

STATE OF URBAN DEVELOPMENT IN AL-QASSIM

KEY STATISTICS IN 13 URBAN AREAS, 2020



UN HABITAT
FOR A BETTER URBAN FUTURE

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Qassim Urban Observatory, a global model for Local Urban Observatories



UN HABITAT
FOR A BETTER URBAN FUTURE

Foreword



Eng. Mohammad bin Mubarak Al-Mejally,
Mayor of Al-Qassim Province

Many cities across the world continue to face significant challenges associated with lack of good quality, relevant, accessible and timely data that responds to their prevailing needs, and that helps them to anticipate and respond to urban challenges. Such was the challenge we faced in Al-Qassim Region just a decade ago, which motivated us to develop the Qassim Urban Observatory to help monitor socioeconomic trends in Buraidah city. Today, the observatory has expanded to cover the entire Al-Qassim Region, which enables consistent collection, collation and comparison of urban data across all cities and urban centres in the region. This has been achieved through the leadership and commitment of His Royal Highness Dr. Faisal Bin Mashal Al Saud, Governor of Al-Qassim Region and Chairperson of the Qassim Urban Observatory Council, who has consistently identified the observatory as an instrumental mechanism for evidence-based decision-making owing to its ability to generate various urban indicators in support of development across sectors.

I am delighted to present this State of Urban Development in Al-Qassim Report, which is the fruit of many years of cooperation between the observatory and UN-Habitat's Data and Analytics Unit – the global coordinator of the Urban Observatory network. The report, which comes only two years after the launch of the Voluntary Local Review on SDG 11 for the city of Buraidah (the first of its kind in the Middle East) is yet another major milestone for the Qassim Urban Observatory, and shows the significance of locally produced data in both demonstrating progress towards achieving our development goals and supporting data-driven decisions.

In this report, which has been developed using data produced by the Qassim Urban Observatory between 2016 and 2018, you will find in-depth and insightful analysis on what is happening in the 13 main cities in Al-Qassim Region in the areas of urbanization, socioeconomic trends, infrastructure development and connectivity, social capital and urban governance. The report also presents some experiences on how findings and recommendations based on data from the Qassim Urban Observatory have already contributed to decision-making and targeted investments at the city and regional levels, resulting in improved quality of life for the urban residents.

Beyond this report, we continue to advance our commitment to the urban observatory model through which we seek, continuously, to produce accurate and up-to-date data based on the global and national standards and agreed upon methodologies; as well to advocate for more use of data in decision-making processes.



Mr. Robert Ndugwa,
Chief, Data and Analytics Unit, UN-Habitat

Accurate, up-to-date and relevant data and information helps city authorities and decision makers to respond better to urban challenges and needs and to allocate scarce resources appropriately. Regular generation of relevant, accurate and reliable data also supports monitoring of progress against local development frameworks (such as city, regional and national development plans) and global agendas, such as the 2030 Agenda and the New Urban Agenda.

UN-Habitat developed the urban observatory model to assist cities and countries in strengthening their data capacities and to guide them in collation, analysis and translation of the data into easily understood information able to support decision-making processes. Urban observatories aim to leverage local technology, innovation and analytical capabilities while supporting capacity-building, urban data literacy and awareness. They also seek to manage local partnerships and coordination of data originating from government departments, the private sector, non-governmental organizations, the media, academia and communities at large. This partnership, in turn, promotes good practices and principles in data sharing, open data and data rights.

Over the years, the urban observatory model has become a major data collection tool and decision support system in many cities. Today, UN-Habitat coordinates and supports activities in its network of more than 300 urban observatories spread in all world regions. Within this network, the Qassim Urban Observatory has consistently demonstrated the value of urban observatories in local city data production and their usage in decision-making processes. Some of the notable achievements by the Qassim Urban Observatory include its expansion to cover all cities in Al-Qassim Region as opposed only to its capital, Buraidah; its continuous production of time-series as well as new data points to respond to emerging local challenges; its network of partnerships and collaborations (across the Saudi Government, private sector, academia, international organizations and local communities); as well as continuous progress reporting against a diversity of indicators, such as through the recently released voluntary local review on SDG 11 for Buraidah city themed “Buraidah attractive to live and work”.

The current report is yet another achievement for the Qassim Urban Observatory, and a great testimony of the value of locally produced and city-level data in progress monitoring and reporting. The report is based on more than 200 indicators whose data have been produced and compiled from official statistics and other sources by the observatory, employing methodologies developed by UN-Habitat, other United Nations agencies, the Government of the Kingdom of Saudi Arabia, as well as those formulated by the observatory in coordination with its partner network. The spatial scale covered in this report – wherein performances of 13 cities within the region presents comparisons of intra and intercity performances against diverse urban contexts, setting a new benchmark for urban observatories across the globe.

Based on this report and our experience working with the Qassim and other urban observatories worldwide, local observatories possess the capability to deal with the chronic lack of city-level data across countries and can contribute significantly to data-driven decision-making processes, which are key to ensuring attainment of sustainable urbanization where no one and no place is left behind.

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Executive Summary

Cities are like living organisms that experience rapid changes depending on prevailing conditions. As a result, they require a clear data production system through which high quality data can be produced on a regular basis. This system is, however, missing in most cities around the world, where lack of accurate, relevant, up-to-date and disaggregated data on many key development indicators is common. In addition, many cities face the challenge of limited data usage in the decision-making processes, which often results in policies and investments not responding to the most pressing needs of their populations. UN-Habitat developed the urban observatory model to simplify the complexities surrounding city-level data production and sharing, as well as a tool for encouraging data usage for decision-making processes while also promoting community participation and feedback.

This report illustrates how the model has been applied in Al-Qassim Region to produce data on a diversity of urban indicators for 13 of its main cities. Additionally, the report shares experiences on how the data have been used to inform decision-making processes and investments throughout the region.

Chapter one presents the 13 focus cities and illustrates how each has grown spatially and demographically over time as well as how the observed growth trends impact the region's urban prosperity today and into the future. The major finding of this chapter is that, historically, cities in Al-Qassim have expanded rapidly without clear urban development guidelines, posing significant challenges to the region's orderly growth and major risks to the future of its agricultural productivity.

Chapter two highlights the existing physical and virtual infrastructure in the cities, and how the prevailing trends are likely to impact on the region's performance against various indicators of urban prosperity. The main finding is that cities in Al-Qassim are highly connected to others within the region, the rest of the country, and to those across the globe through the intertwined network of

physical and virtual infrastructure. This high connectivity makes the focus cities accessible and reduces wastage and system losses in the production processes while expanding the markets for locally produced goods and services. The high Internet connectivity across all cities links their residents to a vast global marketplace where they can interact, trade and generate incomes.

Chapter three unpacks Al-Qassim's social capital stocks, which are key enablers of urban prosperity. The chapter highlights that cities in Al-Qassim perform quite well in most of the social capital indicators, which significantly increases the region's chances of accelerated prosperity. It, however, also identifies high levels of unemployment among a highly literate youthful population as well as lack of economic diversification, which may be a key impediment to the region's progress towards sustainable development for all.

Chapter four provides an overview of the urban governance structure in the focus cities, with particular emphasis on budgeting and resource allocation, citizen engagement in the decision-making processes and resource allocation and distribution, and how these influence the local urban development trends. The chapter highlights weaknesses in urban governance as a major concern in Al-Qassim, with most cities relying too much on central revenues and experiencing low levels of public participation in decision-making processes.

This report, which has been compiled in partnership with UN-Habitat, attests to the commitment of the Qassim Urban Observatory to produce, continuously, up-to-date and relevant data which responds to local, national and global monitoring requirements. The report also demonstrates the dedication of Al-Qassim Municipality and other regional governments to use data to guide decisions and investments. The report compliments other publications by the Qassim Urban Observatory, such as the *Voluntary Local Review for Buraidah (2018)* and the *Livability Report for Buraidah (2019)*.



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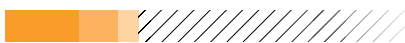
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Qassim Urban Observatory, supporting local data collection and data-driven decisions and investments

The Qassim Urban Observatory was set up in 2009 to respond to the need for timely and relevant data required to offset the numerous challenges brought about by the rapid expansion of Buraidah city. Through the vision and leadership of His Royal Highness Faisal Bin Mashal Al Saud, Prince of Al-Qassim Region, chairman of Urban

Observatory Council, the facility was formed to produce data at the city level in line with the local, national and global development agenda and priorities, and to promote the use of data for decision-making as well as investment processes.



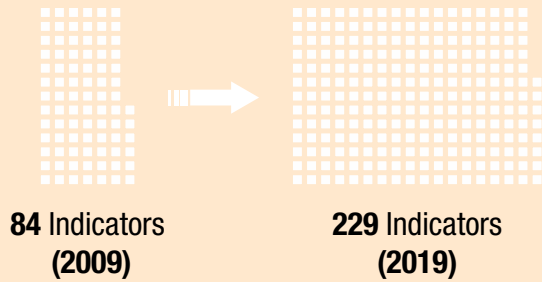
© Launching Buraidah's Voluntary Local Review (VLR), 25 Dec. 2018.

HRH the Governor of Qassim and Chairperson of Qassim's Urban Observatory Council Launches Voluntary Local Review (VLR) report on SDG 11 for the city of Buraidah, the first of its kind in the Middle East.

Over the last 10 years, the observatory has grown significantly in terms of the number of indicators it covers and in the spatial scope of its activities. At inception, for example, the observatory only monitored 84 indicators, which has today increased to 229. The indicators cover a wide range of sectors including economy, infrastructure, social inclusion, transport, housing, environment, governance, tourism, and agriculture. In 2019, after 10 years of focused monitoring only in Buraidah city, and following the directive of His Royal Highness Faisal Bin Mashal Al Saud, the prince of Al-

Qassim Region, Chairman of Urban Observatory Council, the observatory's mandate was expanded to cover the whole region. This was a decision that today ensures consistent collection, collation and comparison of urban data across all cities and urban centres in the region. This measure makes it possible to track progress and inform region-wide decision-making processes. It also presents a uniform approach to collecting and managing data and tracking performance against local, national and global agendas within the region.

Number of indicators monitored by the Qassim Urban Observatory



Throughout its existence, the observatory has sought to innovate and consistently adopt the latest methods in producing the urban indicators at national and international levels, continuously align its data activities to decision-making processes, and to promote partnerships with local and international agencies. Through its innovativeness, the observatory produced in 2018 the first voluntary local review in the Kingdom of Saudi Arabia through which it reported progress against Sustainable Development Goal 11 (“Make cities and human settlements inclusive, safe, resilient and sustainable”) in Buraidah city. The 2018 report not only put the city in the global picture in terms of local-level reporting, it also gave a solid baseline against which the city’s monitoring and progress towards achieving urban goals and targets could be tracked.

Data and evidence generated through the observatory have influenced several decisions and investments in Qassim over the last decade. For example, between 2009 and 2019, the observatory’s studies and data on the main urban and social issues affecting cities in the region have been used by the urban authorities, through the relevant committees, to propose policies and actions to respond to the emerging urban challenges. These have resulted in investments that have contributed directly to improved quality of life for the region’s urban residents.

The observatory is committed to continuing the production of accurate, timely and up-to-date data throughout Al-Qassim Region, and to promoting use of such data to inform decisions and actions in response to the 2030 call for actions where no one and no place is left behind. Within the observatory, indicators are taken

from official statistics of the kingdom’s General Authority for Statistics, Government departments, civil society institutions and the private sector. Alternatively, they can be computed using data from censuses and surveys. The collected data generally falls within two broad categories: i) indicators that respond to the local city and national development priorities (for example, the Kingdom of Saudi Arabia’s Vision 2030 and National Transformation Programme 2023), and ii) indicators that respond to global commitments (for example, the SDGs, and the Paris Agreement on climate change).

This State of Cities in Qassim Region Report presents an analysis of the level of urban development in 13 cities and urban areas in the region using data produced by the observatory from 2016 through 2018. Each of the 13 cities represent the biggest urban areas in each governorate, and include Buraidah (the region’s capital), Unaizah, Ar-Rass, Mithnab, Al-Bakiriyah, Al-Badaya’a, Riyadh Al-Khabra, Al-Asyah, Nabhanya, Uyun Al Jiwa, Al Shammasiya, Oklat AlSkoor and Daria. The report provides insights into the urban performance of the entire Al-Qassim Region and undertakes a comparative analysis of performances of all cities in the territory against nationally and globally set benchmarks. The report also makes recommendations on key investment areas for enhanced urban prosperity and sustainability in the region.



“Al-Qassim Urban Observatory is an instrumental mechanism for evidence-based decision-making as it generates various urban indicators in support of development across sectors”

- HRH Dr. Faisal Bin Mashal Al-Saud, Governor of Al-Qassim and Chairperson of Qassim Urban Observatory Council





CHAPTER 1

Urbanization trends in Al-Qassim Region





1.1 Introduction

A city's urban form and structure, its rate of spatial expansion, its population change as well as its economic prospects are key indicators of its prosperity, level of livability as well as its status and potential for attaining sustainability. A city that expands rapidly without proper planning and a corresponding upgrade of its basic infrastructure and services is likely to experience growth of informal developments, increased inequalities and unsustainable development models. Equally, a city that expands rapidly into agricultural land faces

risks of food insecurity and loss of livelihoods among rural communities, which is similarly an unsustainable urbanization model.

This chapter analyses how Al-Qassim, as a region, as well as the 13 cities which are the focus of this report have grown spatially and demographically over time and how these growth trends impact on the region's urban prosperity today and will do so in future.



1.2 Overview of Al-Qassim Region

Al-Qassim is one of the 13 administrative regions of the Kingdom of Saudi Arabia. The region, located almost at the centre of Saudi Arabia and the Arabian Peninsula covers 73,000 km², accounting for about 3.2 per cent of the kingdom's area. The region is divided into 13 governorates: Buraidah (capital of the governorate), Al Asyah, Uyun Al Jiwa, Al Badaya'a, Al Bakiriyah, Daria, Al Mithnab, Al Nabhanya, Ar Rass, Riyadh Al Khabra, Al Shammasiya, Unaizah and Oklat AlSkoor (see figure 1.1).

Al-Qassim borders Hail Region to the north and north-west, the Northern Border Region to the northeast, Riyadh Region to the south and east, and Medina Region to the west and south-west (see figure 1.1). The centrality of Al-Qassim within Saudi Arabia makes it an important transit route between different parts of the kingdom, which is augmented by the interconnected mesh of highways, railways and air routes which traverse the region.

Al-Qassim is commonly known as the country's "food basket" because it is its most agriculturally productive region. Its high agricultural productivity is closely attributed to high levels of ground water in the region as well as a mean annual rainfall of 100 mm, compared with the yearly national average of 59 mm. The region's main

agricultural products include dates and other fruits, wheat and vegetables. The region also hosts one of the world's biggest cattle markets.

The region's history dates to the 9th Hijri century. Due to its important location at the junction of major trade routes, the region has witnessed a variety of historical events, most of which are closely tied to the Zubaidah route, which begins in Iraq, traverses Al-Qassim and ends in Makkah Al Mukaramah. This route has been used by Hajj caravans for centuries; the wells dug by Zubaidah, wife of the Caliph Haroon Al Rasheed to supply pilgrims with water still exist today.¹ Over the years hundreds of settlements consisting of cities, towns, villages and Bedouin settlements have grown throughout the region, each depicting unique characteristics which are connected to the history, the local populations, economic activities or intra and interregional linkages.

Figure 1.1 shows the distribution of the 13 main urban areas in Al-Qassim Region, which are analyzed at depth throughout this report. Each urban area exhibits unique physical, sociodemographic economic and environmental characteristics as summarized in box 1.1.

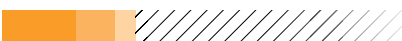
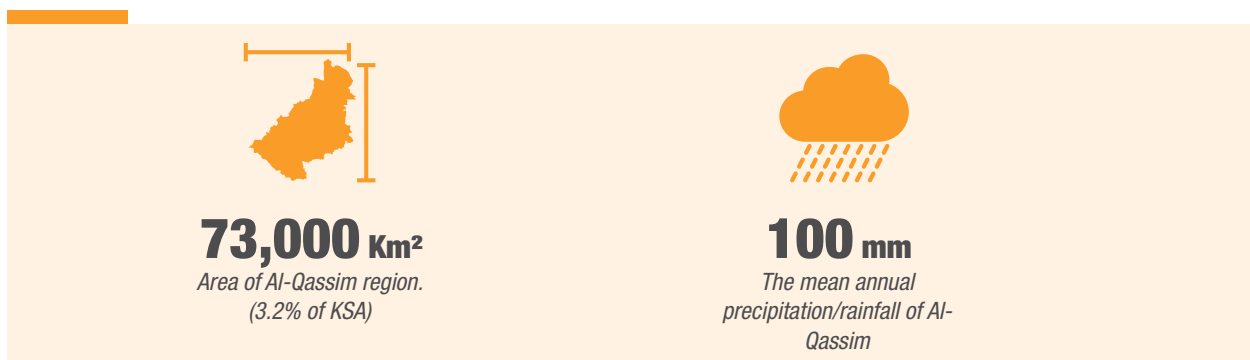
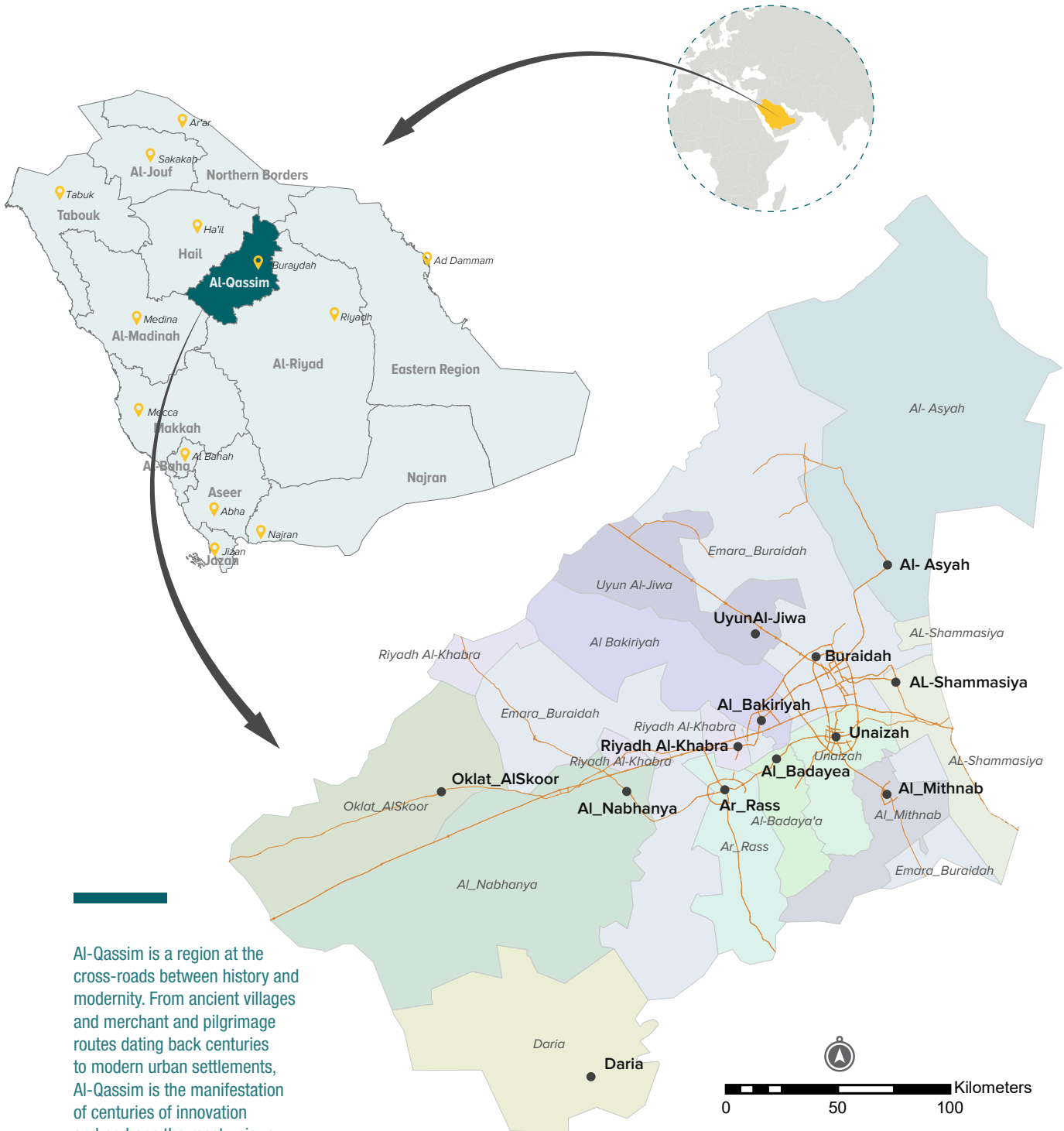


Figure 1.1

Al-Qassim governorates and studied cities



Al-Qassim is a region at the cross-roads between history and modernity. From ancient villages and merchant and pilgrimage routes dating back centuries to modern urban settlements, Al-Qassim is the manifestation of centuries of innovation and perhaps the most unique interactions between human and natural ecosystems in the whole of Saudi Arabia.

BOX 1.1

Main cities in Al-Qassim region

**BURAIDAH**

Buraidah, the capital and largest city of Al-Qassim region, lies along the important link between Medina and the national capital Riyadh. The main economic activities in Buraidah include administrative functions, trade and commerce. Despite accounting for a low share of the nation's agriculture to the economy, Buraidah is the main producer of best-quality dates.

**UNAIZAH**

Unaizah city is located in the water-rich and highly agricultural Unaizah Governorate. The city has a rich history, with archeological surveys indicating that there were had been intensive settlements in the area since the third century B.C., and was a key resting place for pilgrims coming from Iraq.

**AR RASS**

Ar Rass, is a desert city that lies above the Arabian Shield, a hard rock layer of land that covers the earth's surface in the western part of Qassim Region. The city relies largely on trade, and has major commercial services which serve its residents and the surrounding towns, villages and abandonments. Despite its water limitations (associated to its desert location), the city is locally famous for cultivating dates and hot pepper.

**MITHNAB CITY**

Al Mithnab, the city at the convergence of valleys and reefs is famed for its rich soils and abundance of water, parks and green areas. While trade is the most important economic activity, Al Mithnab has a thriving agricultural economy.

**AL BAKIRIYAH**

This city grew from a single farm to become the first health city in Saudi Arabia (2016) and the entire Middle East. The city is centrally located within Al-Qassim Region, putting it within proximity to many other towns. It is one of the important agricultural towns within the region and is rich in parks and green areas.

**AL-BADAYA'A CITY**

Al-Badaya'a is the agricultural capital of Al-Qassim Region, owing to its abundance of water, and fertile agricultural land. The city also prides itself of several factories, which include a water packaging factory, a date factory, pharmaceutical industries, among others

**RIYADH AL-KHABRA**

Riyadh Al-Khabra is at the centre of Al-Qassim Region, and is transected by the old Riyadh-Qassim-Medina road. Its central location between Riyadh and Medina, its connectivity through roads, and its abundance of water makes it distinctive and attractive for investment, making trade and commerce the most important economic activities. The city (and Riyadh Al-Khabra Governorate at large) is famed for its high-quality wheat, dates, vegetables and fruits.



