial	Real Estate	Agricultural	Credit and Saving
1. Al Jawf	-	31.6	9.7	129.9
2. Northern Borders	-	32.1	0.3	88.3
3. Tabuk	-	44.6	7.6	64.0
4. Ha'il	-	61.0	19.2	88.3
5. Al Madinah	283.0	105.6	2.7	213.3
6. Al Qasim	4.9	152.6	25.4	105.3
7. Makkah	115.0	241.7	3.5	399.6
8. Al Riyadh	288.6	374.8	65.1	498.2
9. Eastern Region	1,685.1	196.8	15.9	317.5
10. Al Bahah	-	11.3	0.8	78.0
11. Asir	2.4	114.2	41.6	287.0
12. Jizan	-	23.5	17.3	114.2
13. Najran	-	48.3	4.9	97.7
Total	2,379.0	1,438.0	213.8	2,481.3

Reference: Annual Report of Government Credit Institutions

4. Creating decent jobs and livelihoods

The Council of Ministers in the Kingdom of Saudi Arabia adopted the Saudi Employment Strategy in July 2009. The strategy complements continued efforts to diversify the national economy through its focus on improving the productivity of Saudi nationals in preparation for employment in emerging sectors of the economy.

The labor market in the country has been suffering from a variety of structural imbalances, including high dependency on expatriate workers, severe gender gap in the supply of labor and large wage disparities. In 2009 the unemployment rate of 10.5% Saudis was practically double of the total unemployment rate of 5.7%, and the unemployment rate for youth of age between 20 and 24 had reached 30.2%, reaching 39.3% for Saudi nationals in the same age group.

In regard to the distribution of total employment by major occupational group, approximately 30.6% were assigned to clerical occupations. 34.6% of Saudi employment is concentrated in service sector, particularly government works, followed by scientific, technical and humanities professions at 18.4%, while only 1.1%, the lowest proportion, is associated with industrial, chemical and food industry professions. In contrast, expatriate employment is concentrated in basic engineering auxiliary professions with 36.2% of total expatriate labor.

In this context, the Saudi Employment Strategy aims to achieve a sustainable increase in participation of the national workforce to reach full employment of Saudi citizens, by

providing an adequate number of opportunities at appropriate terms of pay and conditions. The Government strongly acknowledges the importance of human resources

Figure V.4-1 Imam Mohammed Ibn Saud Islamic University and King Saud University Faculties, ADA

development as a foundation for comprehensive development, and aims to raise total labor force participation rates, continuously upgrade its skills and develop its capacities, and provide it with opportunities for gainful employment, particularly in the various activities of the private sector.

The Saudi Employment Strategy incorporated several programmes and policies aimed at achieving qualitative and quantitative expansion of education and vocational training, prioritizing employment with the national workforce, and addressing macroeconomic and structural imbalances in the labor market, especially youth unemployment and reliance on foreign labor.

In regards to the improvement of livelihood, the 'Quality of Life Index' is often used. The Quality of Life Index is composed of indicators that include level and distribution of income, employment, education and health services, housing situation, family condition and environmental situation. The trend shows the improvement in the quality of life of citizens in the Kingdom of Saudi Arabia. The Quality of Life Index increased from 100 points in 1999 (base year) to 105.3 points in 2004 and to 111.3 points in 2009.

In contrast, housing and recreation indicators have gone down. The housing indicator went down from 108.5 points in 2004 to 102.5 points in 2009, while the entertainment indicator went down from 119.2 points to 112.4 points over the same period. This trend

indicates that further efforts are needed to increase the number of housing units, particularly the number of affordable housing units, to enhance the provision of water and sanitary services, and to implement the property mortgage law and related rules.

Table V.4-1 Contributions of Major Sectors of National Economy in Provision of Employment Opportunities

Sector	2004		2009		Average Annual Growth (%)
	No. of employees*	Contribution (%)	No. of employees*	Contribution (%)	
1. Non Oil Sector					
a. Production	278.24	8.4	413.71	10.6	8.3
b. Private Services	2074.48	63.0	2392.49	61.1	2.9
c. Government	878.85	26.6	1048.64	26.8	3.6
2. Oil and Gas Sector					
a. Oil and Gas	66.61	2.0	59.74	1.5	-2.2
Total	3298.18	100.0	3914.58	100.0	3.5

*Number of employees is in thousands, and data for 2009 is preliminary.
Reference: The ninth Development Plan, Ministry of Economy and Finance

5. Integration of the urban economy into national development policy

Over the decade, the annual growth rate of national GDP has been increasing from its low at 0.2-3.4% during the 1990s to 5.6-8.6% during the 2000s. In 2011, the annual GDP growth rate reached 8.6% as in 2004, which was the highest growth rate since 1990. The national economy continued to grow and the national GDP at constant 2005 price was 227.8 billion US Dollars in 1995, which had increased to 519.9 billion US Dollars in 2013. The GDP per capita at constant 2005 price was 12,269 US Dollars, which had grown to 18,034 US Dollars in 2013.

Given the external factors that had an impact on the volume of oil production, the real domestic product of the oil-and-gas sector dropped at a rate of 0.2% per annum, which is lower than the rate of 2.7% targeted by the eighth Development Plan. The oil-and-gas sector acquired 4.3% of the total investments during the period of 2005-2009, with an average annual value of approximately 2.7 billion US Dollars, which amounts to an increase of 129.3% compared to the value of investments in 2004.