AL ASYAH

Located in Al Asyah Governorate, Al Asyah city was one of most famous places in Al-Qassim in the first centuries that followed the introduction of Islam. The city was an important station on the pilgrimage road to Makkah and Medina, and an important corridor for the convoys of merchants travelling from Persia, Iraq and Mesopotamia to Najd and Hijaz.



NABHANYA

The city of Nabhanya sits in an area famous for palm cultivation. The city is considered the main financier for neighbouring markets and is a main link to export markets for dates. Water is very rare in Nabhanya due to its location in the Arabian Shield.



UYUN AL-JIWA

This old settlement at the centre of Al-Qassim Region is only 30 km from the Buraidah, making it a key trading area. Residents of Uyun Al Jiwa city are distinguished by their distinctive dialect from other governorates of Al-Qassim, and are also known as traders and for their honesty.



AL SHAMASIYA

Al Shamsiya city, the green valley and the eastern gateway of Al-Qassim Region is marked by its unique landscape, which extends between agricultural lands and sandy hills that had an impact in determining the city's urban formation and growth trends. "Al-Jal park is an important attraction for the city, with some residents of the surrounding cities such as Buraydah (only 23 km away) reported to visit it over the weekends to enjoy nature and uniquely designed seats which safeguard the privacy of families and youth.



OKLAT ALSKOOR

Oklat Alskoor, the western gateway to Al-Qassim on the Riyadh–Medina road, is about 220 km from Buraidah. Oklat Alskoor is characterized by its proximity to the "cotton" tourist mountains and its proximity to the Skhirat gold mine and the famous Mount Tamiya. The city is also penetrated by the Valley of Rumah, which is one of the largest and most historically rich valleys of Saudi Arabia. The city's central location between a group of centres and villages and its proximity to the borders of Hail and Medina regions make it an important trading centre.



DARIA

Daria, the city between mountains is considered to be one of the most important centres of the pilgrimage of Basra road. The city is characterized by its many mountains and valleys and charming areas that attract hikers.



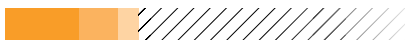
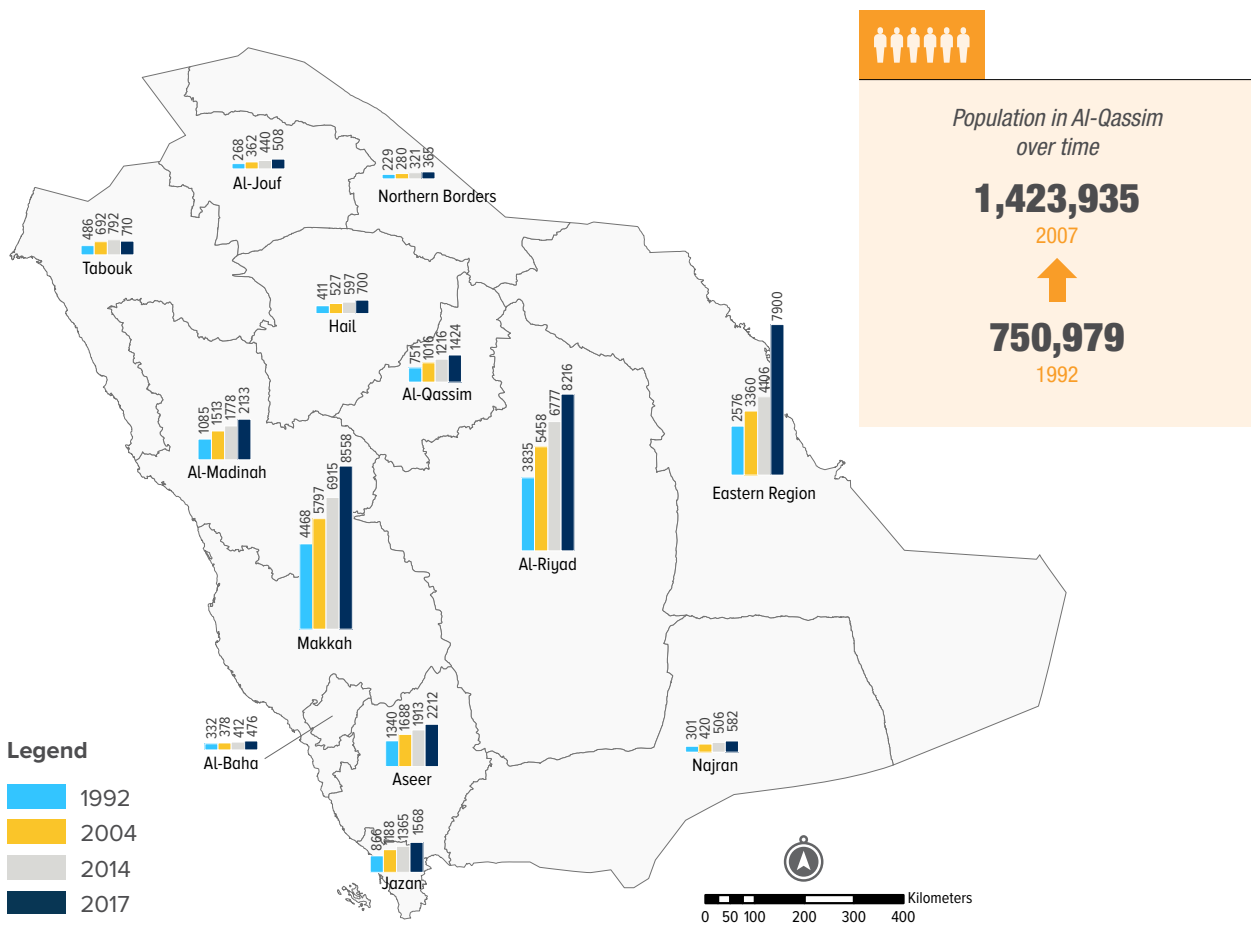
1.3 Demographic trends in Al-Qassim region

Since its establishment as a governance region, its population has been increasing steadily, with the majority of its residents being Saudis. Over the 25 years spanning 1992 to 2017, the Al-Qassim's population rose from 750,979 to 1,423,935. Throughout this period, its population

was consistently about one fifth that of the two most populous regions in Saudi Arabia: Riyadh and Makkah (see figure 1.2). In 2017, 4.4 per cent of Saudi Arabia's population lived in Al-Qassim, making it the seventh most populated region in the kingdom. In 2017, most of Al-

Qassim's 1,009,543 people (that is to say 70.9 per cent) were Saudis split into 511,037 males (50.6 per cent) and 498,506 females (49.4 per cent). Non-Saudis accounted for 414,392 of the totals made up of 310,273 males (74.9 per cent) and 104,119 females (25.1 per cent).

Figure 1.2 Population by region in the Kingdom of Saudi Arabia (,000)

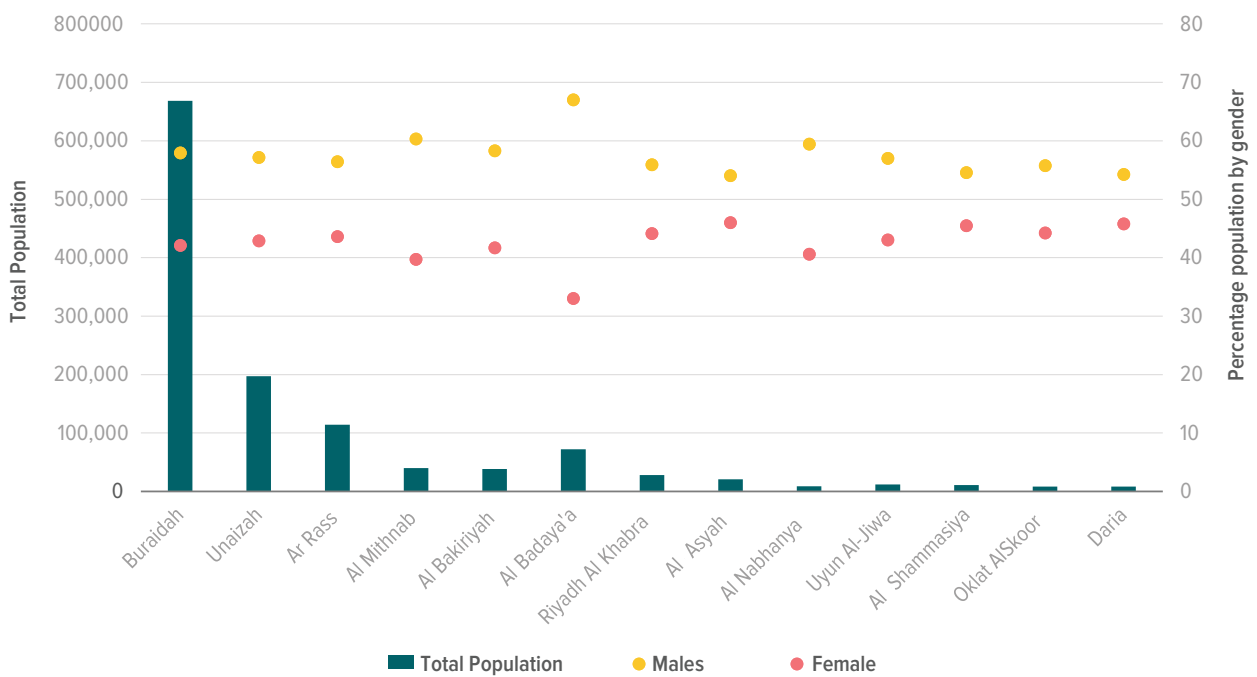


The majority of Al-Qassim’s people live in the urban areas. In all the 13 cities presented in this report, there are more males than females. According to the Qassim Urban

Observatory’s 2018 statistics, the Buraidah city area hosted 668,525 residents, which accounted for about 47 per cent of the region’s population. This population tripled

Unaizah’s, the region’s second largest city, and exceeded the combined populations of the other 12 cities, making Buraidah a primate city within Al-Qassim (see figure 1.3).

Figure 1.3 Population distribution in the main urban areas of Al-Qassim





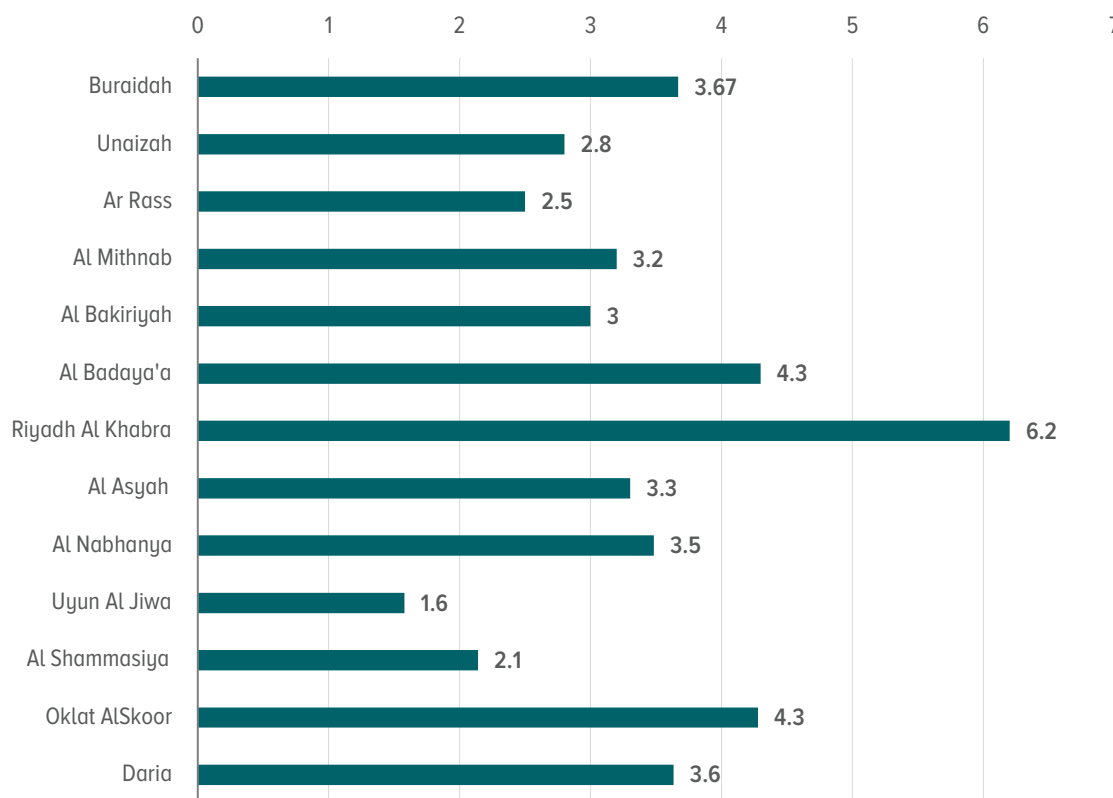
In 2018, nine of the 13 cities in Al-Qassim recorded an annual population growth rate exceeding 3 per cent, compared with the kingdom's average of 2.2 per cent for the 2015–2020 period². Riyadh

Al Khabra was the fastest urbanizing city, with an annual population growth rate of 6.2 per cent, while Uyun Al Jiwa was the slowest with a recorded rate of only 1.6 per cent

(see figure 1.4). Across the 13 cities, the average household size was 6 people, and ranged from a low of 5.4 in Al Mithnab to a high of 6.5 in Al Nabhanya.

Figure 1.4

Annual population growth rate in Al-Qassim urban areas

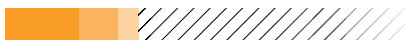


 **2.2%**

Average annual population growth rate in Al-Qassim (2018).

 **6 People**

Average household size.



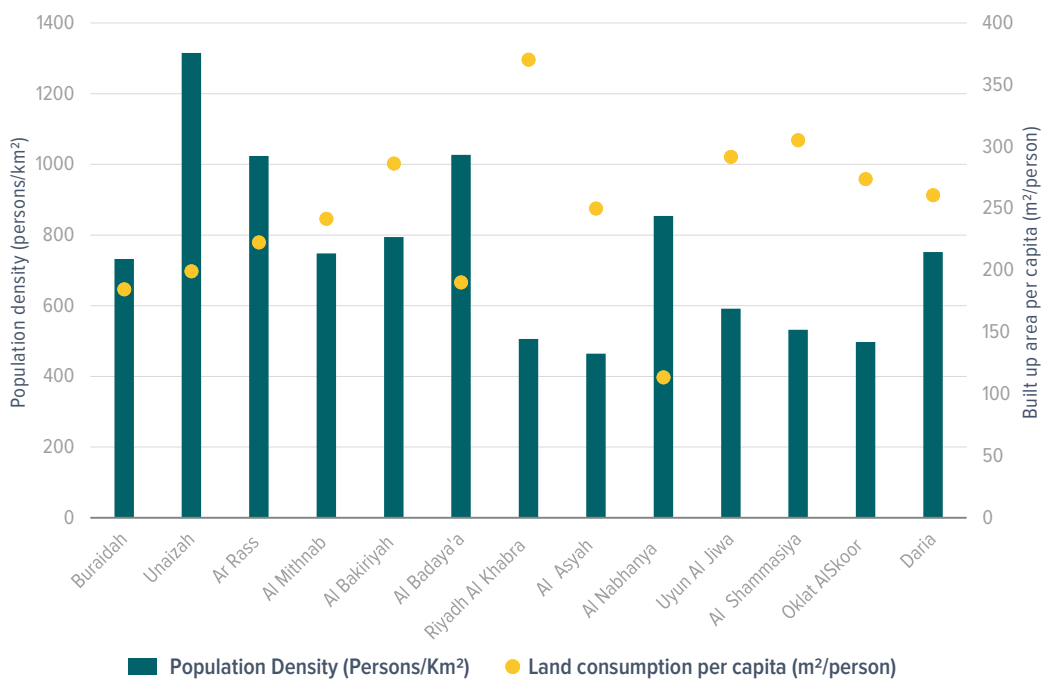
Spatially, Buraidah is the largest city in the region, covering a total 913.6 km², which is six times the area of Unaizah (150 km²); and is greater than the combined areas of all the other 12 cities. However, its spatial expanse is not directly proportional to its population, with large parts of the city either being planned or

existing as unplanned open land (see section 1.4.).

As shown in figure 1.5, this translates to relatively lower population density, which makes Buraidah the eighth most dense city in the region with 732 persons per km², far behind Unaizah's 1,315 persons per km².

However, when the built-up area per person/capita measure is used (which is a good indication of a city's density and compactness), Buraidah, with a built up area of 114 m² per capita, is the second most dense city after Al Nabhanya, whose built-up area per capita is 185 m².ⁱ⁾

Figure 1.5 Population density measures in the main urban areas of Al-Qassim






913.6 Km²
Buraidah is the largest city in the region



1,315 Persons/Km²
Unaizah is the most dense city in the region



114 m²/Capita
Al Nabhanya has the lowest built up area per capita in the region

i). A low built up area per capita indicates that more people occupy less space and hence a higher density



As a region, Qassim enjoys a youthful population, who account for 35.1 per cent of residents and of the ages 15–34 years. This, in addition to a high population share of those aged 35–59 years (35.2 per cent), implies a high workforce throughout the region, which is key for enhanced productivity in the different sectors of the economy.



1.4 Al-Qassim’s urban structure

The location of Al-Qassim within a highly productive part of the country and above the Arabian Shield implies that most of the land is either under agriculture or covered by desert. A network of cities, towns and villages juxtapose with the sandy landscapes

and expansive farmlands throughout the region, with a unique clustering of settlements within a 70km radius from Buraidah, as well as along the Riyadh-Medina highway (see figure 1.6). Many other dispersed settlements and villages also exist

throughout the region, the majority of which are concentrated around governorate capitals or along the road network. All settlements in Al-Qassim are connected through a web of highways and roads that also link them to towns and cities.

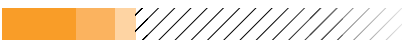


Figure 1.6 Distribution of settlements in Al-Qassim Region



Map Data Sources: Qassim Urban Observatory (boundaries and city metadata), DLR (built up layer based on WSF 2018), Streets (openstreetmap)



Al-Qassim’s urban structure is a manifestation of a history of keeping abreast with the national urbanization trends throughout Saudi Arabia as well as the local need for enhanced production (agricultural) and expanding markets for agricultural produce through enhanced connectivity. Regionally, Al-Qassim

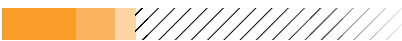
depicts a multi-nodal urban form whose core is Buraidah city from where multiple nodes (constituting varied sized urban areas) spread outwards and into all governorates. The nodes are connected to the core through the Riyadh-Qassim and the Buraidah-Medina-Jeddah highways and their branches (see figure 1.7).

Within this regional urban structure, Buraidah provides the highest order goods and services. This includes high-level connectivity to other parts of the country and the world; for example, through its network of air routes. The smallest nodes provide local services to outlying villages and rural areas (see figure 1.7).

Figure 1.7 Distribution of settlements in Al-Qassim Region



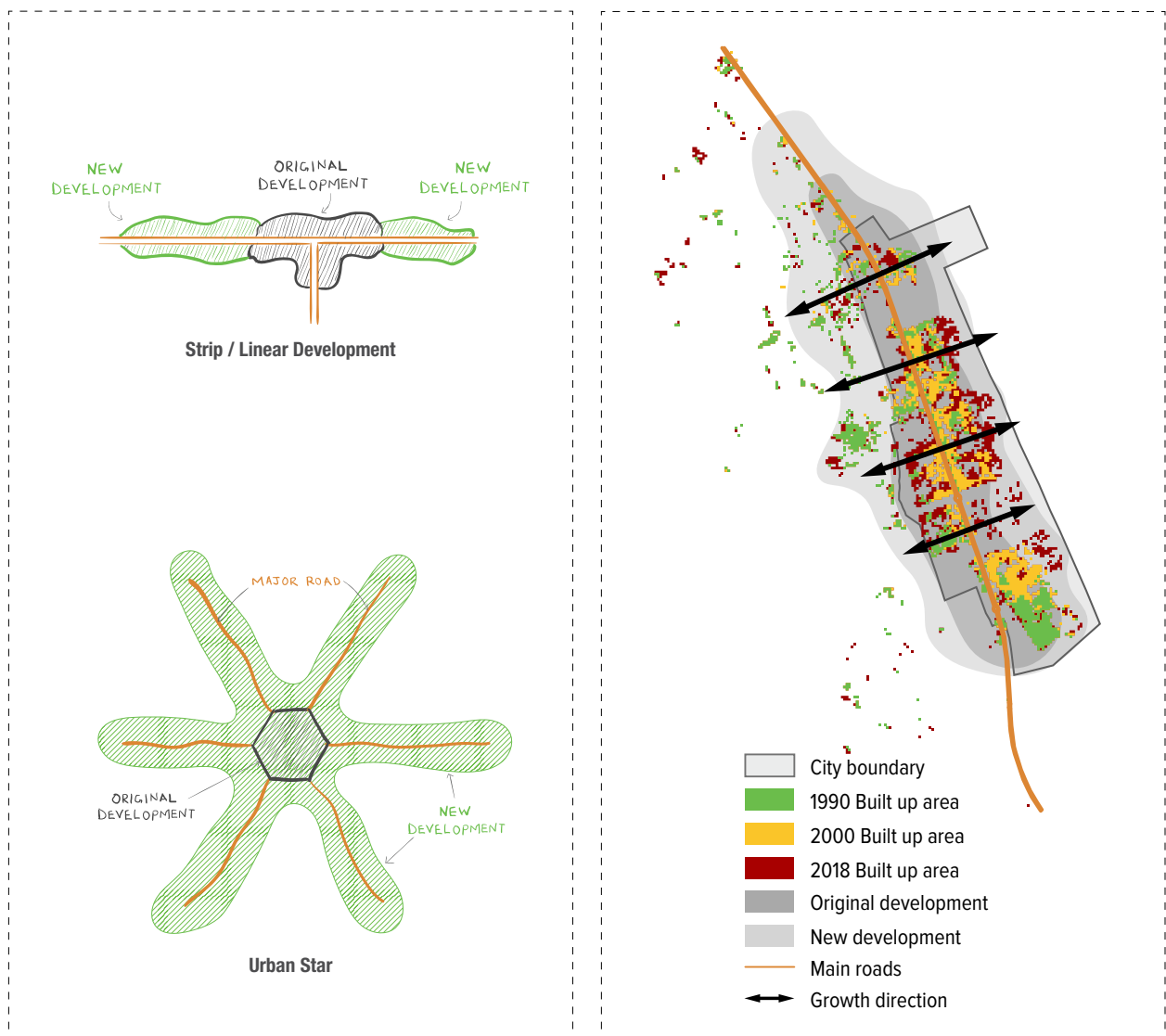
Source: UN-Habitat / Qassim Urban Observatory 2020



In terms of urban form, most of the urban areas depict some form of compactness, with the size of each cluster depending on the city’s spatial extent and population size. Some urban areas, especially the smaller ones, depict a linear settlement form. However, historical growth trends indicate increasing compactness as opposed to linear growth as shown in figure 1.8.

Figure 1.8

Linear developments in Al Asyah city, showing increasing compactness



Left: Conventional linear development³ ; Right: Linear development in Al Asyah city showing increasing compactness.



1.4.1 Manifestation of urbanization in Al-Qassim cities

An analysis of the growth trends as captured by changes in the total built-up area within the urban boundaries reveals a rapid rate of spatial urbanization in the 13 cities over the 28 years spanning 1990 to 2018. Through the 1990–2000 period, all the cities consumed land (converted land from other uses to urbanized uses) at an annual average rate of 3.38 per cent, which increased to 4.55 per cent during 2000–2018.

The analysis further shows that the bigger cities (Buraidah, Unaizah

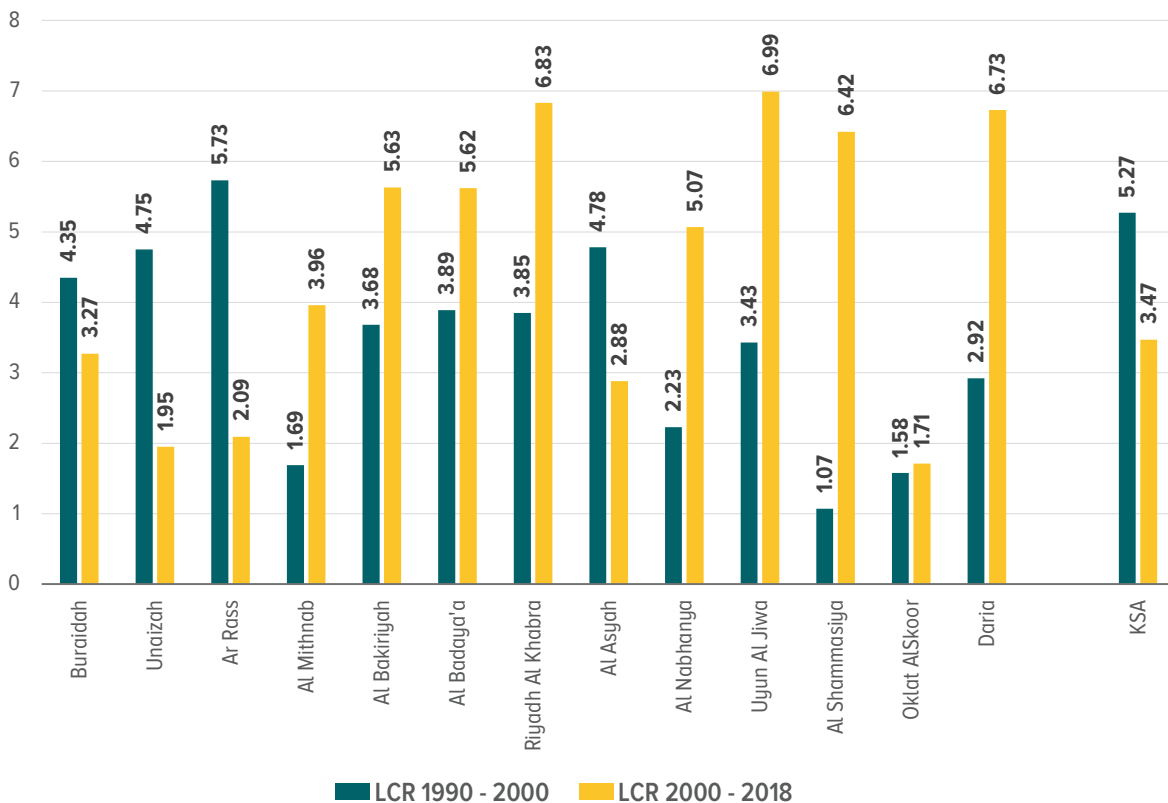
and Ar Rass) expanded at a faster rate between 1990 and 2000 than between 2000 and 2018. The reverse was observed in the smaller urban areas (for example, Al Nabhanya, Al Shammasiya, Daria, Riyadh Al Khabra), which expanded faster between 2000 and 2018 than between 1990 and 2000 (see figure 1.9). These growth trends were relatively close to the average values reported throughout the country during the period 1990–2015. According to an analysis by UN-Habitat in 2019, Saudi Arabia’s cities

consumed land at an annual rate of 5.27 per cent between the years 1990 and 2000. This decreased to 3.47 per cent per annum between 2000 and 2015.

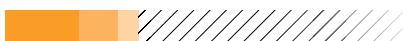
The reported land consumption trends are reflected in the overall urban pattern and structure, built-up area density and overall change in total built-up area over the period 1990–2018 as summarized in figure 1.10 (Evolution of urban areas between 1990 and 2018).

Figure 1.9

Trends in annual rate of urban land consumption (LCR) 1990–2000 and 2000–2018



Source: UN-Habitat Global Urban Indicators Database, 2019



1.4.2 Urbanization trends and their influence on land-use patterns

The observed urbanization trends in Al-Qassim's cities have contributed to a gradual conversion of land from non-urbanized to urbanized uses.

This trend is projected to continue into the foreseeable future. Moreover, the trend will in some ways be augmented by the presence of large chunks of developable land within

the urban boundaries of each city, which constitutes land classified as either "unplanned vacant" or "planned vacant" in the city zoning plans. As shown in table 1.1, other than Unaizah and Ar Rass, more than half of the land in the other cities can be classified as developable land, which further increases to two

thirds when agricultural land within the urban areas is considered. In Buraidah, for example, 61.2 per cent of the urban area constitutes vacant land (planned and unplanned), a situation that is no different in the smallest city of Al Nabhanya where vacant land represents 82 per cent of the total urban area.

Table 1.1

Conversion of land use from non-urbanized to urbanized in Al-Qassim's cities

	Total urban area (Km ²)*	Residential	planned vacant land	commercial	parks, roads and spaces	Services & public utility	Industrial	Un-planned vacant lands	Agricultural lands	Total
Buraidah	913.6	6.9	15.2	1.4	11.5	3.7	1.2	46.0	14.1	100.0
Unaizah	150	10.3	26.9	2.0	18.7	8.1	3.1	13.1	17.9	100.0
Ar Rass	111.5	12.6	15.5	3.6	47.8	3.5	1.3	15.5	0.3	100.0
Al Mithnab	53.2	11.9	24.2	2.4	18.5	2.2	0.9	26.2	13.6	100.0
Al Bakiriyah	48.5	8.3	31.2	2.0	22.3	2.5	0.9	27.7	5.2	100.0
Al Badaya'a	70.9	6.5	28.8	1.1	20.1	3.0	0.5	35.2	4.8	100.0
Riyadh Al Khabra	55.9	4.0	22.7	0.2	21.6	2.7	0.7	38.7	9.4	100.0
Al Asyah	45.3	4.6	24.0	0.3	17.5	-	0.0	53.0	0.6	100.0
Al Nabhanya	10.3	3.2	29.0	0.5	14.0	-	0.0	53.0	0.3	100.0
Uyun Al Jiwa	20.3	6.0	35.5	0.5	30.0	2.3	0.6	25.0	0.1	100.0
Al Shammasiya	20.7	8.4	4.0	0.8	11.0	2.3	0.1	68.0	5.4	100.0
Oklat AlSkoor	16.3	6.7	24.0	1.4	23.0	-	0.0	44.9	0.0	100.0
Daria	11.1	6.0	4.7	0.8	16.1	-	0.4	72.0	-	100.0

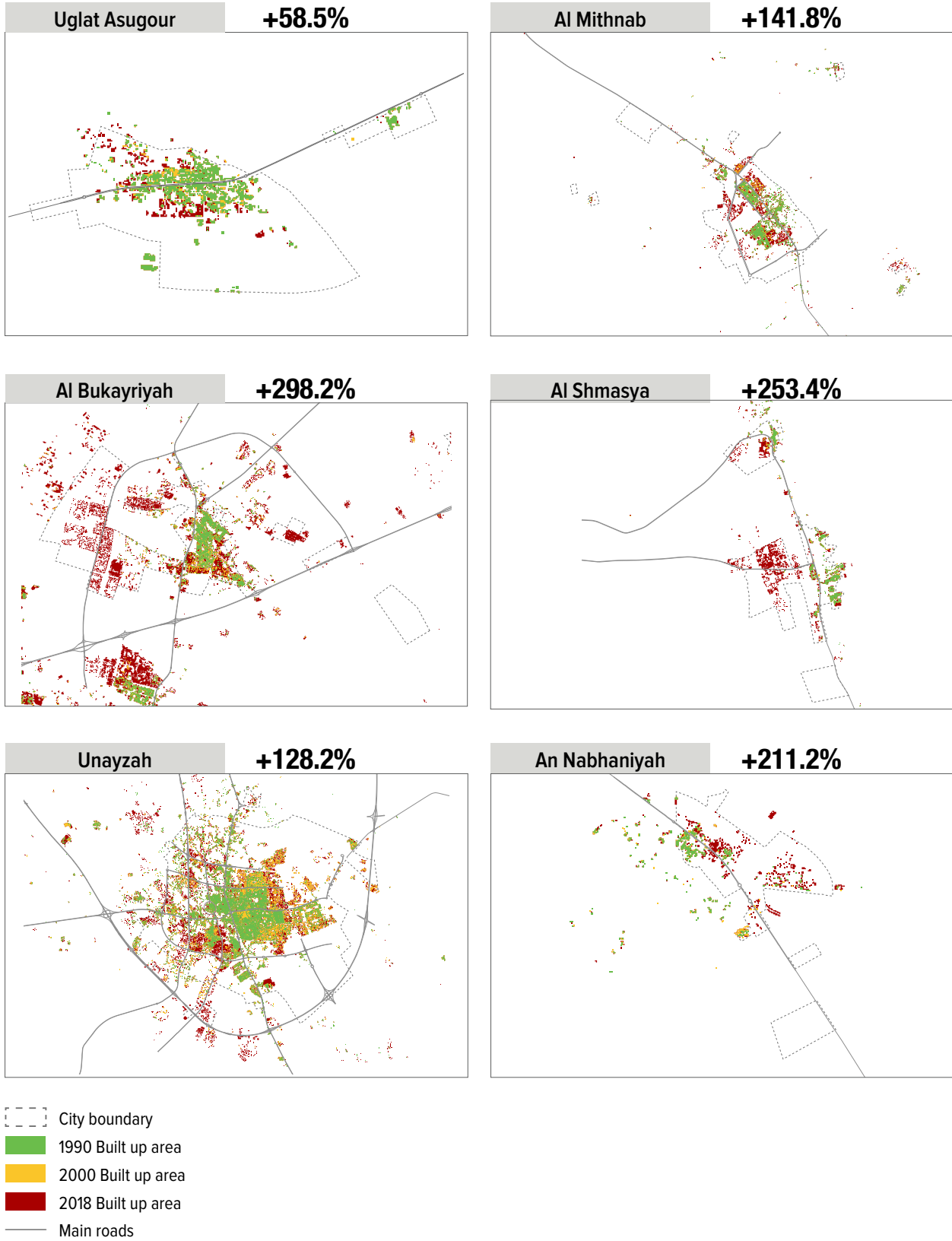
* Represents the physical city area within which the Qassim Urban Observatory collects data

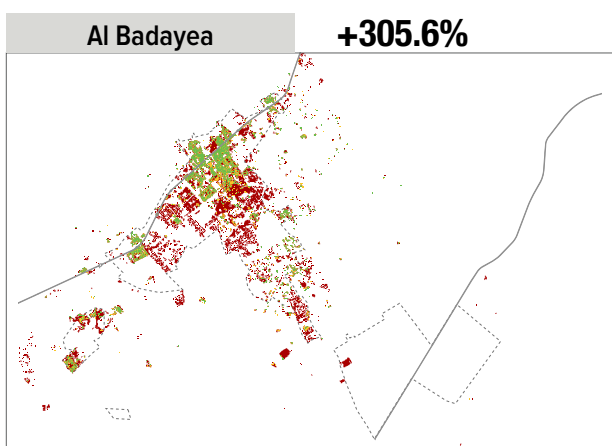
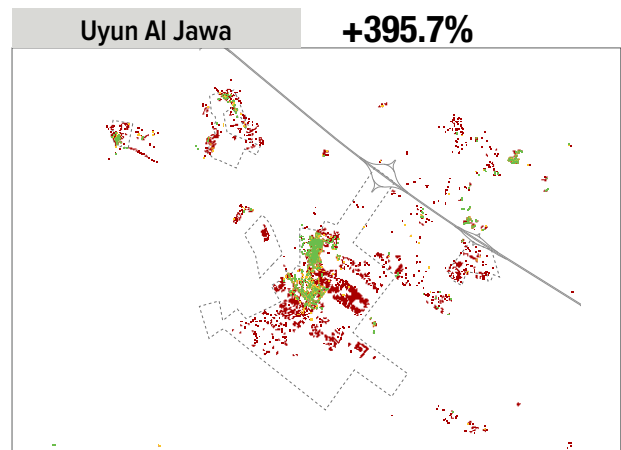
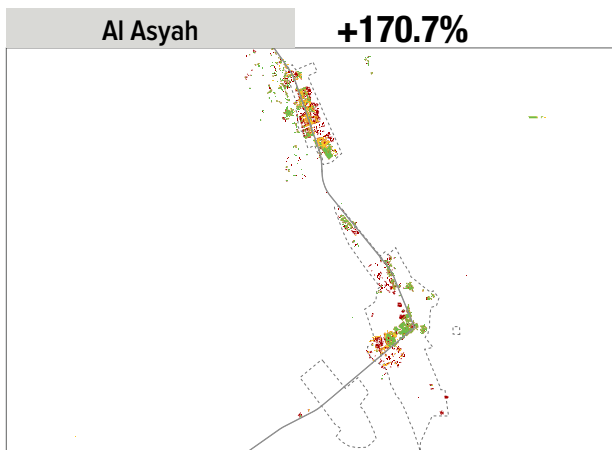
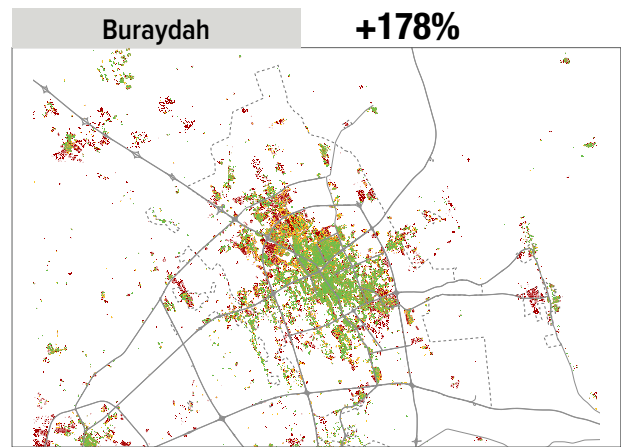
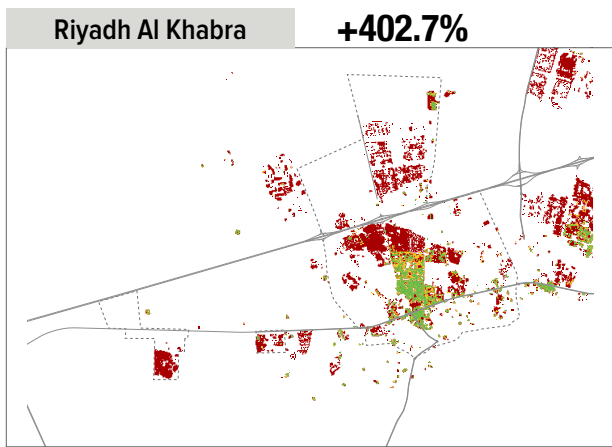
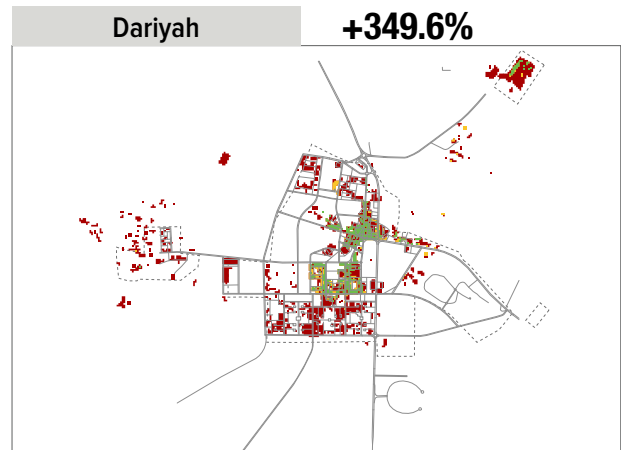
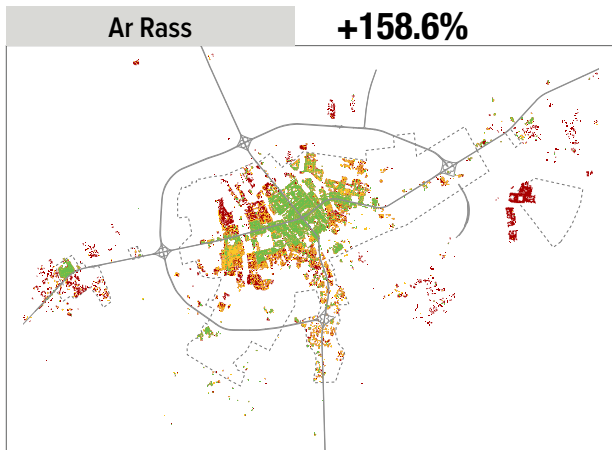
Source: QUO, 2018






Figure 1.10

Evolution of urban areas between 1990 and 2018

Total % change in Built up area 1990 – 2018





-  City boundary
-  1990 Built up area
-  2000 Built up area
-  2018 Built up area
-  Main roads

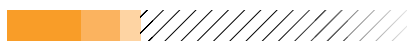
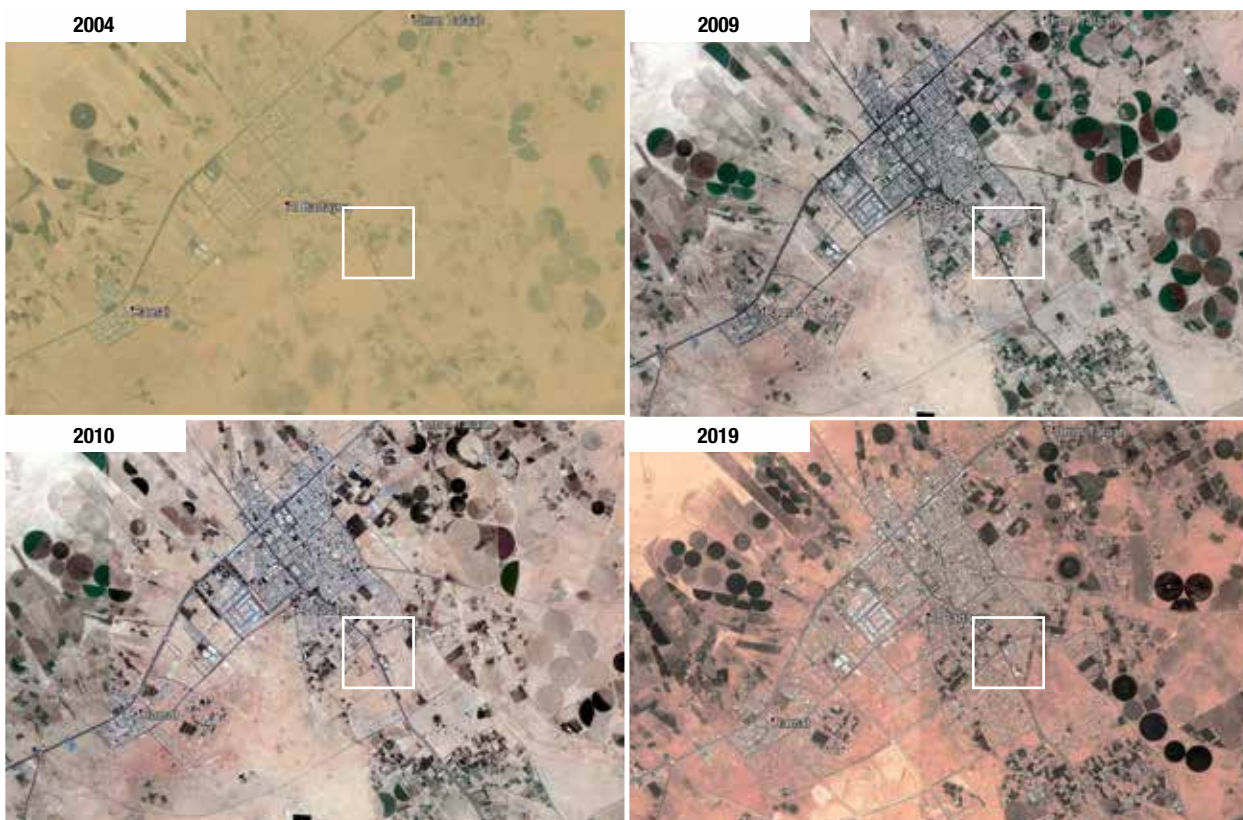


The future of Al-Qassim’s urban form will depend significantly on how the local authorities manage and regulate developments in the available “developable land”. If no proper growth controls are put in place, there is a risk of haphazard expansion proliferating, particularly given that there is more unplanned

vacant land than that planned in the 13 cities, which averages 39 per cent and 22 per cent respectively. Some likely challenges that may result from the unregulated growth would be urbanization without service provision, with severe impacts on the quality of life for residents. In

addition, unplanned expansion of urban areas may seriously hamper the region’s agricultural productivity (and its associated economic returns), as more fertile land gets converted to urban uses. This phenomenon is already being experienced in some parts of the region (see figure 1.11).

Figure 1.11 Conversion of agricultural land to urbanized uses in Al Badayaa between 2004 and 2019



1.5 Conclusion

Since 1990, the 13 main cities in Al-Qassim Region have been expanding spatially at an average annual rate exceeding 3 per cent. For most cities, this has resulted in more than 200 per cent increase in their built-up areas. The trend has also contributed significantly to a conversion of agriculturally productive land into urbanized land uses, which could have adverse effects on the region's high agricultural productivity and food security in the long term. The rapid spatial expansion of Al-Qassim's cities has been happening

against a slower rate of population growth, which is characteristic of sprawling cities. Today, cities in Al-Qassim face two major challenges: on the one hand are huge tracks of developable open land within the city boundaries (both planned, serviced and unplanned areas) which account for more than half of the urban area in most of the cities; and on the other hand is the lack of city plans or strategies to guide their development. While the recorded spatial expansion has generally been orderly so far,

some city sections have developed without the key basic infrastructure provisions. This has resulted in a relatively large share of populations unserved by the municipal water and sanitation services as discussed in chapter 3 of this report. Identifying these challenges, and based on its commitment to the attainment of sustainable urbanization throughout the region, the Al-Qassim regional government is trying to formulate a regional urbanization strategy and urban plans for its cities.