During the same period, non-oil sectors achieved an average annual growth rate of 4.7%, with the value added by these sectors rising, at constant 1999 prices, from approximately 141.4 billion US Dollars in 2004 to approximately 178.1 billion US Dollars in 2009, thereby increasing their contribution to the GDP from 72.5% in 2004 to 77.1% in 2009. This improvement in performance of non-oil sector reflects the efforts made to diversify the production base of the economy.

On the other hand, the national revenue is strongly related to oil sector. 89.1 billion US Dollars out of total national revenue of 105.9 billion US Dollars, which is 84.1%, relied on oil sector. The proportion of oil revenues increased in 2008, where 265.5 billion US Dollars out of total national revenue of 297.2 billion US Dollars relied on oil sector, which accounts for 89.3%.

The Development Plans drafted every 5 years continuously aim to achieve various macro and sectoral objectives, including to adopt a wide range of economic and social policies designed to ensure tangible benefits to improve the standard of living and quality of life of citizens; to develop the structure of the national economy, diversify its productive base, and enhance its competitiveness; to accelerate transformation to a knowledge-based economy; and to achieve balanced development among different regions of the country.

The concept on economic policy in the Development Plan are broken down to the National Spatial Strategy in geographic term, as key growth centers are categorized into national, regional and local growth centers. Regional Spatial Strategies developed by regional principalities also integrate economic growth centers as categorized by economic sectors, which shows that the concept of urban economy is substantively integrated in different layers of spatial planning. The Government's investments on urban infrastructure in different cities, towns and villages throughout regions have been allocated based on the economic policies that are broken down into spatial policies at different levels.

Table V.5-1 Main Items of the National Budget 2004-2008 (Billion USD, 1USD=3.75 SAR)

Items	2004	2005	2006	2007	2008	Average for 2004-2007
Total Revenues	105.9	152.4	181.9	173.6	297.3	201.3
Oil Revenues	89.1	136.2	163.2	151.8	265.5	179.2
Total Expenditures	77.0	93.6	106.2	125.9	140.4	116.5
Investment Expenditures	10.2	16.8	19.1	32.1	35.4	25.9
Current Expenditures	6.5	76.7	87.0	93.7	105.0	90.6

Source: Saudi Arabian Monetary Agency, Ministry of Economy and Planning

Table V.5-2 GDP by Sectors at constant 1999 prices (1USD=3.75 SAR)

Items	Value (Million USD)		Average Growth Rate (%)		Shares on GDP (%)	
	2009	2014	2005-09	2010-14	2009	2014
A) Non-Oil Sectors	178,111	241,826	4.7	6.3	77.1	81.3
1. Production Sectors	61,587	83,742	4.7	6.3	26.7	28.2
1.1 Agriculture, Forestry and Fisheries	10,959	11,933	1.4	1.7	4.7	4.0
1.2 Non-Oil Mining and Quarrying	829	1,286	3.0	9.2	0.4	0.4
1.3 Manufacturing	29,298	41,481	5.9	7.2	12.7	14.0
1.4 Electricity, Gas and Water	4,004	5,740	5.7	7.5	1.7	1.9
1.5 Construction	16,497	23,302	4.7	7.2	7.1	7.8
2. Private Service Sectors	75,742	106,547	6.0	7.1	32.8	35.8
2.1 Trade, Restaurants ad Hotels	20,170	28,629	5.6	7.3	8.7	9.6
2.2 Transport and Communications	15,766	21,146	9.1	6.1	6.8	7.1
2.3 Real Estate Services	15,537	21,579	3.7	6.8	6.7	7.3
2.4 Financial, Insurance and Business Service	15,278	22,055	6.9	7.6	6.6	7.4
2.5 Community, Social and Personal Services	8,991	13,137	4.5	7.9	3.9	4.4
3. Government Services	40,782	51,537	2.7	4.8	17.1	17.3
B) Oil and Gas Sector	54,854	58,225	-0.2	1.2	23.7	19.6