Endnotes

1. The Saudi Network. "Qaseem City Profile". Available at <http://www.the-saudi.net/saudi-arabia/qaseem/Qaseem%20City%20-%20Saudi%20Arabia.htm>
2. United Nations, Department of Economic and Social Affairs, Population Division (2018). World Urbanization Prospects: The 2018 Revision, Online Edition.
3. Haseeb Jamal, "Land-use Patterns – Basic Form Conceptual Framework", 31 July 2017. "Available at" <https://www.aboutcivil.org/urban-land-use-patterns.html>



CHAPTER 2

Linked settlements for enhanced interactions and expanded opportunities





2.1 Introduction

In a highly globalized world, good infrastructure such as efficient transport networks and modern information and communication technology (ICT) enable cities to attract investments, increase their competitiveness and ultimately reap the benefits of globalization. Inter and intra-urban connectivity significantly determines the functionality of urban areas, their productivity and social as well as economic interactions. For example, commodity trade requires physical infrastructure that enables the transfer of goods from the production zones like farms, industries to markets where they are needed. At the same time, production processes require such infrastructure to facilitate transport of raw material to and between industries on the manufacturing ladder. The same infrastructure facilitates movement of

people from their homes to markets where they buy goods and engage in economic activities, as well as to social and recreational spaces which contribute to enhancing their quality of life. Virtual connectivity, on the other hand, contributes to enhanced social integration and makes it possible to source for markets and communicate with suppliers and clientele. Virtual connectivity also widens the scope of income generating activities and employment opportunities for a city, which could include small- to large-scale online-based businesses and business process outsourcing openings.

The more cities and human settlements are connected (to other settlements within the region, country or globally) and the more different parts of a city are connected to

each other, the more efficient is the flow of goods, services, people and technology, which collectively contribute to enhanced productivity and prospects of prosperity. Traditionally, urban prosperity and enhanced productivity have been closely associated with massive investments in physical infrastructure. Today, cities that seek to accelerate their growth and become prosperous across dimensions must invest in some level of physical infrastructure and plough substantial resources to developing their ICT infrastructure. This chapter highlights the existing physical and virtual infrastructure in Al-Qassim Region and its 13 main cities. The chapter also examines ways by which the prevailing trends are likely to impact on the region's performance against various indicators of urban prosperity.

2.2 Physical connectivity in Al-Qassim

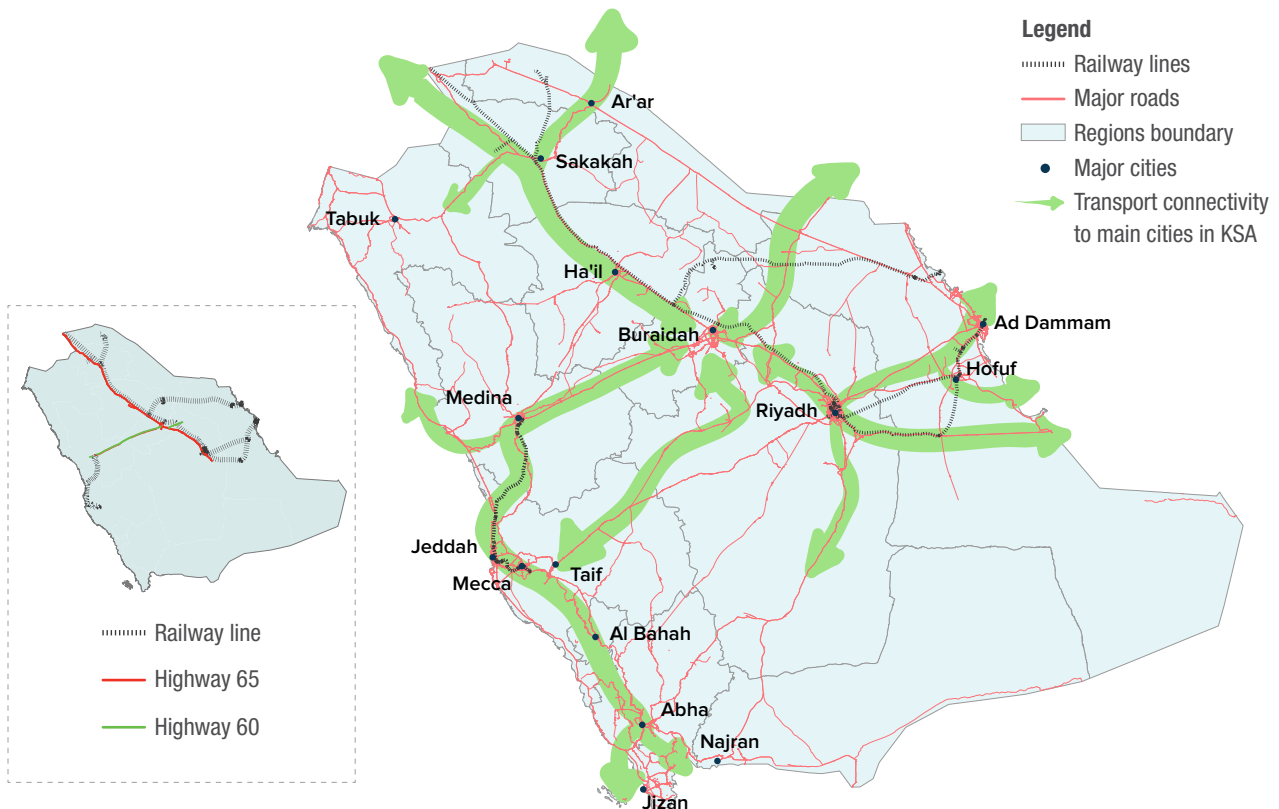
Al-Qassim Region is highly connected physically and virtually to other parts of Saudi Arabia and the world. Within the country, a network of roads, railways and air routes connect Al-Qassim to other regions, facilitating the movement of people, agricultural produce and other goods. Al-Qassim's location at the centre of the country makes it an important transit route between Riyadh and Medina, as well as a major resting point for pilgrims from Iraq and Kuwait on route to Makkah; while Al-Qassim's high agricultural production makes it an important source of food for the entire kingdom.

Highway 65 (popularly known as the Riyadh-Qassim Highway) is a major transport route that cuts through central Saudi Arabia. The 1,200-kilometre highway connects Buraidah to the nation's capital, Riyadh, and other cities like Ha'il, Sakakah and Al-Kharj. It also leads to Jordan and Iraq to the north. Highway 60, which connects to highway 65 at Buraidah city cuts horizontally through Al-Qassim and traverses many cities in the region. The 812-kilometre highway connects Buraidah and other cities in Al-Qassim Region to Jeddah, the

kingdom's commercial capital, as well as to the holy cities of Medina and Makkah. Highway 60 is an important route for tourism and pilgrimage in the country (see figure 2.1). Each of the main highways that traverse Al-Qassim have many branches, which collectively form a mesh of tiered roads that connect all human settlements within the region. Collectively, Al-Qassim's road network comprises of 7,984 km of asphalt streets, 49.2 per cent (3,929 km) of which are city roads and 50.8 per cent (4,055 km) are intercity links.

Figure 2.1

Road and rail connectivity to Al-Qassim



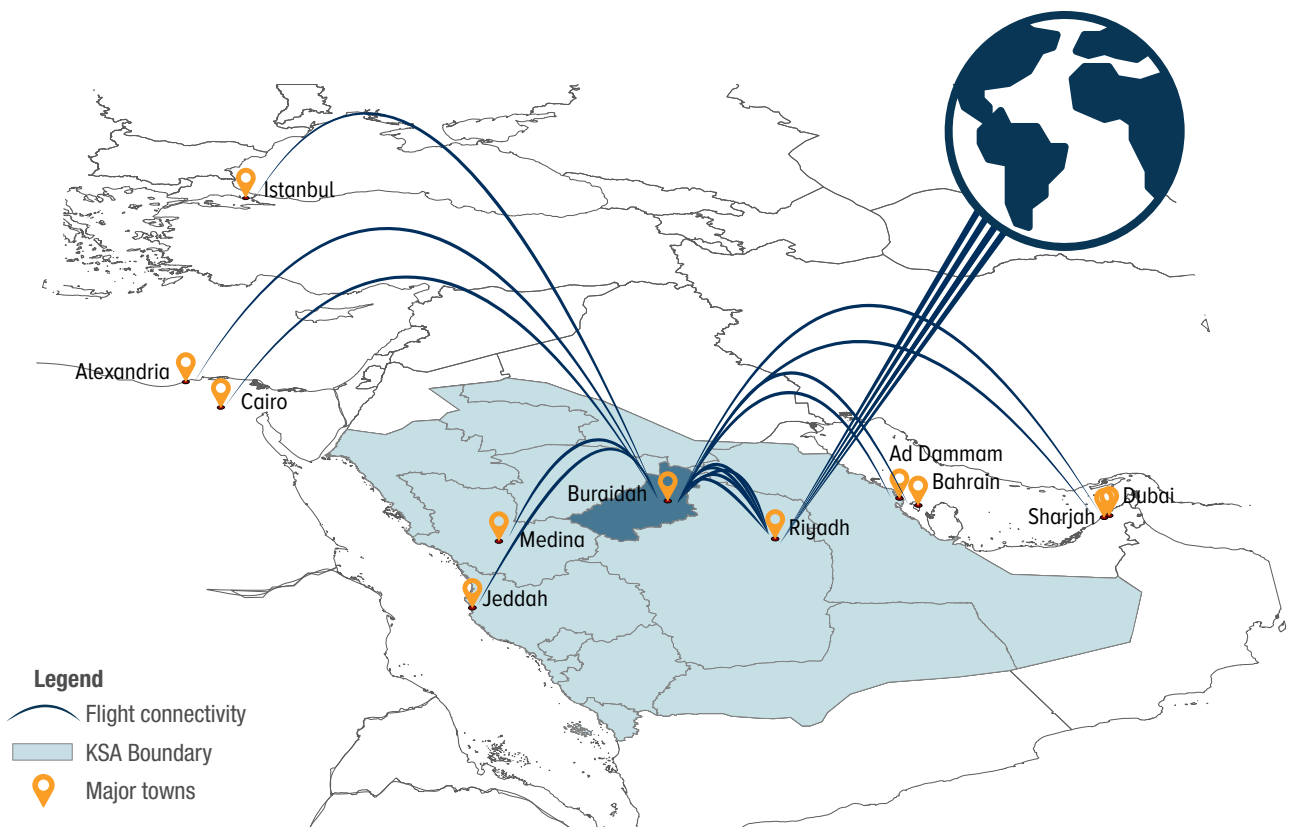
In addition to the roads and highways that link settlements in Al-Qassim, the 2,750 km north-south railway line connects Al-Qassim to the Saudi regions of Al Jawf, Northern Borders, Ha'il and Riyadh and farther to Jordan in the north (see figure 2.1).

Al-Qassim is also connected to other regions in Saudi Arabia and the rest of the world through a network of air routes, which originate from the Prince Nayef bin Abdulaziz Regional Airport (Al-Qassim Airport) in

Buraidah. Al-Qassim is an important tourist destination and a major exporter of agricultural produce within the country, which requires direct connections to several global destinations. Owing to its many tourist destinations (which include festivals, markets, gardens and heritage buildings) and its business connections to the world, Al-Qassim airport accounts for a substantial share of the regional travel within Saudi Arabia. In 2018, 34.3 per cent of all international passengers

from and to the country's regional airports either arrived or departed from this airport. During the same year, the airport also accounted for a substantial share of local air travel, with about 7.8 per cent of all trips either originating from or ending at the airport. The major local destinations from Al-Qassim airport include Riyadh, Medina, Jeddah and Ad Dammam; international destinations include Dubai, Sharjah, Cairo, Bahrain, Istanbul and Alexandria, Egypt (see figure 2.2).

Figure 2.2 Major flight destinations from Al-Qassim Region





The interlinked network of highways, railway lines and air routes connect Al-Qassim and its populations to many trade, commerce, agricultural produce export, foreign exchange and tourism opportunities within the country and the Gulf

Cooperation Council region as well as to all parts of the world. These physical connections linking Al-Qassim to the world are likely to continue to promote the region's economic growth. Moreover, as

the region continues to diversify its economy into manufacturing and pharmaceutical products, these linkages will contribute significantly to the city's accelerated economic growth in the long term.



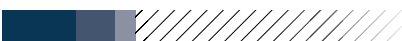
Altamur square, Riyadh Al Khabra © Qassim Urban Observatory

2.2.1 Trends in intra-city connectivity in Al-Qassim Region

Streets, railways and other transport infrastructure play a major role in moving goods and connecting urban land uses, which is key for enhanced urban productivity. Streets also provide important wayleaves for distribution of other basic services such as water, sanitation, and ICT infrastructure, and serve as major open spaces in many cities across the world. Based on a 2016 study

of more than 100 cities from across the world, UN-Habitat established that a city which allocates at least 30 per cent of its land to streets is likely to be more prosperous (across the economic, social, infrastructural and environmental dimensions) than one which allocates much less. UN-Habitat, however, also recommends that there should be a good balance

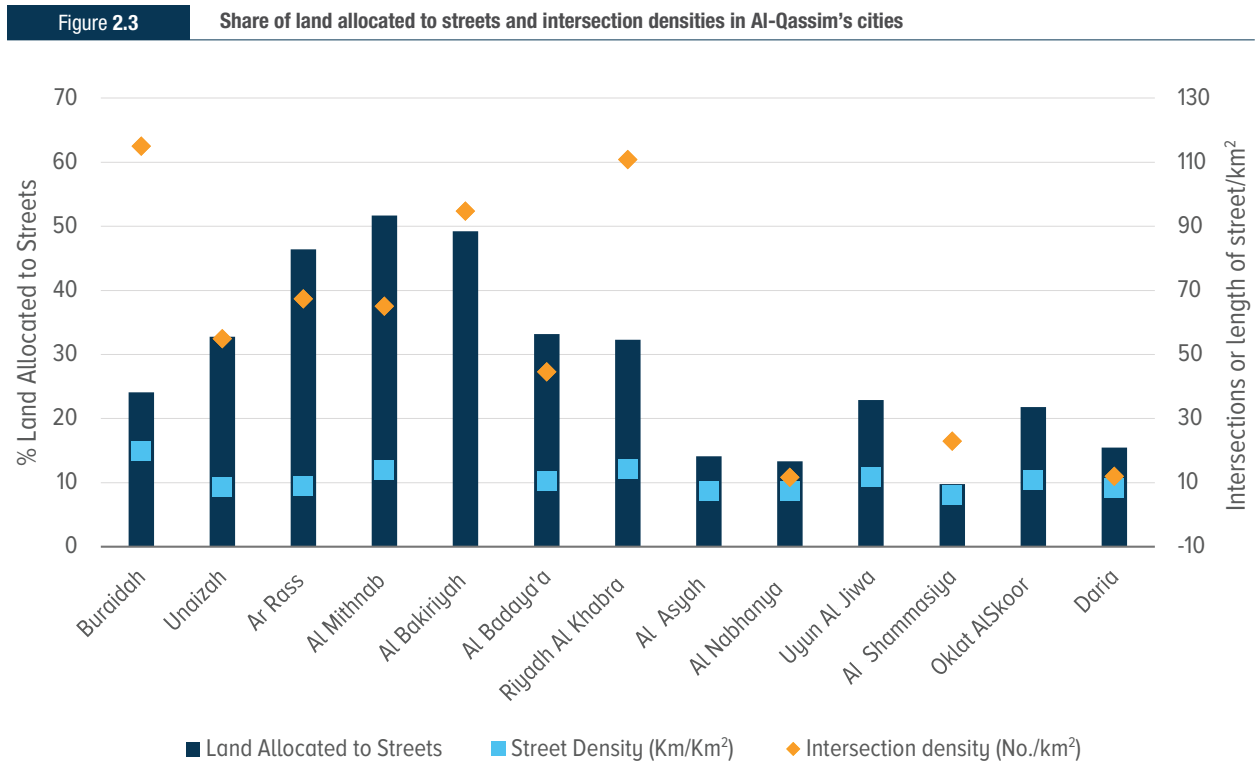
between the share of land allocated to streets with the number of street intersections, which provide urban populations with more route options and also encourage walking. A density of 100 intersections per square kilometre is seen as a good balance for a city that aims to increase connectivity while also protecting it from traffic gridlocking.¹



Based on these benchmarks, Al-Qassim's cities perform relatively well in terms of share of land allocated to streets, with an average of 29.5 per cent of urban land allocated to streets in the 13 main cities. However, the cities score poorly in the intersection density

indicator, with a recorded average of 60 intersections/km² for the 13 cities. There are huge variations between city performances in the two indicators, in which some cities perform very well while others do so poorly. For example, while 6 of the 13 cities allocate more than 30 per cent

of their land to streets, only 2 cities surpass the 100 intersections/ km² threshold. As shown in figure 2.3, Al Mithnab records the highest share of land allocated to streets whilst Buraidah has the greatest number of intersection density.



In addition to good performances in the share of land allocated to streets, cities in Al-Qassim record high street densities which is a good measure of the total length of streets within each urban area. At least six cities have street densities of more than 10km/km², which is consistent with

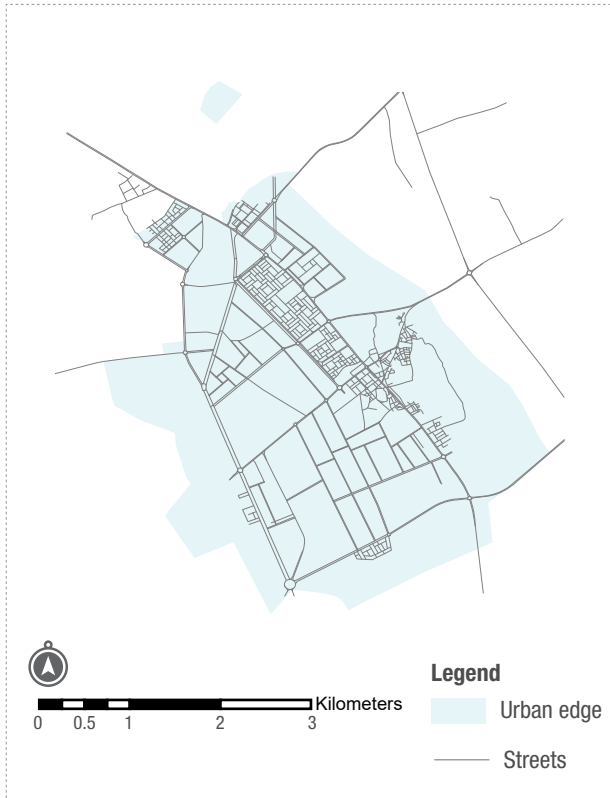
what has been observed in cities in developed countries. Buraidah has the highest street density, which when combined with the high number of intersections indicates that the city is the most connected in Al-Qassim. On the other hand, whereas cities such as Al Mithnab and Ar Rass

have a large share of their land in streets, they record lower levels of connectivity due to their low street densities and few intersections - which could indicate a few wide streets which limits route options for residents (see figure 2.4).

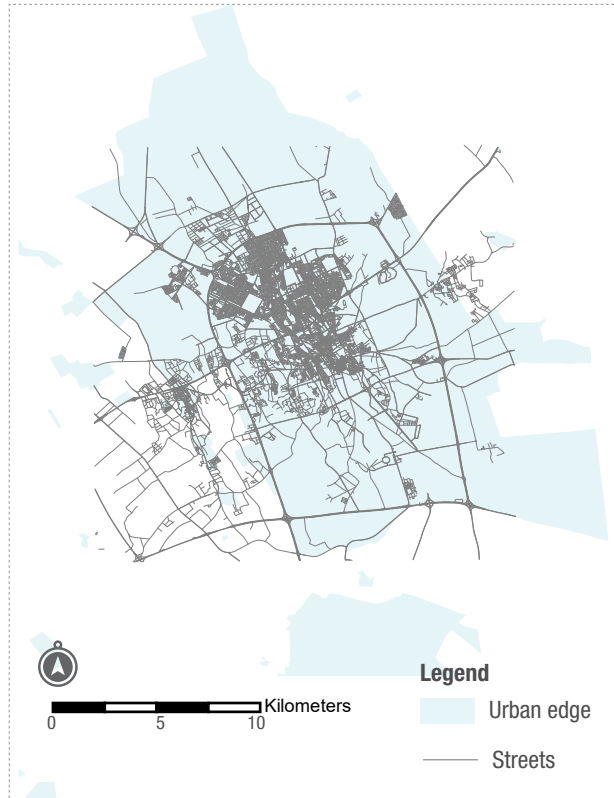
Figure 2.4

Street patterns in Al Mithnab and Buraidah cities

Al Mithnab



Buraidah



2.2.2 Cities in Al-Qassim rely on private cars for transport, posing sustainable urbanization challenges

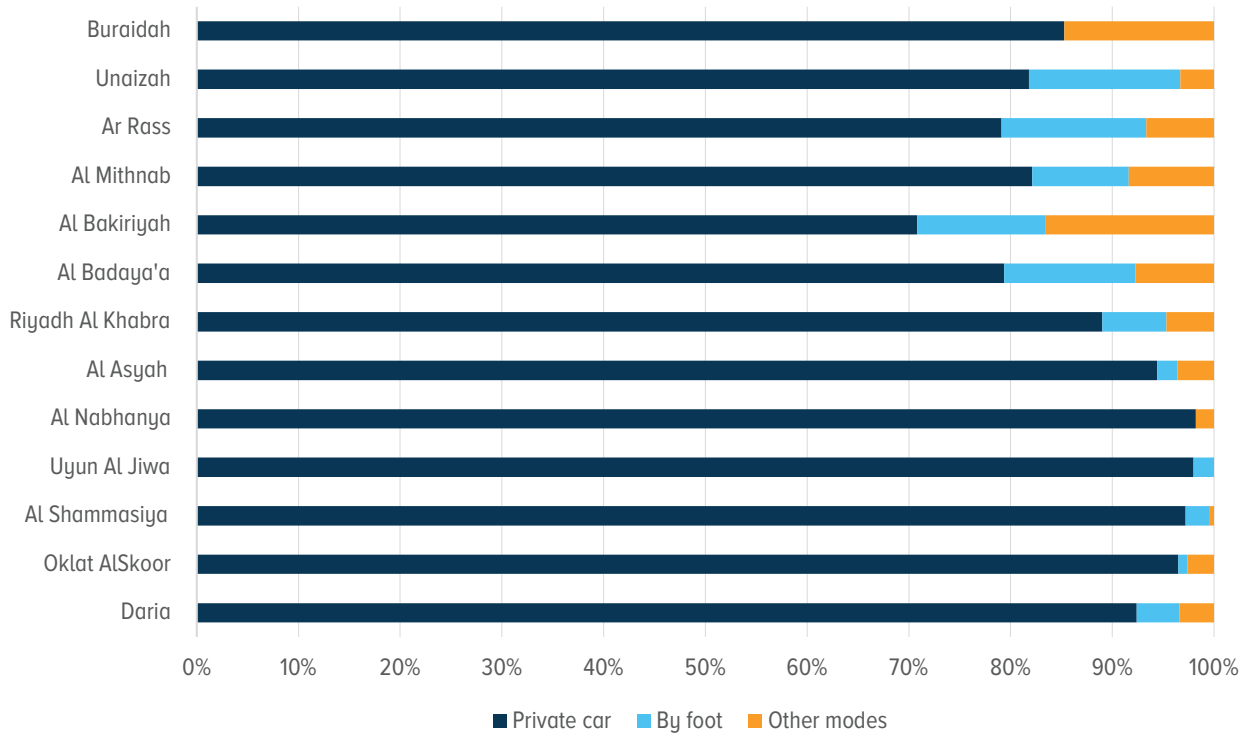
The observed street patterns in Al-Qassim are common in cities where driving and use of privatized vehicles is the main means of transport (as opposed to walking and use of public transport). It is thus no surprise that in all Al-Qassim's cities, private cars account for about three quarters of all trips to work. In some cities such as Al Nabhanya, Uyun Al Jiwa, Al Shammasiya and Oklat Alskoor, more than 95 per cent of the population relies on private cars for their daily trips to work (see figure 2.5). Even in

Al Bakiriyah, the city with the highest usage of other modes of transport, about 71 per cent of the population rely on private cars for their trips to work. This is significantly higher than cities in the developed regions where more than half of their populations rely on public transport or non-motorized transport for their trips to work.