Source: Saudi Arabian Monetary Agency, Ministry of Economy and Planning

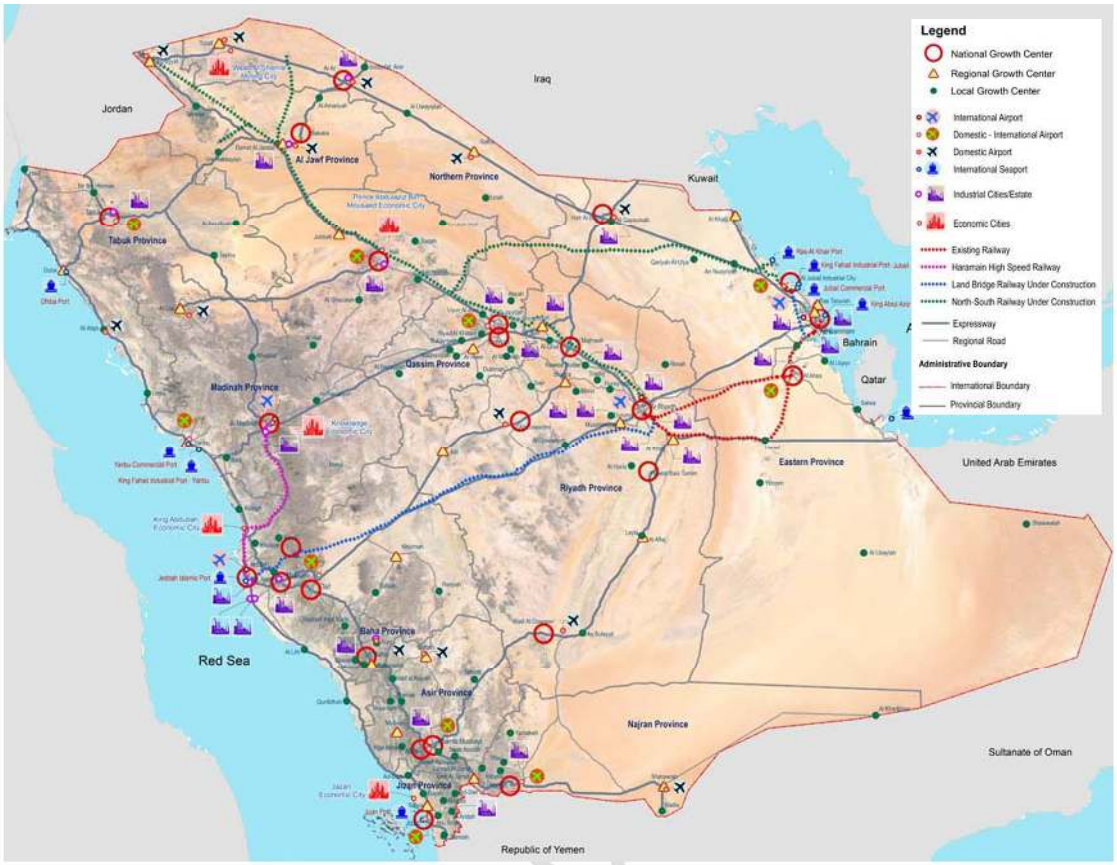


Figure V.5-1-1 Distribution of Economic and Industrial Cities, National Spatial Strategy

6. Challenges faced and lessons learned

Number of medium and small cities has been increasing over the decades throughout the Kingdom of Saudi Arabia, and the Government was urged to manage economic growth of emerging cities in a sustainable manner. The Government acknowledged the importance of enhancing capacity of local authorities through decentralization process that delegate number of responsibilities to municipalities under the supervision of the Ministry of Municipal and Rural Affairs.

The Government has been allocating enormous amount of budget to each municipality in order to improve urban infrastructure, urban services, municipal facilities and capacity of the government officials at the local level. This movement is admittedly improving potential of medium and small cities to attract private enterprises and investments, and stimulate local economy.

Municipalities have started to explore ways to provide efficient public services with the support of private enterprises. For instance, municipalities selected several public services as a target of privatization, including public transportation, waste management and maintenance of public facilities.

Expansion of the Government investment at the local level and encouragement of privatization is expected to be a catalyst for local economic growth, and subsequent job creation at the local level. It should also be underscored that the Government has been encouraging formulation of universities, research centers, medical centers and hospitals,

and other educational facilities throughout the country as they are expected to create decent job opportunities at the local level.

The Government also supports to ensure quality of life for all citizens. Particularly in housing finance, every household, regardless of age and gender, is eligible to apply for no-interest housing loan through the Real Estate Development Fund. Despite the vast Government investment in the Real Estate Development Fund over the past decades, there is a long waiting list of applicants, which may result in marginalizing those who are in need for urgent support. As of September 2014, the Government is reviewing the Real Estate Development Fund to improve their approach so that they are able to identify people in urgent need more efficiently.

7. Visions for the future

In response to challenges faced, the Government of Saudi Arabia aims to address the following issues:

(i) Promote decentralization process and enhance municipal capacities.

- In line with the current policy direction on governance, the Government will promote decentralization process as well as development of financial and personal capacities at the local level to achieve sustainable and balanced development throughout the country.
- The Government will strengthen local plans to identify local economic opportunities and to diversity local economic activities. The local plans should identify specific local economic activities that should be encouraged, taking into consideration their geographic locations and economic potential.
- Continue encouraging public investments that contribute to attract private investment and stimulate local economy.
- The Government will ensure effective coordination and cohesion of local economic activities throughout different regions of the country.

(ii) Encourage privatization process and create incentives for local economic development through public and private partnership (PPP).

- Municipalities will lead privatization and PPP to make medium and small cities attractive for private investment.
- Identify advantages and incentives for private enterprises and opportunities for investments that continue to improve livability and viability of cities.
- The Government will encourage privatization of public services and improve the quality of services that will stimulate local economic activities.
- The Government will explore PPP opportunities in urban development in medium and small cities.

(iii) Enhance housing finance support, particularly for people who need urgent support.

- Housing finance support should reach people who urgently need support. The Government will examine new housing finance support system and identify eligible people in need for urgent support.
- The Government will improve effectiveness of the housing finance support and increase access to housing finance support.
- The Government will identify target population for the Government housing finance support and propose new housing finance scheme in collaboration with private banks, so that it could reach all those who seek the housing loan.

VI. Housing and Basic Services

1. Slum upgrading and prevention

Slum is defined as densely populated urban informal settlements characterized by inferior living standards without adequate urban infrastructure and services including road, sanitation, water supply, sewage and electricity. Informal settlement, usually ends up as slum, is typically shaped as a result of concentration of temporarily built housings due to the lack of affordable housings for migrant workers from rural area or other countries that come to cities to seek job opportunities. Due to rapid urbanization, housing provisions both by private and public sectors cannot catch up with rising housing needs, which also resulted in the increase of housing price. As a consequence, migrant workers, particularly those who are deprived, build temporary accommodations with poor materials, shaping informal settlements and slums altogether. Given that these settlements are informally built without the official approval, urban infrastructure and services are usually not adequately installed.

The Kingdom of Saudi Arabia embraces two of the holiest cities in the religion of Islam, Makkah and Medina, which attract Muslim pilgrims from all over the world. 15 million people visited those places annually, of which approximately 2 million concentrated during the few-day period of the Hajj. This means that more than 10 times the city's population visit these holy cities every year, and pilgrims of more than city's population visit during the Hajj period. This unprecedented movement of large number of people poses challenges on urban settlements. As a consequence, two holy cities of Makkah and Medina as well as adjacent cities of Jeddah and Taif have the largest concentration of informal settlements in the Kingdom of Saudi Arabia.

For example, Jeddah is the second largest city in Saudi Arabia with a population of approximately 3.4 million, and has a large number of informal settlements. Historically, and still today, the city continues to function as the gateway to two holy cities of Makkah and Medina, and as an important commercial hub in the entire Red Sea region. The city has been experiencing rapid urbanization and the city's population is estimated to reach 5-6 million in the next 20 years. During the 1960s and 1970s, Jeddah had expanded rapidly, particularly along the Makkah and Madina corridors, and modern urban settlements well equipped with urban infrastructure and services expanded to suburban areas. As a consequence, old town and inner urban areas were deteriorated, turned into the area where deprived people seek accommodations. In parallel, migrants and/or poorer Saudi families, who were in need of cheaper housing, formed a large number of informal settlements in the fringes of the city. The survey conducted by Jeddah Municipality and Jeddah Development and Urban Regeneration Company unveiled that there are approximately 50 settlement areas categorized 'unplanned settlements' or 'slums' (hereinafter referred to as 'informal settlements') in Jeddah City, that embrace total population of 1 million, a third of total population of the city. The area of informal settlement accounts for 16% of the city. The maintenance of urban infrastructure, however, remained in poor condition as constant subdivision of the residences over decades increased population density of the settlements.

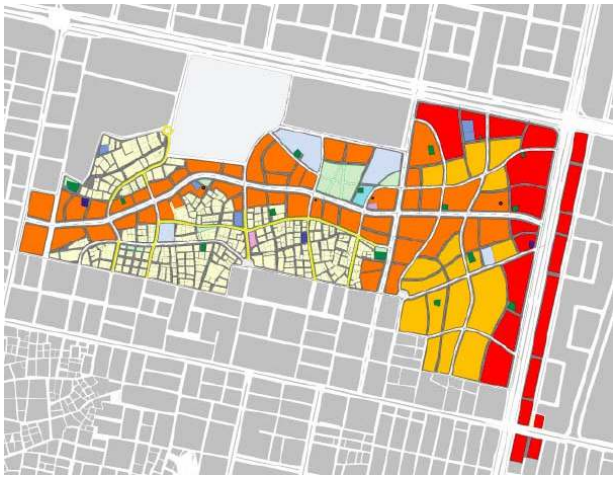
Jeddah Principality and Municipality had drafted several different layers of spatial plans. At the city level, local and regional authorities prioritized their objectives to improve and upgrade informal settlement areas, and formulated projects to take immediate

actions. One of the biggest obstacles to improve, upgrade and formalize informal settlements is the lack of formal land titles. In Jeddah, the authorities addressed the challenge through the "Jeddah without Slums Programme".

In 2007, the Jeddah Development and Urban Regeneration Company was established to facilitate legalization of land titles, improvement of local environments and provision of basic services for residents of informal settlements. Jeddah Regional Principality and Municipality, together with Jeddah Development and Urban Regeneration Company, surveyed a wide range of urban conditions through spatial analysis engaging community members. As a result, upgrading schemes were developed for each informal settlement while carefully considering physical changes of buildings and public realm to improve structural soundness and comfort and to provide adequate urban infrastructure.

Several scenarios were developed by different stakeholders in upgrading informal settlements in Jeddah, namely (i) private developers, (ii) Jeddah Development and Urban Regeneration Company and Jeddah City, and (iii) residents of informal settlements. Scenarios were based on two major options (i) regeneration of the entire area, and (ii) upgrading street and minimal redevelopment alongside improved streets. During all stages of the development, consultations were held with local residents, representatives of traditional community groups, municipalities, Jeddah Development and Urban Regeneration Company and private developers to ensure that stakeholders are appropriately engaged throughout the process.

In the end, intervention and upgrading scheme at the minimum level was supported by both residents and local authority, who sought to improve the area with the absolute minimum physical disruption to the existing settlement. The advantage of this scheme was that that it demonstrated that interventions for improvement of informal settlements could be small, independent projects.



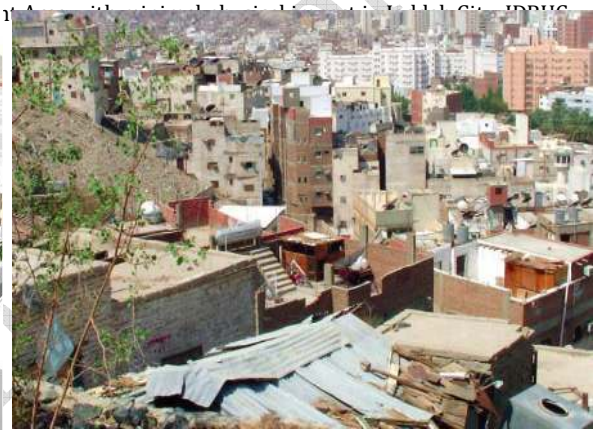


Figure VI.1-3, 4 3D Model of Action Area and existing Informal Settlements in Jeddah City, JDRUC