The high reliance on private cars in Al-Qassim's cities is closely associated with a high car ownership,

wherein each household owns at least one (average car ownership ranges from 1.08 to 1.5 cars per household). On the downside, this points to very low investment on public transport, which is almost non-existent in most cities throughout the region. For those without private cars, walking seems to be a more common means of transport across cities, while in some cities such as Buraidah, employer-provided transport accounts for some part of the home-to-work trips.

Figure 2.5 Transport mode to work by city in Al-Qassim Region



* In Buraidah, 6.4 of the trips are by a car owned by the employer

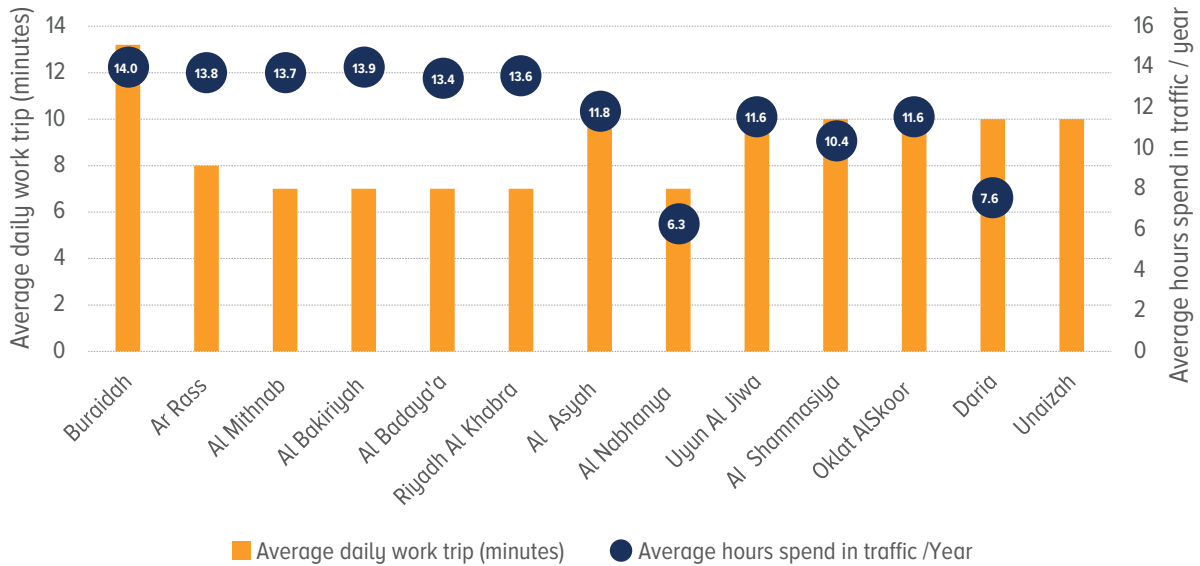
10.6 mins
Average time to reach work in Al-Qassim cities. (2018)

Despite the high usage of cars in Al-Qassim, the time spend stuck in traffic is low, which could be a contributing factor to the good air quality in the cities

Despite the over reliance on private cars, the travel time and average time spent in traffic is relatively low in Al-Qassim cities. In 2018, the average time to reach work in the 13 cities was only 10.2 minutes, while the time passengers spend stuck in traffic averaged only about 13 hours per annum (see figure 2.6). The amount of time wasted in traffic in the region's cities is significantly smaller than the averages for cities in the United States (54 hours/year),² United Kingdom (45.73 hours/

year) and Finland (18.13 hours/year),³ implying more opportunities for higher productivity in Al-Qassim cities. The low traffic congestion in these Al-Qassim cities is also one likely explanation of the low levels of air pollution in Buraidah, Unaizah and Uyun Al Jiwa where the recorded concentrations of carbon dioxide, nitrogen dioxide, ozone gas and Sulphur dioxide were within the World Health Organization recommended levels.

Figure 2.6 Time spent in transport network by city



While the current street pattern and transport strategies seem to be working in most cities in Al-Qassim (with less time and resource wastage in the road network), and while this is positively impacting on

the economies and productivity of each city, the efficiency of the largely private car driven transport sector is likely to decline as the populations of the cities increase. In the mid to long term, all cities in Al-Qassim should

invest in a public transport system, which will, among other benefits, offer transport options to the public, help manage future traffic congestion and reduce air pollution from the transport sector.

2.3 Virtual connectivity opening new growth opportunities for Al-Qassim cities

Empirical evidence from across the world has concluded that investment in and use of information and communications technology and associated infrastructure has a positive and significant correlation with economic development. This relationship is associated with a) job creation within the ICT sector; b) use of ICT for enhanced efficiency in the production sector; and c) enhanced local and international connectivity, which creates new opportunities and widens markets for products. Equally, advances in ICT can significantly

increase female participation and inclusion in labour markets (through e-commerce, online work, business process outsourcing) as well as creating labour market opportunities for persons with disabilities, thereby collectively improving their quality of life.⁴

Like in many other parts of the world, the Internet and the ICT revolution over the last few decades has significantly changed how people in Al-Qassim interact with each

other, how goods are connected to markets, how production processes are designed, as well as how urban economies are structured. With increased use of mobile phones and the Internet, more businesses today are able to connect with markets without having to invest in physical offices or stores across cities, while residents of all cities can enjoy many municipal services at the comfort of their businesses or homes, significantly reducing the amount of time spent seeking such services.

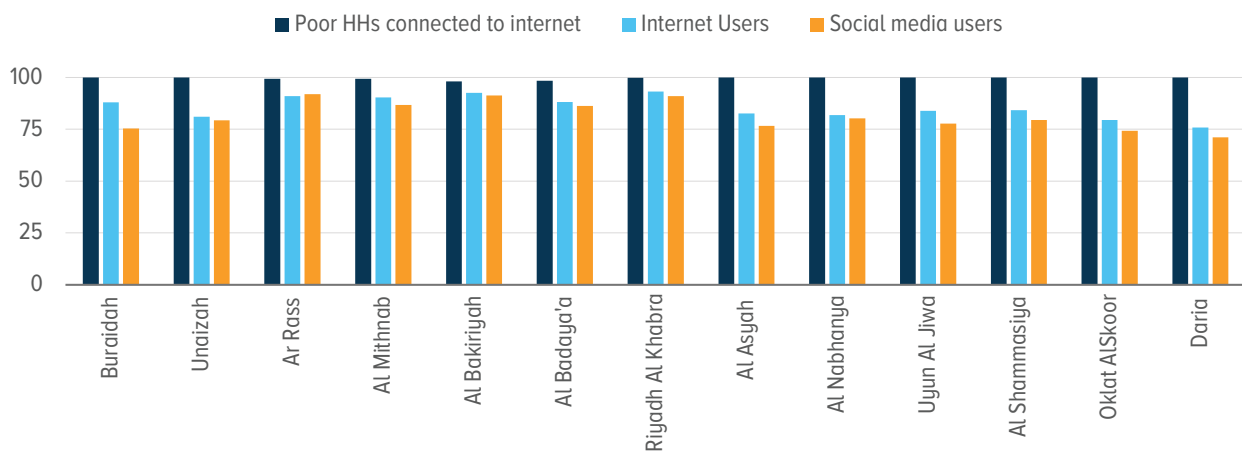
Throughout Al-Qassim, there has been massive investments to increase access to ICT infrastructure, which has been implemented at the regional, city and household levels. At the regional, for example, massive investments have been made to ensure that core ICT communication and Internet infrastructure are laid out throughout Al-Qassim. Some of these investments have been part of the national Government’s interventions and public-private partnerships. Individual cities, in partnerships with private sector actors, have equally invested and made provisions for Internet cables and communication masts to be erected within Government premises as well as in major public areas. The same has been transferred to individual households, which have been investing in gaining access to mobile phone networks and getting Internet connections to their homes.

The different levels of action have contributed significantly to near universal connectivity to ICT infrastructure in Al-Qassim. In 2018, of the 6 cities with data on connection to Internet, all homes in Ar Rass, Al Mithnab and Riyadh Al-Khabra were connected to the Internet (, while the other 3 cities recorded close to universal connectivity (Al Bakiriyah 99.8 per cent, Buraidah 99.2 per cent and Al Badaya’a 97.3 per cent). At the household level, Internet connectivity is not associated with income levels. In total, 8 of the 13 cities recorded exhibited universal connectivity of poor households to the Internet, while the other 5 recorded close to universal connectivity (see figure 2.7). High connectivity to the Internet is of particularly high significance to poor households which, with the right know-how, can leverage Internet-

based economic opportunities (and the global marketplace) to augment their incomes.

The high connectivity to the Internet among households is closely related to its high usage across cities. In 2018, about 87 per cent of the urban population in the 13 main cities in Al-Qassim were Internet users. During the same year, the share of social media users to the total urban population was equally large (averaging 81.7 per cent), implying high virtual linkages of populations in Al-Qassim’s populations with the world (see figure 2.7). This, in addition to a very high number of mobile phone ownership (which exceeds 700 mobile ownerships per 1,000 people), points to very high virtual connectivity among residents of Al-Qassim’s cities.

Figure 2.7 Internet connectivity and usage in Al-Qassim’s cities





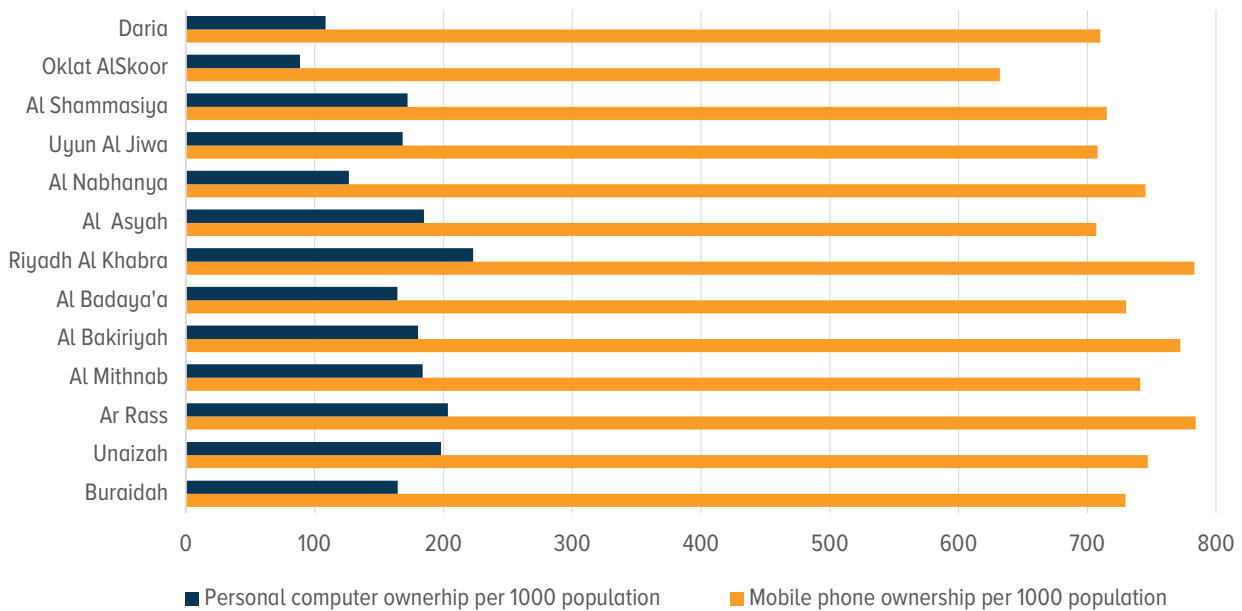
The main impediment to tapping the economic opportunities associated with the high Internet connectivity in Al-Qassim cities might be due to low computer ownership, which in 2019

averaged less than 200 personal computers per 1,000 population. While the high phone ownership opens diverse opportunities for

most populations, more computer ownership can expand these opportunities across all population groups.

Figure 2.8

Phone and personal computer ownership per 1,000 population in Al-Qassim's cities



A combination of high Internet usage and the digitization of many government services in Al-Qassim's cities are likely to be a major contributing factor to an increase in the number of people undertaking digital transactions with the regional government. This trend, which seems to be on the rise, is likely

to contribute continuously to a reduction in the need for physical interactions in service delivery, as well as to an overall improvement in services. Buraidah city is leading in this area, with 88.5 per cent of households using the Internet in government transactions in 2018 (see figure 2.9).

88.5%
Households using the internet in government transactions in Buraidah. (2018)

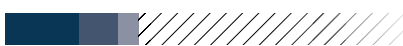
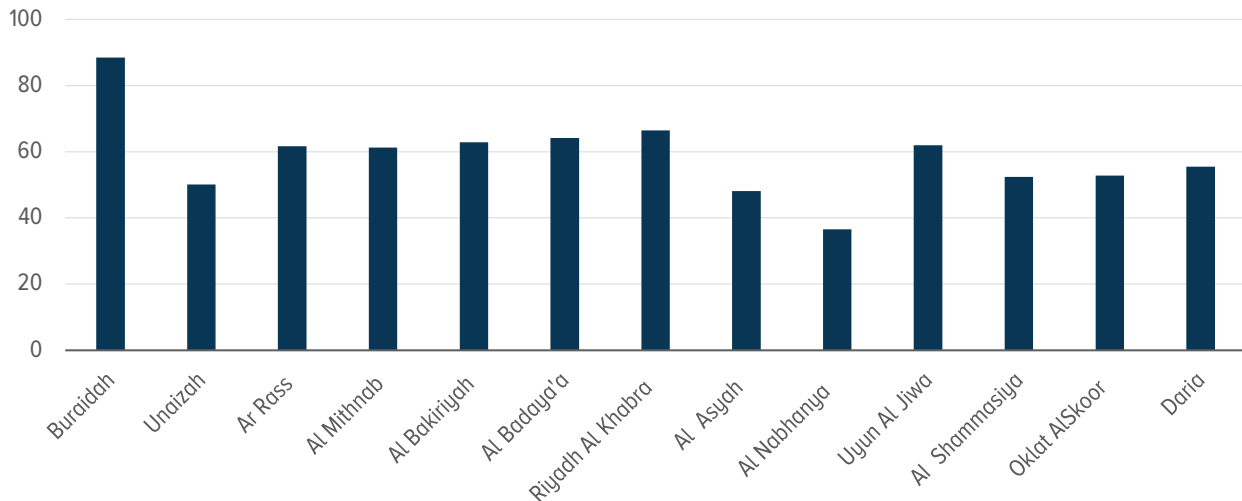


Figure 2.9 Internet usage for regional government transactions in Al-Qassim’s cities



2.4 Conclusion

Cities in Al-Qassim are highly connected to others within this region, the rest of the country and to those across the globe through the intertwined network of physical and virtual infrastructure. The high connectivity makes these cities accessible and reduces wastage and system losses in the production

processes while expanding the markets for locally produced goods and services. High Internet connectivity across all cities links their residents to a vast global marketplace where they can interact, trade and generate incomes. This, coupled with a largely youthful

population and high literacy rates throughout the region can be exploited to create more jobs in all cities and to expand the income-generating opportunities for their residents. This can also be promoted through the business process outsourcing service delivery model.

Endnotes

1. UN-Habitat, Streets as public spaces and drivers of urban prosperity. UN-Habitat, (Nairobi, 2013).
2. Willingham, A.J. Commuters waste an average of 54 hours a year stalled in traffic, study says”, CNN, 22 August, 2019. Available at <https://edition.cnn.com/2019/08/22/us/traffic-commute-gridlock-transportation-study-trnd/index.html>
3. European Commission, “Hours spent in road congestion annually”. Available at https://ec.europa.eu/transport/facts-fundings/scoreboard/compare/energy-union-innovation/road-congestion_en
4. Mwaniki, D, “Infrastructure Development in Nairobi: Widening the Path Towards a Smart City and Smart Economic Development”, in Smart Economy in Smart Cities, Kumar T.M.V eds, (Springer, Singapore, 2017).



CHAPTER 3

Social capital for sustainable and prosperous development





3.1 Introduction

A city's future sustainable growth and prosperity depends upon its investment in education, health, peace, security and other social capital stocks. Successful cities report lower levels of inequalities and poverty, as they create a peaceful and secure environment for investment; encourage high human capital development through well-educated and healthy citizens.¹

This chapter presents an analysis of the performance of the 13 main cities in Al-Qassim Region against four key social capital indicators and enablers: 1) employment, job market trends and the prevailing urban inequality conditions; 2) sociodemographic and health conditions; 3) education trends; and 4) access to basic services. The prevailing urban safety conditions in the region and how they impact quality of life and urban prosperity are also discussed.

Findings indicate that cities in Al-Qassim perform quite well in most of the social capital indicators, which significantly increases the region's chances of accelerated prosperity. To tap into the massive opportunities from the high social capital reported in Al-Qassim, the regional government and city authorities will, however, need to tackle urgently the critical challenge of high unemployment among the highly literate youthful populations.



3.2 Employment and poverty trends in Al Qassim region

A country or region’s economic performance is a good indication of the success or failure of programmes and projects that cut across the social, infrastructural and economic dimensions; as well as a good

reflection of the quality of life of its residents. For shared growth and sustainable development to be attained, however, economic performance should be accompanied by reduced inequalities between

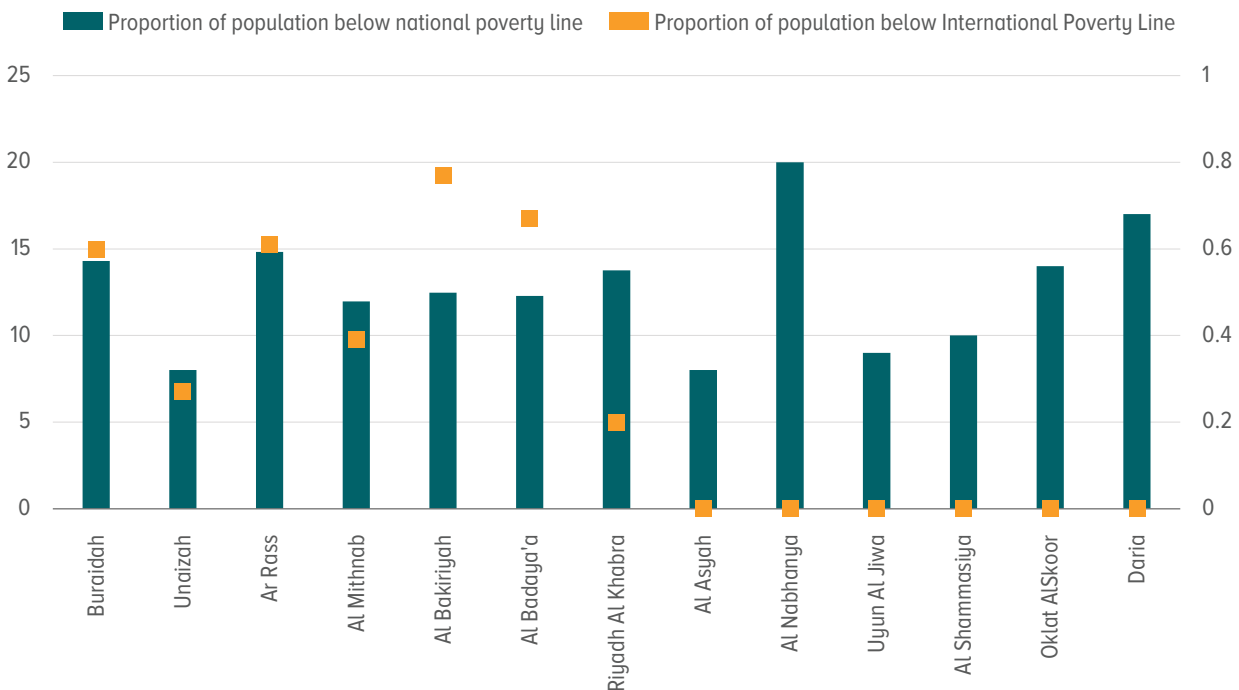
rich and poor, and prosperity should be shared in such a way that the benefits of growth are experienced by all regardless of socioeconomic status, age or gender.

3.2.1 Cities in Al-Qassim record low poverty levels, but increasing unemployment rates

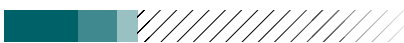
In the region’s 13 main cities, the average proportion of population below the international poverty line is less than 1 per cent, while the average share of population below the national poverty line is 12.3 per cent. In 2018, Buraidah had just 0.6 per cent of its population below the international poverty line, while 14.3 per cent were below the national poverty line, which was the third highest value after Al Nabhanya (20 per cent), Daria (17 per cent) and Ar Rass (14.8 per cent) (see figure 3.1).