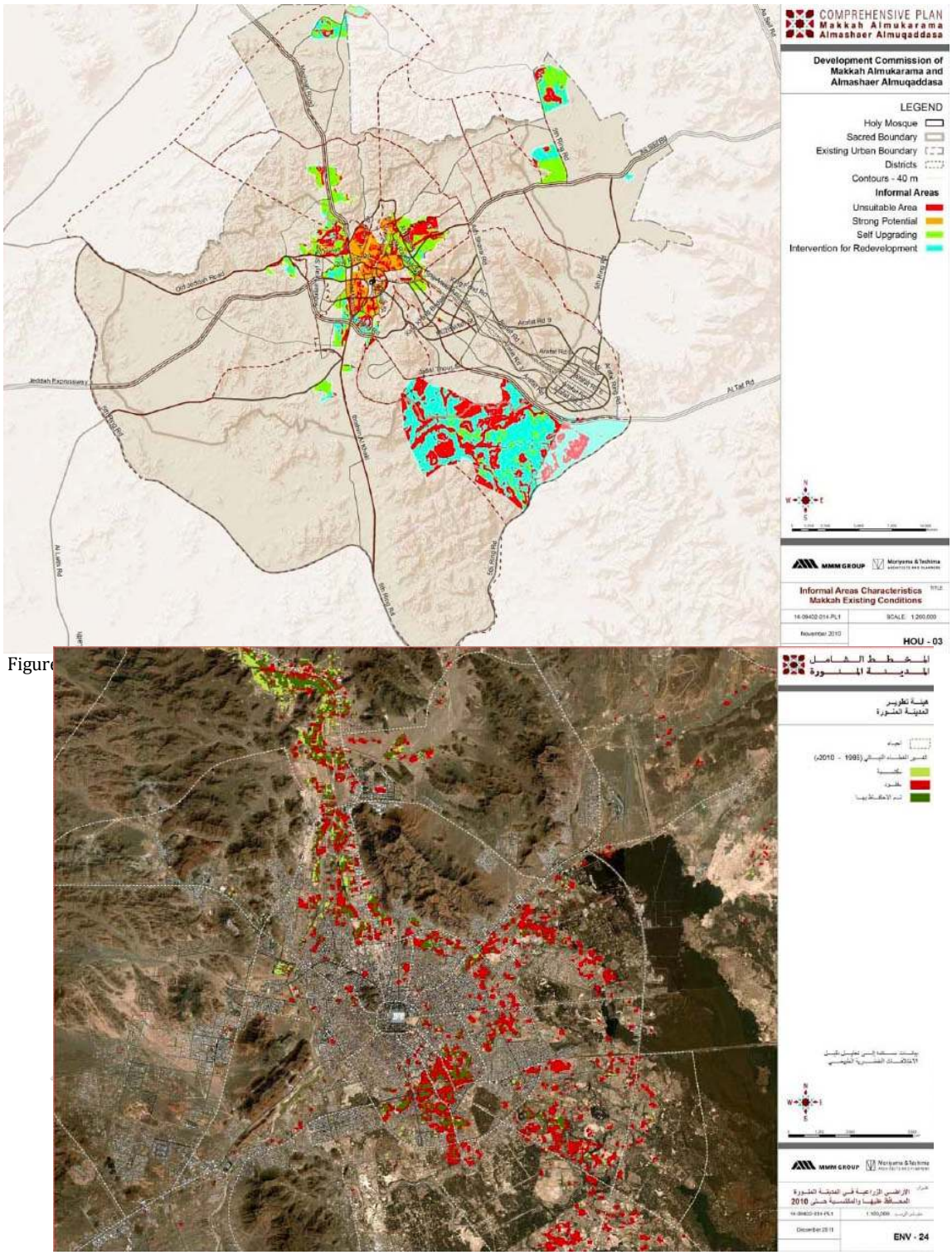


Figure VI.1-6 Medina City Comprehensive Strategic Plan (Informal Settlement Area), Madinah Almunawara

2. Improving access to adequate housing

It is one of the top priorities of the Government that all the people have access to affordable housing. There are numbers of approaches that the Government supports to provide affordable housing: i) provide no-interest loan through the Real Estate Development Fund, ii) provide government land to individuals and private housing developers, and iii) construct affordable housing. Notably, the Real Estate Development Fund has been playing the major role for providing affordable housing in public sector. However, concerns were raised that the amount provided by the Government is never sufficient, even though the Government has been expanding the annual budget of the Real Estate Development Fund to provide no-interest loan for people. Basically, there are no eligibility criteria for borrowing mortgage from the Real Estate Development Fund, resulting in a long waiting list for the applicants. As of September 2014, the Government is currently seeking advanced lending programmes to maximize the access to housing finance scheme.

In order to strengthen the national capacity on housing, the Government newly established the Ministry of Housing in 2011. The Ministry of Housing is currently focusing on four key initiatives outlined below:

1) Adaptation of the National Housing Strategy:
The Ministry of Housing developed the National Housing Strategy in 2014. The strategy aims to i) review challenges and constraints surrounding the housing sector; ii) address key issues including the gap between housing needs and supply, land policy, housing finance, and Public and Private Partnership (PPP); iii) identify action plans and programsmes; and iv) establish implementation plan. In the National Housing Strategy, lack of housing legislations, shortage of lands for housing development, and non-targeted housing loan scheme were identified as key challenges. Role of private sector and PPP approach is also underscored.

2) Develop prioritization mechanism on affordable housing provision and mortgage:
The Ministry of Housing launched a project to develop a mechanism to prioritize the provision of affordable housing led by public sector. The mechanism identifies criteria of the eligible people based on their financial, social and health backgrounds. The mechanism to prioritize provision of affordable housing will be developed based on principles of transparency, equity, social balance, universal coverage and sustainability.