Figure 3.1

Proportion of population below international and national poverty lines

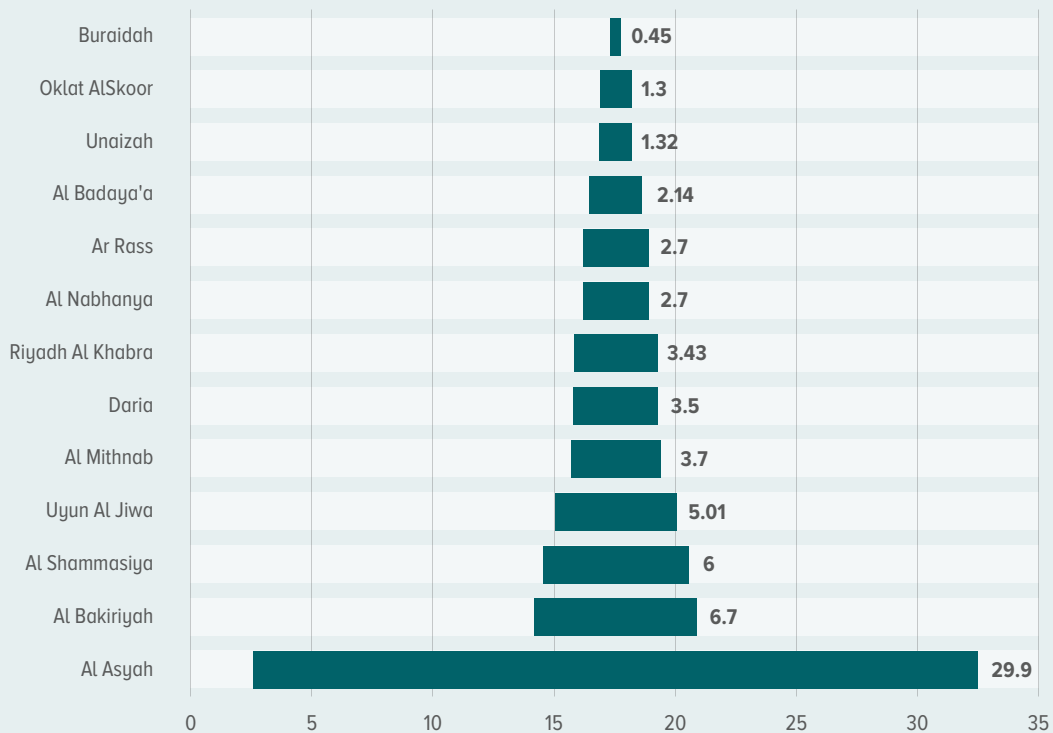


(International poverty line = income of \$1.9 per day; national poverty line = income of SR 1066 per month)



Box 3.1**Urban safety, a challenge for enhanced investments and productivity**

Cities in Al-Qassim enjoy high levels of peace and security like most parts of Saudi Arabia. According to data from the Qassim Urban Observatory, only three cities recorded homicide cases in 2018, which included: Buraidah (0.03 homicides per 1,000 population), Al Badaya'a (0.01 cases/1,000 population) and Al Asyah (0.3 cases/1,000 population). While these numbers seem low, they compare quite significantly with those of other parts of Western Asia, wherein there were about 4 homicides reported per 100,000 population in 2015.² During the same year, cities in Al-Qassim recorded relatively high numbers of robberies, which were more than the average 9 robberies per 100,000 population reported in all of Saudi Arabia in 2017.³ Overall, all cities recorded at least a few robberies through 2018, although Al Asyah was by far the least secure city, with 29.9 robberies per 1,000 population reported. This is eroding the quality of life of city residents and dampen long-term investor confidence in the city's business and economy.

Robberies per 1000 population



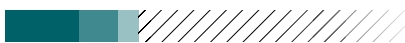
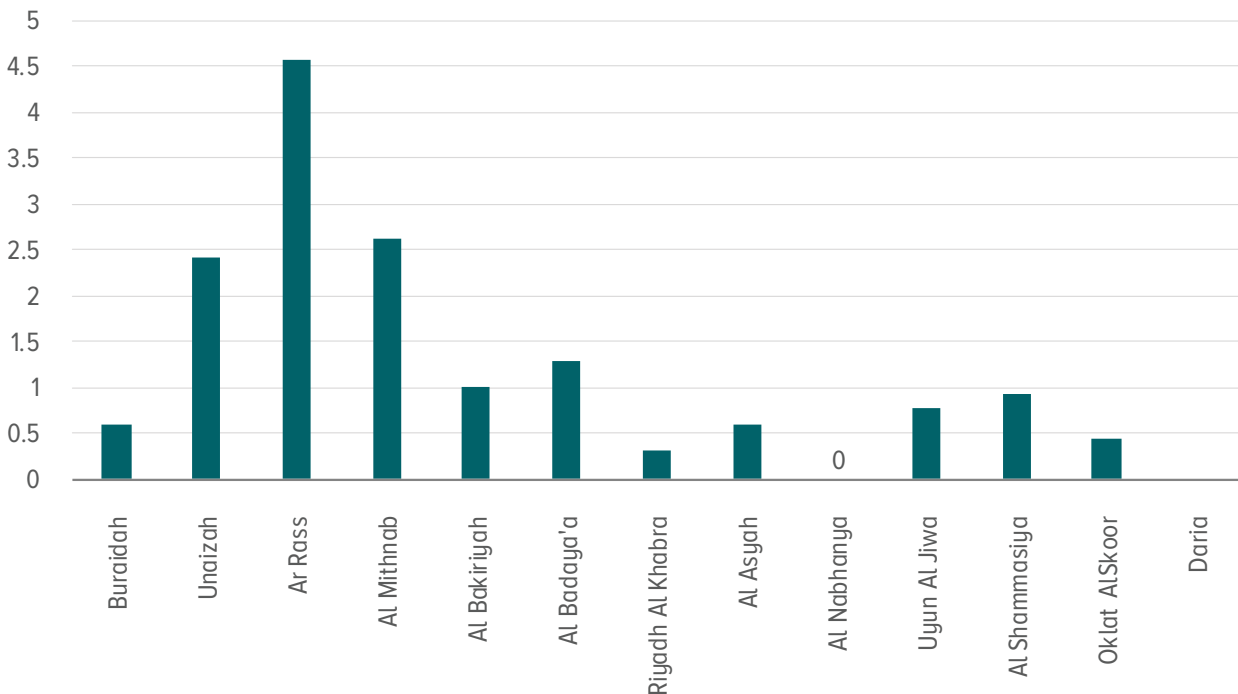
Despite the relatively low proportion of population below the international poverty line, urban unemployment in Al-Qassim is significantly high. The recorded unemployment values range from 14 per cent in Uyun Al Jiwa to 18 per cent in Unaizah, which is higher than the nationally reported average of 6 per cent.⁴ In all cities, unemployment among women was at least twice as high as among men in 2018. Youth unemployment is equally high in Al-Qassim. In all the 13 cities, youth accounted for the highest

shares of unemployed populations in 2018 with at least half of youth aged 15–24 being unemployed.

The employment trends in Al-Qassim cities translate to a male-dominated labour force, which holds true for the regional government and private sectors. Within the government sector, for example, the proportion of women working in the different departments averaged about 1.4 per cent across all 13 cities in 2018, with city-specific values ranging from total

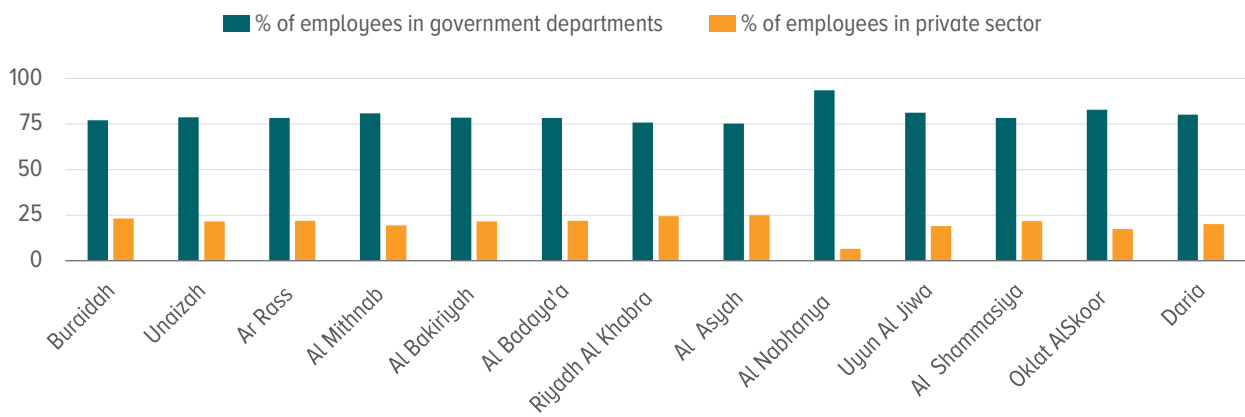
absence of female employees in Al Nabhanya and Daria to a high of only 4.6 per cent in Ar Rass city (see figure 3.2). The situation is even more dire in senior roles in the government departments. Only Buraidah and Unaizah had females in senior positions, which represented 0.9 per cent and 3.1 per cent of the total female employees in the government departments, respectively. All the other cities did not have any women in senior roles (those in grades 11 and above).

Figure 3.2 Percentage of female employees in government departments



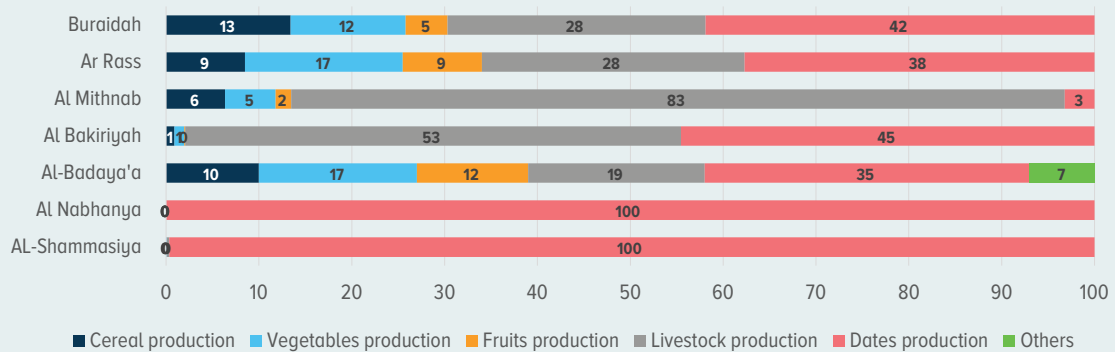
In terms of labour force distribution, the public sector is the biggest employer in all cities, with the total employees in government departments averaging about 79.7 per cent of the total employees (see figure 3.3).

Figure 3.3 Distribution of employment by sector



Box 3.2 Agriculture is a main land use and economic activity in Al-Qassim

ate production is the most dominant agricultural activity in Al-Qassim Region, followed by livestock. Other key produce includes vegetables, cereals and fruits. Buraidah, Ar Rass and Al Badaya'a have the greatest diversity of agricultural practices within the region, with at least four main agricultural activities. On the other hand, Al Nabhanya and Al-Shammasiya record the least, wherein dates account for the entire agricultural production sector. Livestock production is the most dominant practice in Al Mithnab and Al Bakiriyah, where associated activities account for 83 per cent and 53 per cent of the agricultural land uses, respectively.



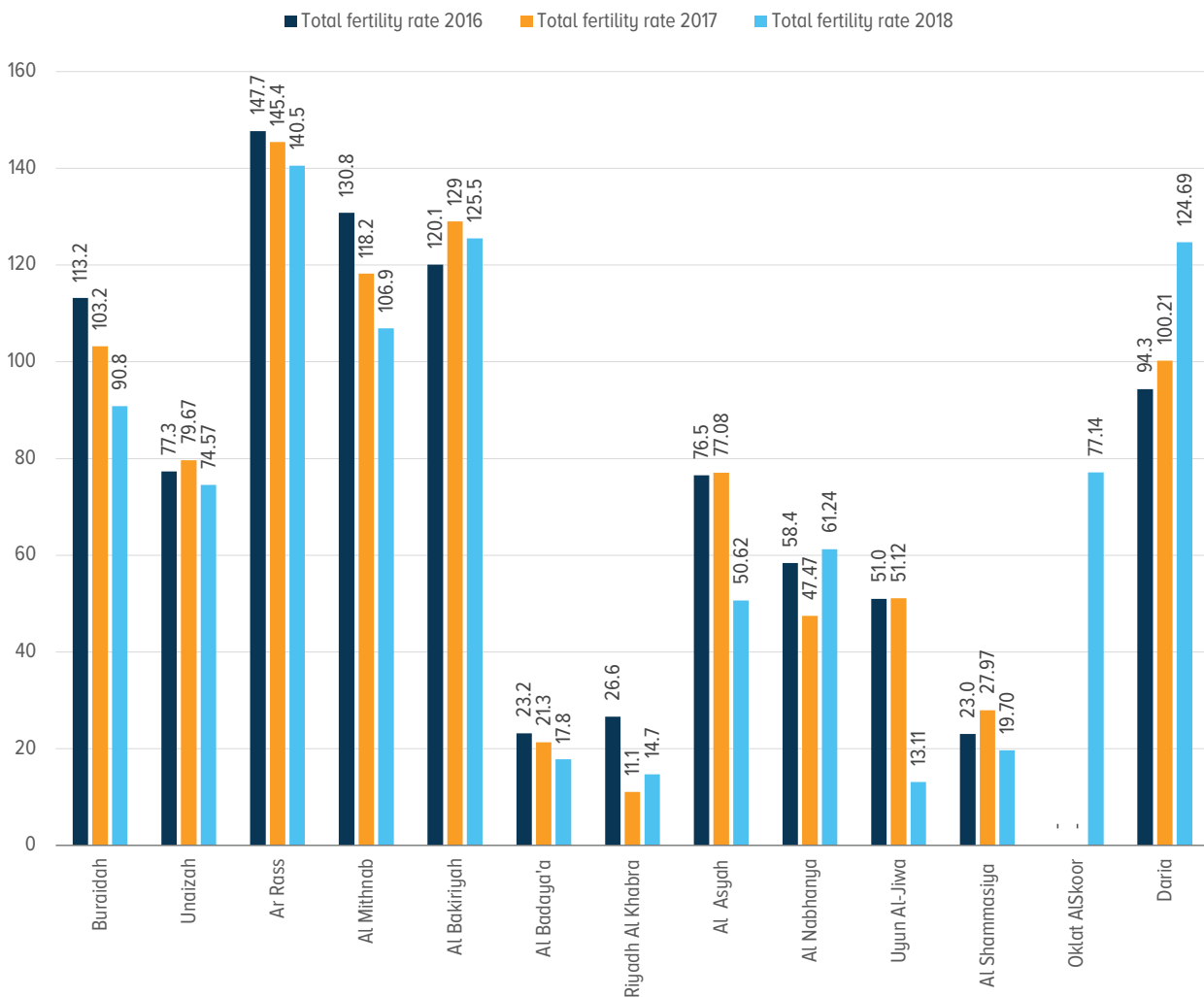
3.3 Health status and access to health services

The average life expectancy at birth in Al-Qassim's cities is 74.4 years, with females expected to live longer (75.7 years) than males (73.1). The region's average life expectancy is similar to that of the entire nation, which is estimated at 74.9 years split into 73.7 years for males and 76.5 years for females.⁵

Like other parts of the world and Saudi Arabia at large, cities in Al-Qassim are experiencing declining fertility rates, which could be closely associated with increasing education levels among women. The general fertility rate varies significantly across cities (see table 3.1), from a high of 140.5 live births in Ar Rass to a low

of 13.11 live births per 1,000 women aged 15–49 in Al-Shammasiya in 2018. Age at first marriage, a key determinant of fertility levels in many societies, has little variation among the cities. In general, women get married younger (between ages 20.8 and 22.8) than men (who get married between ages 25.6 and 28.2). See figure 3.4.

Figure 3.4 Fertility rates in Al-Qassim's cities



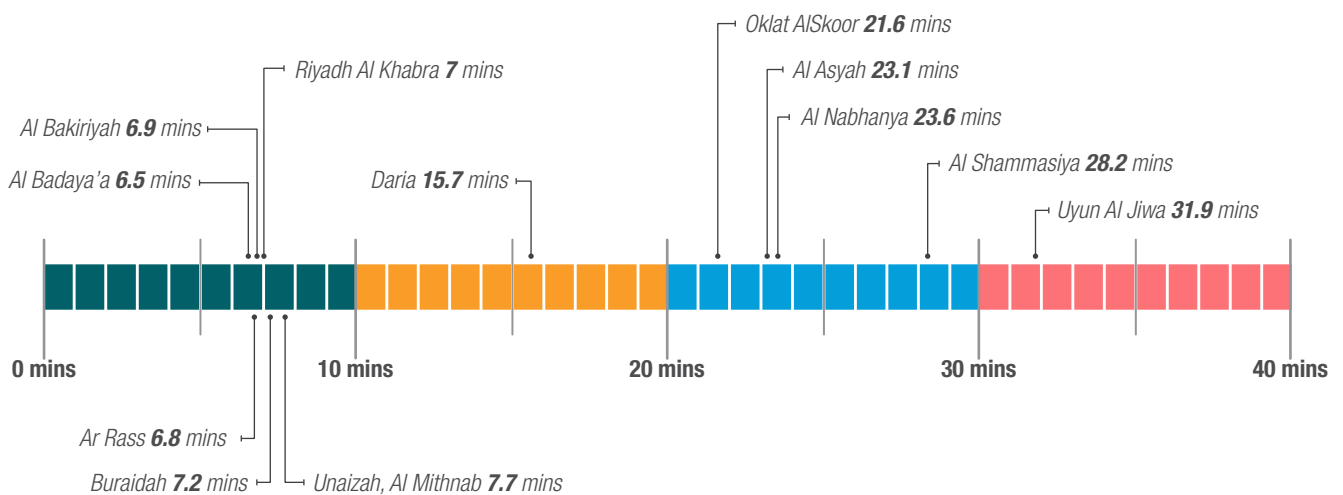
3.3.1 Cities in Al-Qassim perform well in the health sector

Multiple studies have established that there is a correlation between distance to health facilities and the quality of health for populations. For example, Kelly et al (2016) posit that the farther away a patient is from a health facility that they need to attend the worse their health outcomes (which could include survival rates, length of stay in hospital and non-attendance at follow-up).⁶ Different studies have, however, also identified that distance indicators do not give the overall picture of the health

sector and must be considered against other factors such as availability of the needed medical services, presence of adequate facilities and the quality of health care. The proximity to hospitals, for example, eases access to health care for all populations, while well-equipped hospitals ensure access to adequate and appropriate medical attention. Affordability of health care is another important factor, and one that significantly contributes to equity in access to health services.

In Al-Qassim’s cities, the average travel time to health services ranges from 6.5 minutes in Al Badaya’a to 31.9 minutes in Uyun Al Jiwa. Seven cities record a travel time of less than 8 minutes. Only Uyun Al Jiwa records a travel time of more than 30 minutes (see figure 3.5). Although there is no globally agreed standard, the 30-minute travel time to health care facilities has been used as a good benchmark,⁷ against which cities in Al-Qassim perform significantly well. As such, residents of Al-Qassim cities seem to be well served by health services.

Figure 3.5 Average travel time to health services



In addition to proximity to health facilities, adequate supply of hospital beds is vital for efficient access to hospital-based care. According to data from the Qassim Urban Observatory, availability of hospital beds varies greatly between cities in the region. They range from a low of 17 beds per 10,000 population in Al Badaya'a to a high of 62 beds per 10,000 in Oklat AlSkoor. Buraidah has about 26 hospital beds per 10,000 people. The values for cities

in Al-Qassim are on both sides of the nation's average of 22.3 beds per 10,000 people (2016 statistics),⁸ with five cities recording higher values than the national average (see table 3.1).

The doctor-population ratio also varies greatly between cities: from 0.8 doctors per 1,000 people in Al Shammasiya to 3.9 doctors per 1,000 people in Oklat AlSkoor. In

general, Al-Qassim scores quite well in its doctor-population ratio, with 12 of the 13 cities meeting the WHO recommended standard of one doctor for 1,000 people. Additionally, Al-Qassim's cities record high levels of skilled attendance at birth, with the recorded levels surpassing the global average of 90 per cent. Also, 9 of 13 cities recorded universal access to skilled birth attendance in 2018 (see table 3.1).

Table 3.1

Health indicators by city

	Low birth weights (No. of babies born with less than 2500 gram /1000 live births)	Hospital Beds/10,000 population	Doctors/ 1,000 population	Skilled doctor at delivery (%)
Buraidah	24.3	25.9	2.3	100.0
Unaizah	51.9	21.5	2.2	99.8
Ar Rass	75.9	21.9	3.2	100.0
Al Mithnab	65.8	32.7	3.5	100.0
Al Bakiriyah	80.4	35.1	3.6	100.0
Al Badaya'a	27.9	16.7	1.3	100.0
Riyadh Al-Khabra	37.7	17.7	2.6	100.0
Al Asyah	52.4	23.8	2.7	98.3
Al Nabhanya	46.5	56.8	3.7	100.0
Uyun Al Jiwa	25.0	22.5	3.2	100.0
Al Shammasiya	0.0	0.0*	0.7	100.0
Oklat AlSkoor	-	61.7	3.9	95.7
Daria	21.4	60.1	3.8	97.9

*there is no hospital in Al Shammasiya

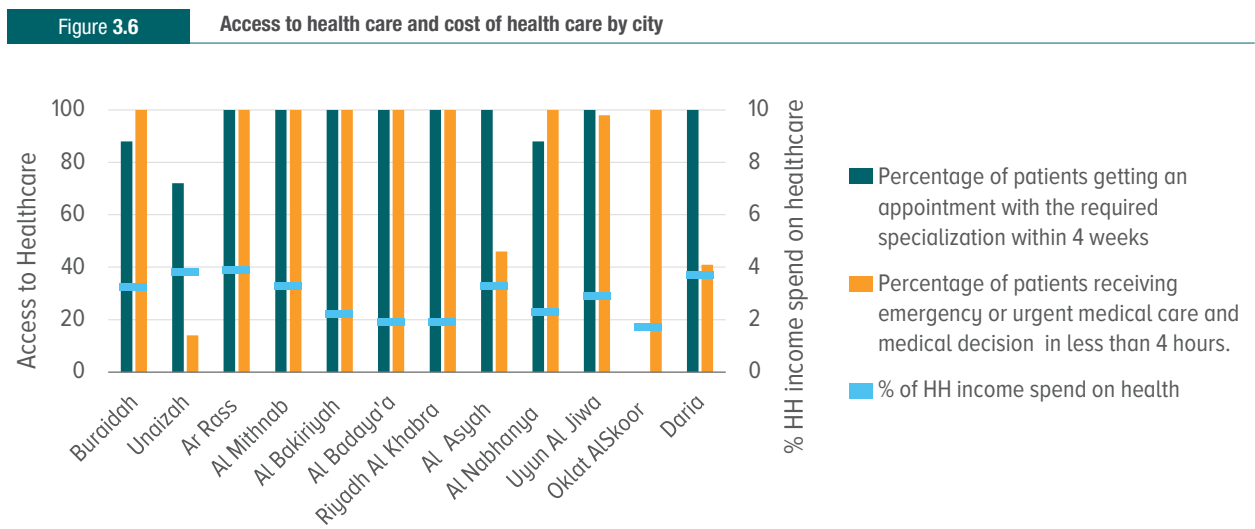
Overall, cities in Al-Qassim perform quite well in the health indicators, and in some cases even surpass the national performance. This can broadly be attributed to increasing investments in the sector by the Al-Qassim regional government as well as the national Government. At the national level, for example, the national Government has increasingly invested in the health sector over the last 20 years, with a cumulative positive effect on the quality of health care available in all regions. In 2018, for instance, 15 per cent of the national budgetary expenditure (SAR 146.5 billion - approximately USD 39.07 billion) was allocated to health services and social development.⁹ Within Al-Qassim, there has equally been significant investments in the health

sector, with the most recent efforts targeted at increasing the number of beds in childcare units. This investment, which had been in response to high infant mortality rates identified through data collected by the Qassim Urban Observatory, shows a direct link between locally generated data, and policy and investments. As a result of the investments in children’s health care in Al-Qassim, most hospitals in 12 of the 13 cities now have a specialized child treatment section.ⁱ⁾

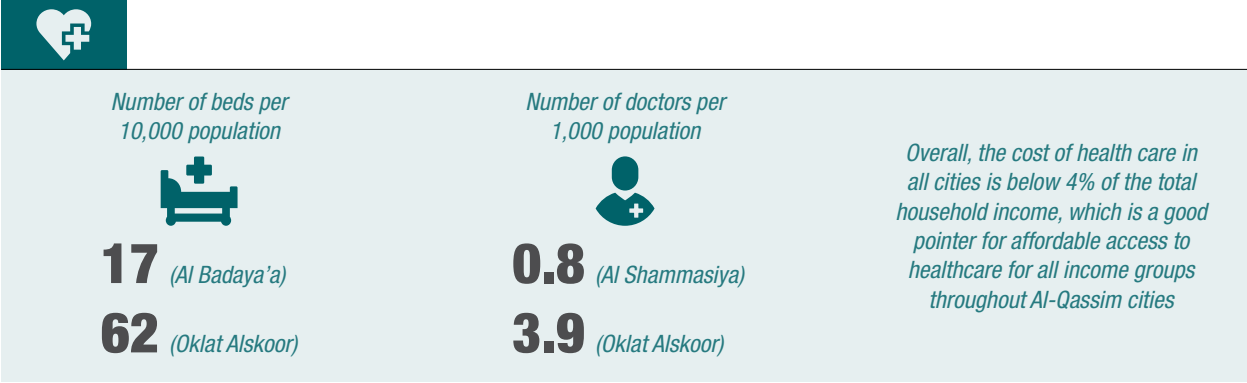
Equally, cities in Al-Qassim record a high proportion of patients receiving emergency medical and specialized care within the nationally recommended period. In 8 of 12 cities which have data on the indicator, all patients receive

emergency medical care within the nationally recommended period of four hours. In an equal number of cities, patients get an appointment with the required medical specialization within the nationally recommended period of 4 weeks (see figure 3.6). In both cases, Unaizah city scores the least, which combined with a low score in availability of specialized child treatment facilities points to a significant need for enhanced health care in the city.