3) Encourage construction and provision of affordable housing:
The Ministry of Housing undertakes three types of substantive support on affordable housing provision, i.e. no-interest loan, land provision, and implementation of housing construction. The Government allocated 250 billion Saudi Riyal (equal to approximately 68 billion US Dollars) for construction of 500,000 affordable housing units, and is implementing 48 affordable housing projects throughout the country as of September 2014. Some of the projects are completed, and eligible people identified by the Ministry of Housing were already provided housing. In addition to construct housing units, the Ministry of Housing is mandated to plan, develop and install basic infrastructure in areas surrounding affordable housing, which will also be provided to eligible citizens (for instance, in Gizan, Al Yasmin District).

4) Strengthen PPP approach for affordable housing provision:
It is inevitable to seek active cooperation with private sector to ensure adequate provision of housing. The Ministry of Housing has applied the PPP approach in the construction and provision of affordable housing. To enhance the PPP approach, the

Ministry is working to strengthen regulatory frameworks, incentives to private sector, and criteria of private enterprises who are capable to cope with the Government.

Among overall activities of the Ministry of Housing, 11 housing projects were completed and 33 housing projects are implemented as of September 2014. In terms of land development, the Ministry of Housing has been constructing 13 housing districts with improvement of infrastructure so that they can absorb 59,000 housing units. Additional 103 housing land developments have been planned to provide 139,000 housing units.

In the Kingdom of Saudi Arabia, the land price is remarkably high. This is because the land market is not active and people do not want to release their lands for investment purposes. To improve this situation, the Government is proposing the law on taxation for unexploited lands as of September 2014..

Figure VI.2-1 Residential development in Riyadh, ArRiyadh Development Authority

Figure VI.2-2 Residential development in Jeddah City, JDURC

3. Ensuring sustainable access to safe drinking water

Given that the territory of the Kingdom of Saudi Arabia is dominated by desert. water is scarce resource in the country. There is neither rivers nor lakes within the territory, and the amount of rainfall is very little throughout the year. On the other hand, the need for water has been continuously increasing every year, due to rapid urbanization triggered by population growth in the country.

In the Kingdom of Saudi Arabia, aquifers, which are vast underground reservoir of water, are the major source of water supply. Therefore, there are tens of thousands of deep tube wells to obtain water both in urban and rural areas. In the 1970s, the Government launched a major initiative to locate and map the national aquifers and estimate their capacity, and concluded that the most of regions throughout the country can access aquifiers.

There is another measure to secure water supply, which is a technique called desalination. Desalination is a process to produce potable water from brackish seawater, and the Kingdom of Saudi Arabia is the world's largest producer of desalinated water. The Saline Water Conversion Corporation operates 27 desalination stations, which produce more than three million cubic meters of potable per day. These desalination stations provide more than 70% of the water used in cities, as well as a sizeable portion of the water used in the industrial sector. These desalination stations are also a major source of electric power generation in the country.

Dams are also used in the Kingdom of Saudi Arabia to capture surface water after frequent flash floods. More than 200 dams collect an estimated 16 billion cubic feet of runoff annually in their reservoirs. Some of the largest of these dams are located in the Wadi Jizan, Wadi Fatima, Wadi Bisha and Najran. Water captured in dams is used

primarily for agriculture and is distributed through thousands of miles of irrigation canals and ditches to vast tracts of fertile land that used to be fallow.

A new water source in the Kingdom of Saudi Arabia that is recently highlighted is the recycled water. The Government aims to recycle approximately 40 % of the water used for domestic purposes in urban areas, and constructed recycling plants in Riyadh, Jeddah and other major urban industrial centers. Recycled water is used for irrigation of farm fields and urban parks. Through these efforts, the Government has been supplying safe and clean water in 1,660 cities, villages and hamlets. Approximately 4,060 other villages and hamlets are supplied water by tankers.

4. Ensuring access to basic sanitation and drainage services

Since 2003, the Ministry of Water and Electricity has been responsible for policy and regulation on water and sanitation services, whereas the National Water Company has been responsible for water and sanitation. The length of sanitation networks reaches more than 17,600km, across the country, and more than 831,000 households are connected to the network. However, the sanitation networks cover only approximately 42% of the areas in major cities, and sewage treatment stations receive wastewater at the rate that exceeds their maximum capacity. The coverage of sewage network is estimated to be 53% as of 2014, and is expected to reach 70% of urban areas through the Ministry of Water and Electricity.

In 2013, the Ministry of Water and Electricity launched 32 projects with total budget of 824 million Saudi Riyal (equal to approximately 222.5 million US Dollars) throughout the country. The projects consist of development of water supply network and domestic wells, installment of sewage, and renovation of old water supply network.

5. Improving access to clean and domestically produced energy

The consumption of electric power in the Kingdom of Saudi Arabia had increased rapidly in recent years. Moreover, growth in consumption rates in less developed regions exceeded the average growth rate of the country as a whole, indicating progress towards regionally balanced development. In 2008, the residential sector accounted for approximately 53% of total energy consumption amounting to 181.1 billion kilowatt/hours, compared to industrial consumption at 18%, government consumption at11%, commercial consumption at 12%, and agricultural consumption at 2%.

Notably, the number of cities, towns, villages and hamlets covered by the electricity service has drastically increased from 11,405 in 2008 to 793 in 2004. In 2008, the total number of subscribers throughout the country was approximately 5.4 million, with increase of approximately 929,000 new subscribers by 2009, reflecting an average annual growth rate of 4.8%. Residential subscribers accounted for approximately 82% of the total subscribers, while subscribers from the commercial sector accounted for approximately 13%, the government sector 2%, and the agricultural sector 1%. Industrial sector accounted for only 0.13%.

The total electric generating capacity relies on available generation from the power plants of the Saudi Electricity Company, water desalination plants, and plants owned by large consumer companies including Saudi Aramco and SABIC. In 2008, the total generating capacity available during peak load was approximately 39,200MW,

compared to approximately 30,300MW in 2004, indicating an average annual growth rate of 6.7%. In 2008, electrical energy generated from all sources was approximately 204.2 billion KWH, with production of steam-turbine stations constituting 40% of the total, increasing from approximately 31% in 2000.

6. Improving access to sustainable means of transportation

In response to rapid urbanization with growth of number of the population particularly in major cities, development of advanced and sustainable network of transportation has been one of the top priorities of the Government over the decades. At the national level, the Ministry of Transport is responsible to develop plans, policies and strategies on transportation. In 2011, the Ministry of Transport developed the National Transportation Strategy, which aims to provide sustainable transportation system at the national, regional and local levels.

As the National Transportation Strategy highlighted, public transportation services play a crucial role particularly in major cities where road infrastructure is overloaded by private vehicles owned by individuals. Public transportation will provide citizens with effective and efficient meas of transportation that reduces number of private vehicles and, as a consequence, relieves traffic congestions. It will also reduce local pollutant and CO_2 emissions, which improves environment and thereby benefit all people. Therefore the development of integrated public transportation is critical.

In response to the National Transportation Strategy, the Government approved the projects that simultaneously develop integrated public transportation system in four major cities in the country, namely Riyadh, Makkah, Medina and Jeddah.

In 2012, the Council of Ministers adopted Public Transport Project in Riyadh, subsequent to the development of Comprehensive Strategic Plan including the policy on integrated public transportation, by the High Authority for the Development of Riyadh.. The plan stipulates the establishment of road networks for public transportation using buses and electric trains, creating special lanes. The High Authority for the Development of Riyadh had completed the engineering designs, technical specifications and blueprints for these projects.

In the first phase of these projects, a light rail network will be constructed on the axis of King Abdullah Road with a length of 17km, which includes 11 railway stations. The metro network will also run on the axis of Al-Olaya-Al-Batha Street with a length of 25km, extending from the northern to the southern ring road and including 25 railway stations. Key railway stations located in outer area of the city will be equipped with car parking, which is the system called “Park and Ride,” to encourage use of public transport rather than private vehicles.

In parallel with the development of railway networks, the establishment of bus network, including special bus lanes, is planned to take place in the entire Riyadh City. The bus network will be carefully arranged in four levels, ranging from small to high capacity, to complement the railway network and with organic linkages between bus stops and railway stations.

The High Authority for the Development of Riyadh had revealed that the economic benefit of the Public Transport Project in the Riyadh City is estimated to be three times higher than the cost of its construction and operation. The annual economic returns of the plan are expected to be more than 8 billion Saudi Riyal. The project will also provide

more than 450,000 direct and indirect job opportunities during the time of its execution. The implementation of the project will also bring big gains for Riyadh City and its residents beyond traffic, architectural, social, health and environmental aspects in addition to economic gains.

According to the studies conducted by the High Authority for the Development of Riyadh, the project will cut down daily car journeys by more than 2.2 million trips every day and will reduce the distance driven daily on the road networks by more than 30 million km. Once the Integrated Public Transport System is set, it is expected to save more than 800,000 hours, which are now being wasted on roads every day. It will also reduce the fuel consumption in the city by more than 620 million liters annually. The development of the Riyadh Metro will cost 22.5 billion US Dollars, and the project is planned to be completed by 2019.

Figure VI.6-1 Riyadh Metro Project, Olaya Main Metro Station, ArRiyadh Development Authority (ADA)

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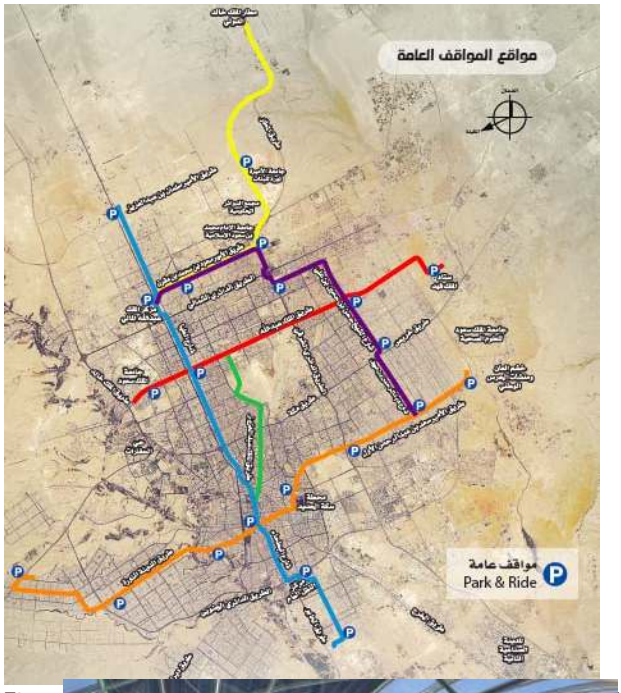
Figure VI.6-4 Riyadh Metro Project, Metro Station, ArRiyadh Development Authority (ADA)