Overall, the cost of health care in all cities is below 4 per cent of the total household income, which is a good pointer for affordable access to such care for all income groups throughout Al-Qassim’s cities (see figure 3.6).



i). This indicator is calculated by QUO as the percentage share of children’s hospitals to the total hospitals in each city; Al Sham-masiya city is not indicated in this indicator.



3.4 Al-Qassim's cities record high literacy levels, perform well in education indicators

Most cities in Al-Qassim record higher adult and youth literacy rates than the national and global averages. In 2018, the adult literacy rate in the region's 13 main cities ranged from 92.3 per cent in Daria city to 99 per cent in Al Mithnab and Riyadh Al-Khabra. The adult literacy rate in Buraidah was 95.9 per cent, with a slightly higher value (96.2 per cent) recorded among Saudis. Only two cities, Oklat Alskoor and Daria,

recorded total literacy levels lower than the national average of 95.3 per cent,¹⁰ and none of the cities was below the global average of 86.3 per cent.¹¹

Youth literacy rates are higher than adult literacy rates in all cities in Al-Qassim, with about half of the cities recording universal youth literacy (for persons aged 15–24 years). With

the exception of Oklat Alskoor, adult males were slightly more literate than adult females in the main cities of Al-Qassim, which is consistent with the national and global trends as shown in figure 3.7. A similar trend was observed in youth literacy rates, although in the cities of Oklat Alskoor, Buraidah and Al Bakiriyah young females were more literate than their male counterparts.

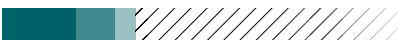
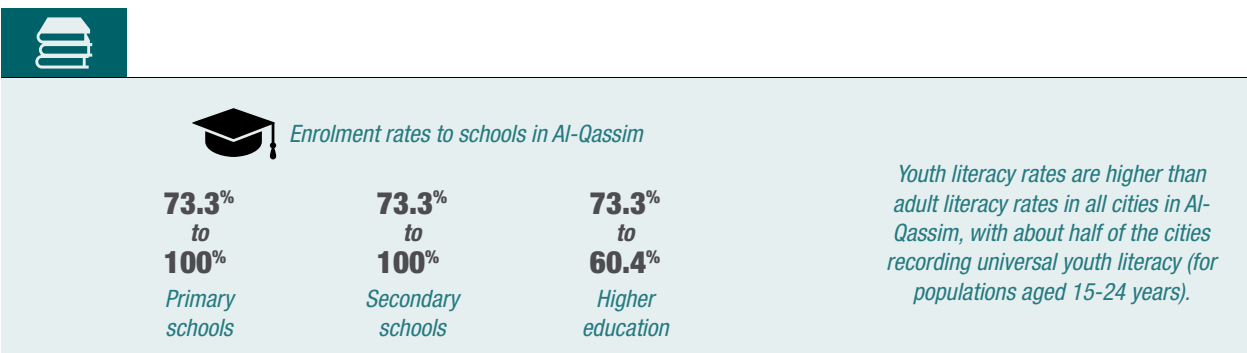
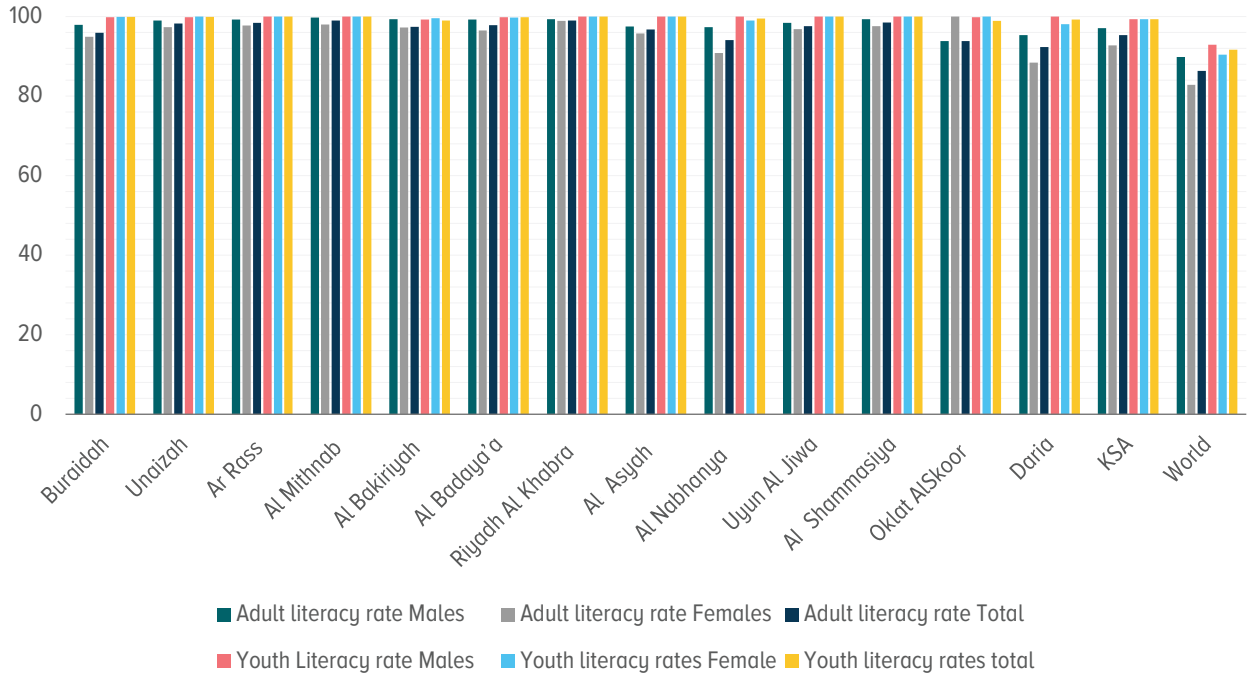


Figure 3.7 Literacy levels in Al-Qassim cities



The high literacy levels recorded in the region's cities can be attributed to several factors, some of which include the school enrolment rates, mean years of schooling and the student-teacher ratio.

In 2018, the net enrolment rate in primary and secondary schools in Saudi Arabia was 94.6 per cent and 96.4 per cent, respectively.¹² During

the same year, cities in Al-Qassim recorded rates ranging from 73.3 to 100 per cent in primary school, 88.1 to 100 per cent in secondary school and 43.2 to 60.4 per cent for higher education (see table 3.2). For most cities, secondary school enrolment was higher than primary school, which was consistent with the national enrolment trends. Of the 10 cities with data on primary

school enrolment rates, 5 fell below the national average and the other 5 were above. Only 3 of the 10 cities recorded universal primary school enrolment. On the other hand, 6 of the 11 cities with data on secondary school enrolment fell below the national enrolment rate at that level, while the other 5 cities recorded universal enrolment at the same level.

Table 3.2

Education indicators in Al-Qassim's cities

	Primary school enrollment rate	Secondary school enrollment rate	Higher education enrollment rate Total	Students per Teacher in primary school	Students per Teacher in secondary school	Mean years of schooling	School children per class room in primary school	School children per Class room in secondary school
Buraidah	95.8	94.1	46.3	11.1	9.2	11.3	21.0	24.9
Unaizah	95.1	100.0	46.2	13.7	12.8	12.5	20.5	26.4
Ar Rass	100.0	100.0	59.6	9.0	8.1	12.4	15.7	24.1
Al Mithnab	83.6	89.1	56.4	8.8	7.5	12.7	19.2	21.8
Al Bakiriyah	100.0	100.0	58.5	5.9	6.1	12.4	15.7	27.3
Al Badaya'a	86.8	89.1	60.3	8.3	7.7	11.6	17.9	-
Riyadh Al Khabra	89.9	88.1	60.4	8.0	10.0	12.3	23.6	27.4
Al Asyah	-	90.7	44.4	7.4	6.6	11.9	13.6	21.6
Al Nabhanya	73.3	94.1	49.6	8.0	9.6	10.7	17.6	27.4
Uyun Al Jiwa	100.0	100.0	42.9	10.0	10.9	12.1	22.1	30.8
Al Shammasiya	-	-	49.5	6.2	6.9	11.7	16.4	16.5
Oklat AlSkoor	-	-	46.7	9.7	9.5	10.2	11.7	19.6
Daria	81.4	100.0	43.2	5.9	7.9	10.5	13.9	27.5
KSA (2018 data)	94.6	96.4		13.8	11.5	10.2 (2017)		

The student-teacher ratio is a good indicator of the amount of attention each student is given by the teachers, and in turn the quality of education received. In Saudi Arabia, the average pupil-teacher ratio is 13.8 and 11.5 in primary and secondary schools, respectively.¹³ That is lower than the global average of 23.5 and 17.0 students per teacher for primary and secondary schools, respectively.¹⁴ In Al-Qassim, the situation is even much better, with the recorded ratios being lower than the national average in all cities except Unaizah where the ratio is slightly higher for secondary schools. Al Bakiriyah is the best performing city in terms of student-teacher ratio, with values of 5.9 and 6.1 for primary and secondary schools, respectively. Overall, all cities in Al-Qassim perform highly, with the recorded values being about three times lower than the recommended 40 students per teacher. This is a good

indicator of high-quality education and better performance of students when combined with small class sizes of below 25 pupils in primary schools and 31 students in secondary schools, pointing to an education system where students get the needed attention from teachers.

Cities in Al-Qassim also perform significantly well in the duration of schooling as captured by mean years of schooling. In 2018, the mean ranged from 10.2 years in Oklat AlSkoor city to 12.7 years in Al Mithnab. In all cities, the mean years of schooling was higher than the national average of 10.23 years, and is comparable to reported mean years in the best performing countries such as Germany (14.15 years), Estonia (14), the United States (13.8), Latvia (13.7), the United Kingdom and Northern Ireland (13.2), Denmark (12.8) and Australia

(12.5).¹⁵ Cumulatively, a combination of declining fertility and mortality rates, high youth and adult literacy rates, high performance in the different education indicators, and a largely youthful population in most of Al-Qassim's cities point towards a demographic dividend in the region, which will significantly influence the region's future productivity. While the current picture is one of which the youth are struggling for lack of job opportunities, cities in Al-Qassim enjoy a unique benefit from its youthful population, for whom they need to create new opportunities if they seek to become more prosperous. An area where the cities could utilize the highly literate and youthful population could be in the manufacturing and industrial industries, wherein the cities could easily attract foreign investments due to a highly educated potential workforce.

Overall, all cities in Al-Qassim perform highly, with the recorded values being about 3 times lower than the recommended 40 students per teacher. This is a good indicator of high quality education and better performance of students when combined with small class sizes of below 25 pupils in primary schools and 31 students in secondary schools, pointing to an education system where students get the needed attention from teachers.

Cities in Al-Qassim also perform significantly well in the duration of schooling as captured by mean years of schooling. In 2018, the mean years of schooling ranged from 10.2 years in Oklat AlSkoor city to 12.7 years in Al Mithnab. In all cities, the mean years of schooling was higher than the national average of 10.23 years, and is comparable to reported mean years of schooling in the best performing countries such as Germany (14.15 years), Estonia (14), USA (13.8), Latvia (13.7), United Kingdom and Northern Ireland (13.2), Denmark (12.8) and Australia (12.5).



3.5 Cities in Al-Qassim enjoy adequate housing

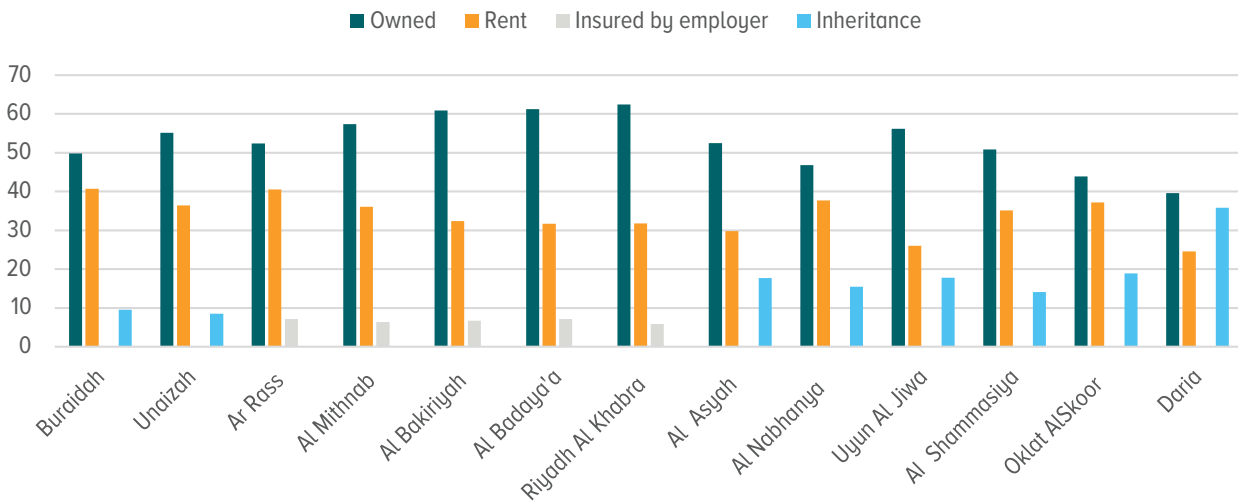
The quality of housing, the amount of space available per person within a household as well as the nature of housing tenure (owned vs rented) are important indicators of the quality of life for households. Congested households lack adequate living comfort and contribute to increased risks of respiratory diseases, especially where cooking and living functions are within the same space. People who own their own homes

are likely to make improvements for greater comfort than those in rental housing. Additionally, homeowners have more disposal income since mortgage costs are not a consideration.

Overall, cities in Al-Qassim perform significantly well in the housing sector. In all cities, most households live in their own homes, most of which are single dwelling structures.

Renting, inheritance and employer-insured housing are the other common housing tenure modes in Al-Qassim's cities (see figure 3.8). More than 90 per cent of the houses in the cities are considered as permanent structures that can last for 20 years when maintained. This implies that for the high proportion of people who own their houses, homeownership is guaranteed in the medium to long terms.

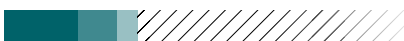
Figure 3.8 Type of housing tenure in Al-Qassim's cities



In addition to the high level of homeownership, all cities in Al-Qassim enjoy a high allocation of housing space per person, with the floor area per person averaging about 60 m². This, when coupled with a room occupancy rate that averages only about 0.8 persons per room, indicates that all cities in the

region have sufficient living area by UN-Habitat standards. Considering rental price, the median annual rent for housing is less than 20 per cent of the median annual household income in all cities in the region which is below the 30 per cent benchmark beyond which housing is unaffordable.¹⁶

The median annual rent for housing is less than 20% of the median annual household income in all cities in Al-Qassim, which is below the 30% benchmark beyond which housing is unaffordable.



Cities in Al-Qassim also enjoy a moderate-to-high housing production rate, which is a ratio of the number of new houses to the number of new households in a given year (see table 3.3). The high homeownership rate and high housing production rate are likely to be contributing factors to the

declining rental values in the region, wherein an oversupply of housing and a reduction in rental-housing demand could have a negative effect on the long-term investments in the cities. Equally, these two factors could be contributing to the

prevailing housing occupancy in some cities. For example, Riyadh Al Khabra, Al Badaya'a and Buraidah, which record the highest housing production rate also have the highest percentage of vacant houses as shown in table 3.3.

Table 3.3 Housing indicators in Al-Qassim Cities (2018)

	Floor area per person (m ² per person)	Room occupancy rate (persons per room)	Housing production rate to household formation (new houses per new households)	Variation in rental value (2017 – 2018) (%)	% of permanent Structures	House rent to income ratio	% vacant housing units (2018)
Buraidah	60.0	1.1	0.9	-3.9	99.9	13.2	3
Unaizah	65.4	0.8	0.7	-2.1	97.23	15.6	-
Ar Rass	49.4	0.7	0.6	-0.8	99.6	14.5	0.77
Al Mithnab	55.6	0.6	0.7	2.3	96.9	11.5	-
Al Bakiriyah	57.7	0.8	0.7	-2.0	97.1	11.8	2.81
Al Badaya'a	57.9	0.7	1.0	-2.2	99.6	12.3	2.99
Riyadh Al Khabra	56.2	0.7	1.9	-0.2	98.2	12.5	3.38
Al Asyah	65.8	0.7	0.3	-3.9	92.3	13.4	-
Al Nabhanya	65.6	0.8	-	-0.8	-	15.6	-
Uyun Al Jiwa	62.7	0.8	0.5	-1.2	-	17.4	-
Al Shammasiya	64.7	0.8	1.1	-1.1	-	14.6	-
Oklat AlSkoor	59.3	0.8	0.3	-1.2	99.4	15.0	-
Daria	58.7	0.8	-	-2.1	99.6	13.5	-

For some cities, such as Buraidah, the housing market seems to be on a self-correcting trend, where a decline in housing production between 2016 and 2018 resulted in a reduction in the share of vacant housing. The situation is, however, not the same in the smaller cities of Al Badaya'a and Riyadh Al Khabra where, despite a significant reduction in housing

production during the 2016–2018 period, they still recorded an increase in vacant housing (see table 3.4). This could be attributed to other factors such as the housing tenure type in which an increase in employer guaranteed housing in Al Badaya'a and Riyadh Al Khabra could have an overall negative effect on demand for rental housing.

Riyadh Al Khabra, Al Badaya'a and Buraidah cities which record the highest housing production rate also have the highest percentage of vacant houses.

Table 3.4

Housing production and occupancy trends in select cities

	Buraidah			Ar Rass			Al Mithnab			Al Bakiriyah			Al Badaya'a			Riyadh Al Khabra		
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
Housing Production per 1000 population	15.3	15.6	12	18.8	18.2	12.3	16.2	19.5	10.1	-	39.3	34.3	35	24.5	14.4	36.4	27.5	16
% Vacant housing units	4.51	4.05	3	1.48	1.14	0.77	2.46	2.18	-	3.73	3.46	2.81	1.86	1.93	2.99	2.44	2.38	3.38

The good performance in housing indicators in Al-Qassim's cities points to adequate housing throughout the region, which is an important prerequisite for increased productivity, high quality of life and a healthy population.

3.6 Al-Qassim's cities depict huge variations in access to basic services

Access to basic services such as water, sanitation and reliable electricity supply are key determinants of the quality of life of populations as well as their productivity. Urban residents who have access to water within the household are, for example, likely to spend more time in economically productive activities than those who must resort to vendors or sources very far away. Equally, members of a household who have reliable access to electricity can extend their work hours into the night, unlike households without.

Provision of water, sanitation and electricity (the basic services) varies significantly across Al-Qassim's cities. All 13 cities record universal access to electricity, while sanitation is the least accessible service. The share of households connected to water varies widely, from total lack of piped water in the smaller cities such as Oklat Alskoor and Daria to

universal connectivity in Al Mithnab (see figure 3.9). Despite these huge variations in access to piped water, there is no acute shortage in access to water in any of the cities since all households are able to access potable water within 200 metres from their home, which meets the globally recommended standards. In total, 12 of the 13 cities depend on rainwater which is stored in tanks, with cities such as Daria relying on this source for most of their water needs (see box 3.4). This points to a paradoxical situation; a water-rich region where not all households have access to the resource in their premises and must spend a significant amount of time accessing supplies. Time-consuming searches for water have a negative impact on the overall quality of life for residents of most of the region's cities.

Similarly, household connectivity to sanitation services (main sewer)

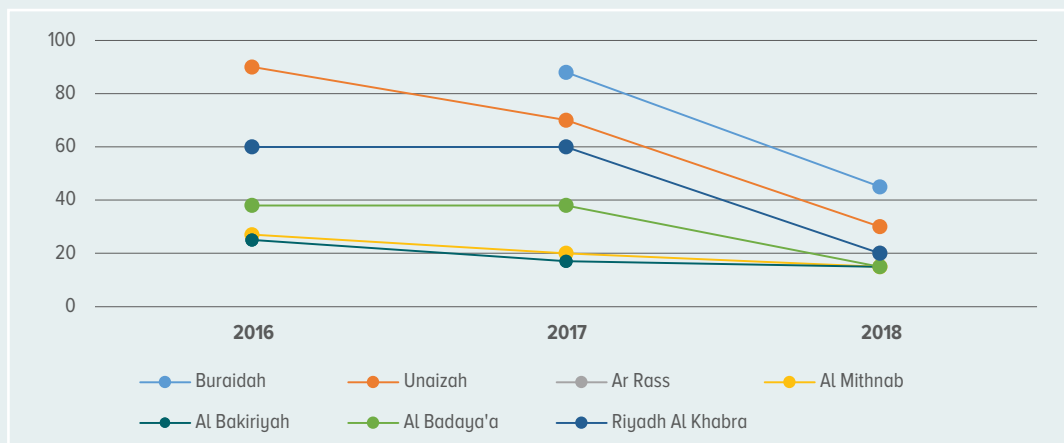
varies hugely across the region's cities, and ranges from total lack of connectivity in six cities to a maximum connectivity of 98.6 per cent in Al Mithnab city (see figure 3.9). In Buraidah, only 73.8 per cent of the households are connected to sanitation services. However, the low levels of connectivity to sanitation (sewer) services do not imply a total lack thereof, as most households without connection to main sewer lines rely on alternatives, which consist mostly of septic tanks. The recorded levels of access to sanitation services in Al-Qassim mirrors the overall situation in the nation in 2017, where only 56 per cent of the population had access to improved sanitation facilities (including shared ones) which were connected to a sewer network. This compared with 44 per cent who relied on septic tanks and less than 1 per cent who relied on latrines and other facilities.¹⁷

BOX 3.3 Increasing service delivery efficiency: the panacea for Al-Qassim's universal urban access to basic services?