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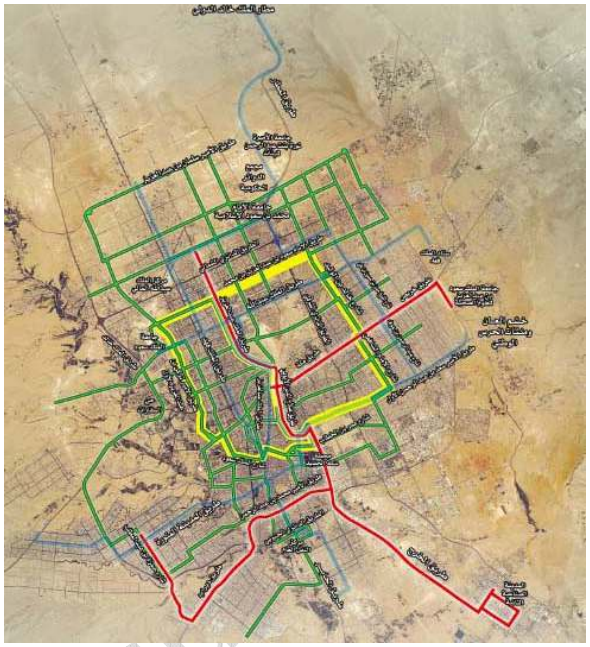

Figure VI.6-6 Riyadh Integrated transport network (Bus), ADA

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Figure VI.6-9 Existing under-pass King Abdulllah Road, ADA

Figure VI.6-10 Image of LRT, King Abdulllah Road, ADA

7. Challenges faced and lessons learned

Provision of adequate housing and accompanied basic service infrastructure for all citizens is the top priority of the Government. Providing no-interest loan by the Real Estate Development Fund has been the approach taken by the Government to achieve this objective. The Government's remarkable efforts for investing in housing sector was well recognized, although there are still people who need support for their housing.

As a side effect of rapid population growth in major cities during the 1970s and 1980s, large numbers of informal settlements were developed by deprived population within deteriorated old centers as well as in urban peripheries. In these informal settlement areas, municipalities and government urban development agencies proposed and implemented various types of urban renewal initiatives that include both minimum improvement and full-scale regeneration approaches. These informal settlement-upgrading projects provided opportunities for providing affordable housing in urban centers.

In general support on affordable housing provision, the Government diversified the approaches, including i) providing no-interest loan; ii) encouraging use of public lands by private sector; iii) developing lands for residential use by installing basic infrastructure that are released to individuals; and iii) constructing affordable housing units. Establishment of the Ministry of Housing enhanced affordable housing construction led by the Government.

However, there remains a critical challenge on providing affordable housing in major cities. The problem becomes increasingly difficult to solve, because the land price has been continuously increasing and land owners do not want to release their land for investment purpose. As a result, some municipalities reluctantly constructed affordable housing estates in suburban areas where basic infrastructure cannot be easily installed. Those inferior housing developments may cause deterioration of the estates when the housing demand had gone down. These cases show that the challenges associated with ad hoc housing provision as well as the importance of comprehensive strategy on housing provision that is in consistent with spatial plans.

In responding to these challenges, the Ministry of Housing developed the National Housing Policy in 2014, which ensures the strategic housing provision and new approaches of providing affordable housing.

Development of integrated public transportation system is also among the highest priorities for the Government, aiming to improve the lives of urban residents and increase economic potential of the major cities that have regional and global economic competitiveness. There are four mega-projects that establishes integrated public transport system in major cities of Riyadh, Makkah, Medina and Jeddah. Various transportation modes have been effectively integrated to promote use of public transportation, which drastically improve urban mobility and attract private enterprises and investment to the Kingdom of Saudi Arabia.

8. Visions for the future

In response to challenges faced, the Government of Saudi Arabia aims to address the following issues::

(i) Strengthen correlation between spatial planning and housing policy

- Successful formulation of the National Housing Policy indicates the direction for affordable housing provision. This housing policy should be disaggregated into spatial plans at the local level, so that affordable housing provision can meet the needs of the citizens.
- Different measures of affordable housing provision should be combined geographically through spatial analysis. For instance, private-led affordable housing project can easily add value to neighboring areas, and can easily raise values of the lands. Strategic distribution and provision of affordable housing supports sustainable urbanization.
- With the support of UN-HABITAT, the Government will seek strategic provision of affordable housing based on spatial analysis and planning.

(ii) Promote utilization of valuable under-utilized lands in urban areas.

- Due to private investment purpose, land market is static particularly in major cities, which is a root cause of high land price. This constraints provision of affordable housing.
- Underutilized lands in urban areas should be effectively utilized to solve shortage of affordable housing.
- The Government will seek to develop and apply an appropriate taxation system to land owners who own lands that are not utilized.
- With the support of UN-HABITAT, the Government will survey underutilized lands in urban areas, particularly in major cities, to promote utilization of valuable lands for provision of affordable housing.

(iii) Encourage use of integrated public transport in major cities.

- By 2020, integrated public transport system in four major cities is expected to be fully operational. The public transportation system contributes to reduce private vehicles. On the other hand, the challenge remains to change people's behavior to use public transportation, given the running cost of private vehicle in the Kingdom of Saudi Arabia is incredibly reasonable with low fuel cost and no taxation to both a cost of vehicle and its ownership.
- The Government will seek for measures to provide incentives so that citizens are encouraged to use public transportation.
- The Government will also seek to combine measures to control traffic, including road pricing in urban area and limiting number of private vehicles entering urban area.

VII. Indicators

Percentage of people living in slums 14.9%
Percentage of urban population with access to adequate housing 72.8%
Percentage of people residing in urban areas with access to safe drinking water 71.4%
Percentage of people residing in urban areas with access to adequate sanitation 48.7%
Percentage of people residing in urban areas with access to regular waste collection 85%
Percentage of people residing in urban areas with access to clean domestic energy 97.4%

VII. References

To be added.