The Urban Development Authority in Al-Qassim regional government and individual municipal authorities recognize the role that access to basic services plays in enhancing the quality of life for its citizens. An important step towards achieving universal access to such services is reducing the number of days in which the services are delivered.

Over the last five years, the regional government and individual municipalities have been working at improving the delivery of basic services, particularly with regard to the time taken to delivery water and sanitation to users. The result of multilevel interventions has been, in most cities between 2016 and 2018), the halving in number of days required to deliver water and sanitation. This increased efficiency in service delivery is likely to enhance the quality of life.

Days to deliver sanitation services



Days to deliver water services

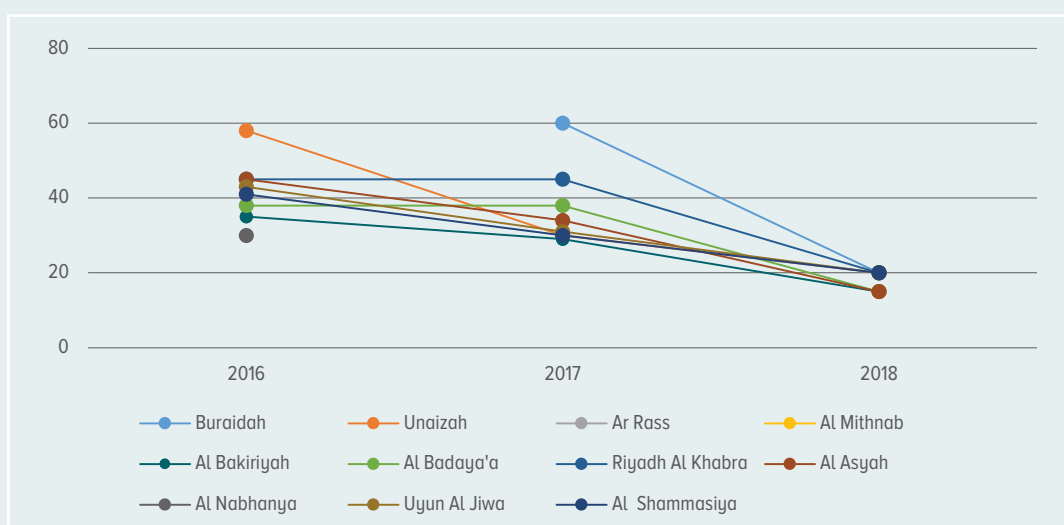
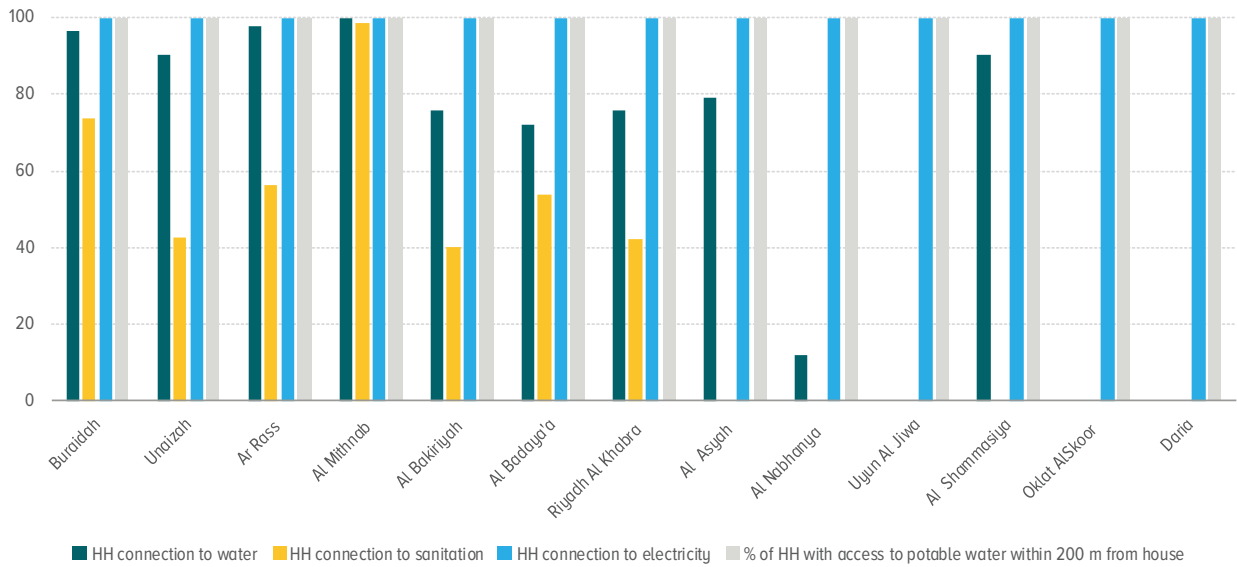




Figure 3.9

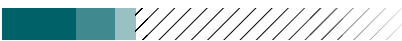
Household access to basic services (water, electricity and sanitation)



* Throughout 2019 and the first half of 2020, most cities in Al-Qassim Region recorded increased investment in expanding the water and sewerage networks, with a positive impact on enhanced connectivity to households.



Shamsiya Museum, Al-Shammasiya © Qassim Urban Observatory



3.6.1 Cities in Al-Qassim overconsume water, overproduce waste

The level of water consumption in most of Al-Qassim's cities is significantly high. The daily water usage per person per day ranges from 139 litres to 371.6 litres, which closely compares with trends in developed countries. This consumption is, however, higher than the estimated basic daily requirements of 50–100 litres/person/day,¹⁸ implying an overconsumption of water. In addition to the high-water consumption, most cities in Al-Qassim record a very high rate of water wastage, ranging from 9.5 per cent to 27.8 per cent of the total annual water produced (see table 3.5).

While Al-Qassim is a water-rich region, compared with the other regions in KSA, the prevailing water consumption and wastage trends point to an over extraction of the resource. If uncorrected in the short term the situation would significantly and negatively affect future water supply throughout the region. A good alternative for Al-Qassim's cities would be to put in place structures to improve wastewater treatment to levels equivalent to, or higher than those currently reported in Buraidah.

Box 3.4

Al-Qassim's high precipitation contributes to reliance on rainwater for city water supply

Twelve of the 13 main cities in Al-Qassim rely on rainwater for a part of their daily needs. In Daria city, rain is the most important source of water, with about 62 per cent of the population relying on this source. Associated with the high level of use of rainwater is a relatively high proportion of the population across all cities that rely on storage tanks for their water source. Such is the case in Daria, where about 80 per cent of the population gets its drinking water from storage tanks. Despite the highwater consumption and wastage trends reported in Al-Qassim's cities, the region's high precipitation can be harvested to increase water supply while preserving underground reserves.

	Ratio of population served by rainwater drainage projects	Drinking water sources			
		Public network	Bottled water	Tanks	Other
Buraidah	13	75.7	11.2	12.9	
Unaizah	13	44.4	15.5	8.3	
Ar Rass	35	64.5	17.2	18.1	0.2
Al Mithnab	25.1	69.8	7.1	23.1	
Al Bakiriyah	39.5	69.2	14.8	15.8	0.2
Al Badaya'a	18.8	71	9.7	19.3	
Riyadh Al Khabra		77.2	8.4	14.2	0.2
Al Asyah	33.04	52.2	13	3.8	31
Al Nabhanya	18	67.3		11.8	20.9
Uyun Al Jiwa	25.2	72.8	0.8	1.7	24.7
Al Shammasiya	1.2	65.1	0.8	7.1	27
Oklat AlSkoor	29.8		18.3	81.7	
Daria	61.7		19.4	79.9	0.7

The waste generation trends in these cities follow a similar one to those reported for water usage, in which the cities generate high amounts of waste. In 2018, waste generation in these cities ranged from 0.21 tons/person/year in Al-Asyah to 0.7 tons/person/year in Al Bakiriyah. Most cities exceeded the global average of 0.26 tons/person/year¹⁹ (see table 3.5).

However, the waste generation trends fell within the global margins of 0.039 to 1.6 tons of waste/person/year.²⁰ The waste situation in Al-Qassim's cities is significantly worsened by the prevailing waste management modes, wherein 6 of 12 cities dispose all their solid waste by burying. For the other six cities which adopt some form of recycling, the volume of recycled waste is too low compared to the actual volume of waste produced (see table 3.5).

Collectively, the waste generation and disposal modes in all the region's cities pose a major environmental challenge which should be attended to urgently. The high rate of solid waste collection, which exceeds 93 per cent in all cities, implies that most of the waste in each city is centrally managed, which presents a major opportunity for recycling.

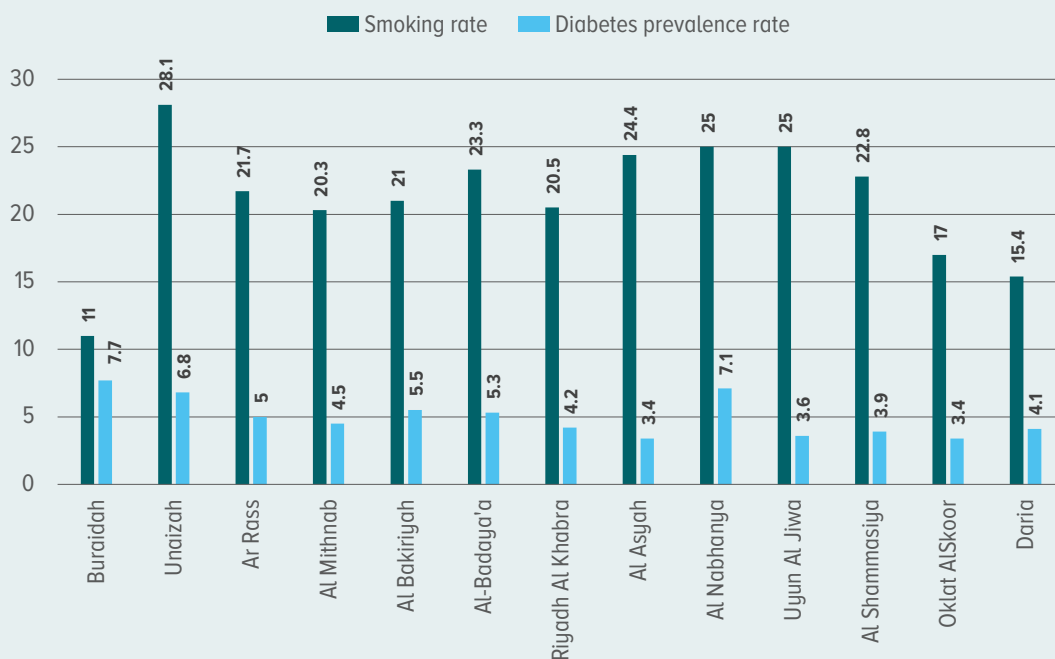
Table 3.5

Water consumption and waste management trends in Al-Qassim's cities

	Water consumption (liters/person/day)	Solid waste generated (tonnes/person/year)	Volume of solid waste by disposal method (%)		Annual wastage of water (%)	Share of household waste collected (%)	% of wastewater treated
			Burying	Recycling			
Buraidah	269.3	0.42	92.6	7.4	10	96.7	94.6
Unaizah	254.9	0.37	97.5	2.5	27.8	98.1	0.887
Ar Rass	262.8	0.48	95	5	15.5	98.4	75.4
Al Mithnab	154	0.41	96.4	3.6	21.9	99.1	53.8
Al Bakiriyah	210.5	0.7	100		10	99.6	
Al Badaya'a	139.3	0.59	99	1	18.5	98.4	
Riyadh Al Khabra	-	0.55	99.9	0.1	9.5	99.3	
Al Asyah	371.6	0.21	100		16.5	98	
Al Nabhanya	319.6	0.57	100		10	99.4	
Uyun Al Jiwa	-	0.58	100		27.8	99.6	
Al Shammasiya	266	0.4	100		9.9	99.6	
Oklat AlSkoor	210	0.34	100		-	93.3	
Daria		0.3				97.3	

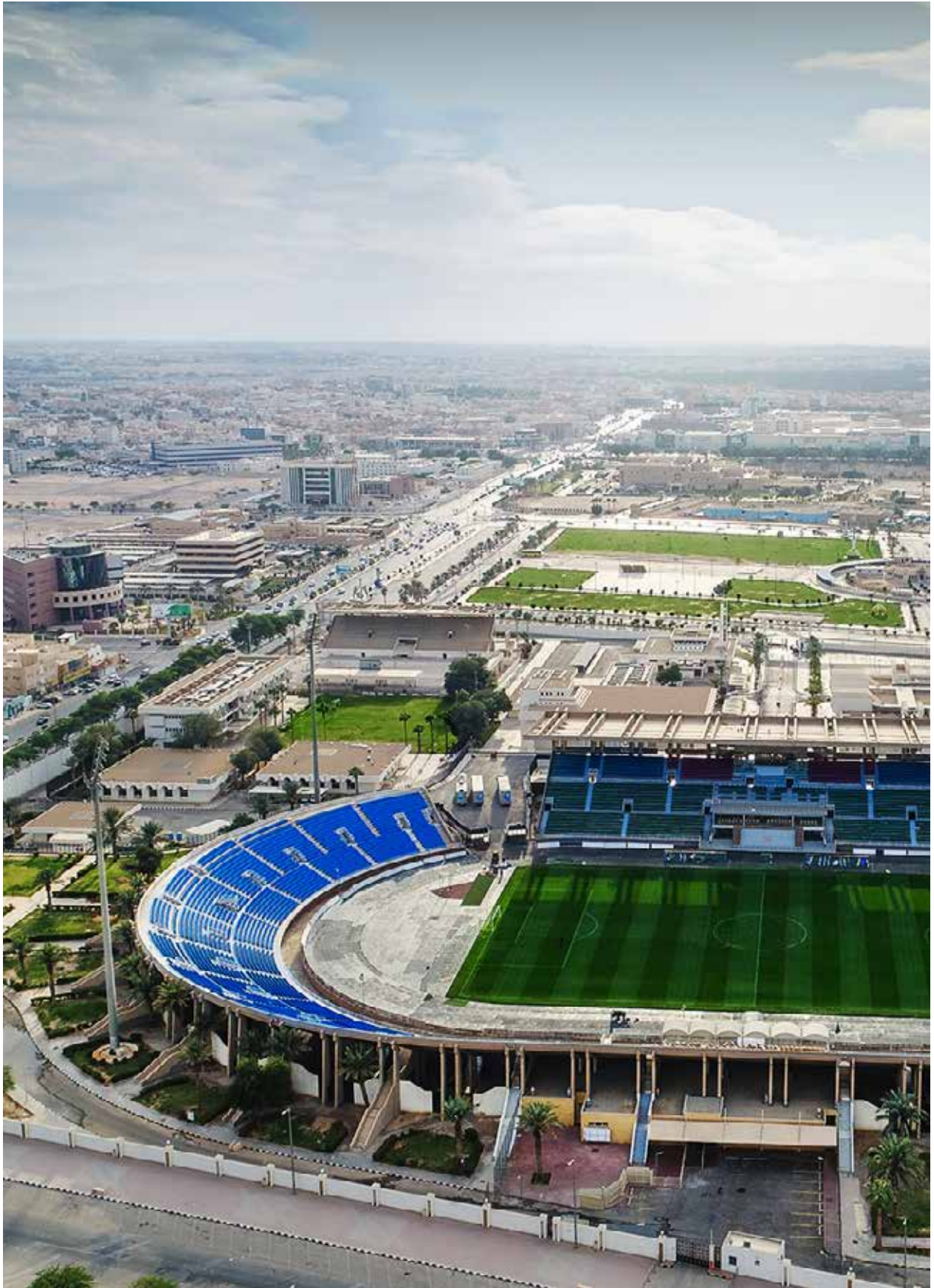
BOX 3.5**Lifestyle and disease prevalence increases risk of respiratory diseases such as COVID-19 in Al-Qassim's cities**

In the era of COVID-19, more than one fifth of the population in Al-Qassim's cities is at a high risk of experiencing severe impacts from the pandemic and other related respiratory diseases. By considering smoking rate only, for example, nine of the 13 main cities in Al-Qassim record a higher smoking rate than the 2017 global average of 20.49,²¹ which implies higher COVID-19 risks. Other factors that increase the risks of coronavirus and other associated infections include a moderate to high diabetes prevalence that ranges from 3.4 per cent in Oklat Alskoor to 7.7 per cent in Buraidah (against a global average reported at 8.5 per cent in 2014).²²

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CHAPTER 4

Governance for prosperity: Experiences of Al-Qassim's cities



Riyadh Al Khabra Municipal building © Qassim Urban Observatory

4.1 Introduction

Urban governance is one of the most important determinants of a city's efficiency, its prospects of becoming prosperous, the level of prosperity it attains, as well as the sustainability of its prosperity. Urban governance has multiple components which operate at different scales and span from leadership, urban administration and management to citizen engagement and participation. It is both a mechanism of interconnected components and a process that ensures different parts of a city operate in synchrony. Urban governance requires cities to formulate urban development and economic plans, and guides their implementation and enforcement; ensures that all urban dwellers and actors are involved; makes deliberate efforts to distribute growth and give opportunities to all urban residents and actors; and ensures that the city is attractive to investors, workers and

residents. Where good governance is practiced, city dwellers participate in decision-making processes and develop a sense of belonging which makes them responsible residents who care for and promote their city.

The performance of a city in urban governance can be measured against the effectiveness of its leadership systems, the extent to which the prevailing management structures promote equity among its citizens, the level of public engagement and participation, as well as the measures put in place to ensure accountability among different actors. The most commonly used indicators to measure urban governance include those on the existence of urban laws and legislation; revenue collection, allocation and distribution across sectors; multi-stakeholder engagement in decision-making

and governance processes; citizen participation in political processes; measures to reduce wastage of city resources (corruption reduction and control); and efficiency of the urban management processes (adherence to plans, rules and regulations).

This chapter gives an overview of the urban governance structure in Al-Qassim Region and how this has shaped or is likely to shape the performance of individual cities towards prosperity. Based on data produced by the Qassim Urban Observatory, the chapter also unpacks how each city performs against three indicators; 1) budgeting and resource allocation, 2) citizen engagement in the decision-making processes and 3) resource allocation and distribution, and how these influence the local urban development trends.



4.2 The urban governance system in Al-Qassim's cities make it is easy to start a business

The World Bank, through its ease of doing business annual report assesses how easy it is to do business in different countries based on 11 indicators: the number of days needed to start a business, the procedures for dealing with construction permits, ease of connection to electricity, registering property, getting credit, measures put in place to protect minority investors, effectiveness of paying taxes, trading across borders, enforcing contracts, resolving insolvency, and labour market regulation. The interactions between the different indicators collectively give a good picture of what is happening in each city or country.

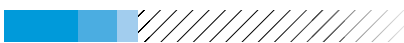
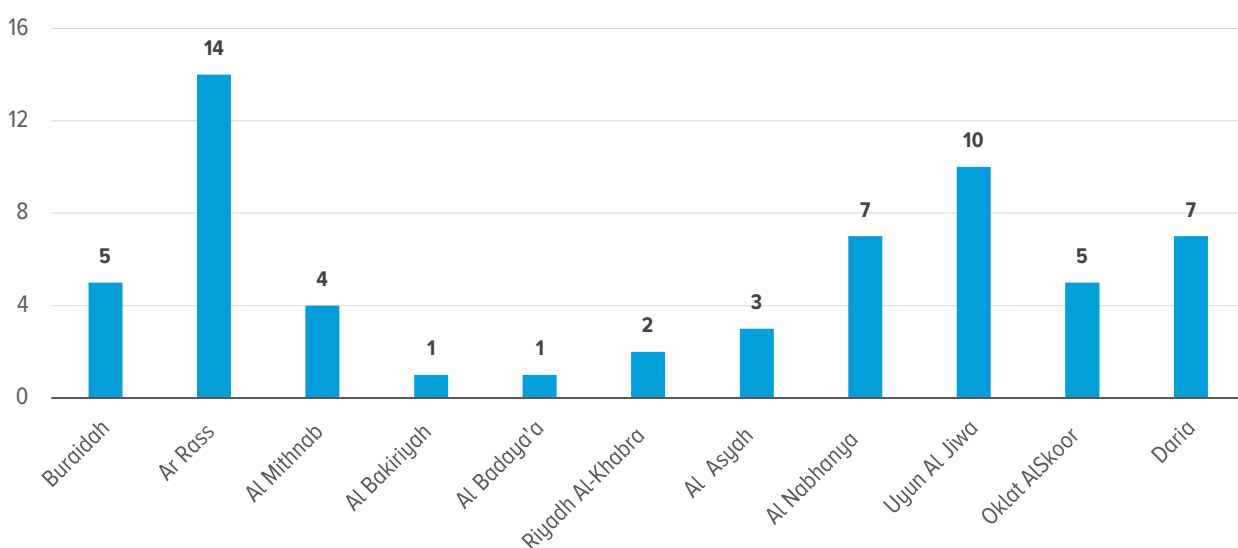
“Doing Business advocates for both regulatory quality and efficiency. It is important to have effective rules in place that are easy to follow and understand. To realize economic gains, reduce corruption and encourage SMEs to flourish, unnecessary red tape should be eliminated. However, specific safeguards must be put in place to ensure high-quality business regulatory processes; efficiency alone is not enough for regulation to function well. What use is it when one can transfer property in just a few days and at a low cost, but the property registry contains unreliable information with incomplete geographic coverage?”

- World Bank Group, 2019¹

While it is not possible to access the ease of doing business in cities in Al-Qassim using all 11 World Bank indicators, the number of days required to start a business in the region's 13 cities is lower than the national average of 17.8 days and the global one of 20 days.² The worst performing cities in Al-Qassim are Ar Rass and Uyun Al Jiwa, where 14 and 10 days are required, respectively, to open a business (see figure 4.1).

The few days required to open a business in Al-Qassim's cities is a good thing and indicates a simplified regulatory environment for entry into business. This factor has been proven to affect a wide range of economic outcomes positively, such as minimum capital, productivity, growth, employment. The factor has also reduced informality and corruption levels.³

Figure 4.1 Number of days to start a business in Al-Qassim



4.3 Al-Qassim's cities rely overly on national revenues for their budgets; invest very little on capital expenditure

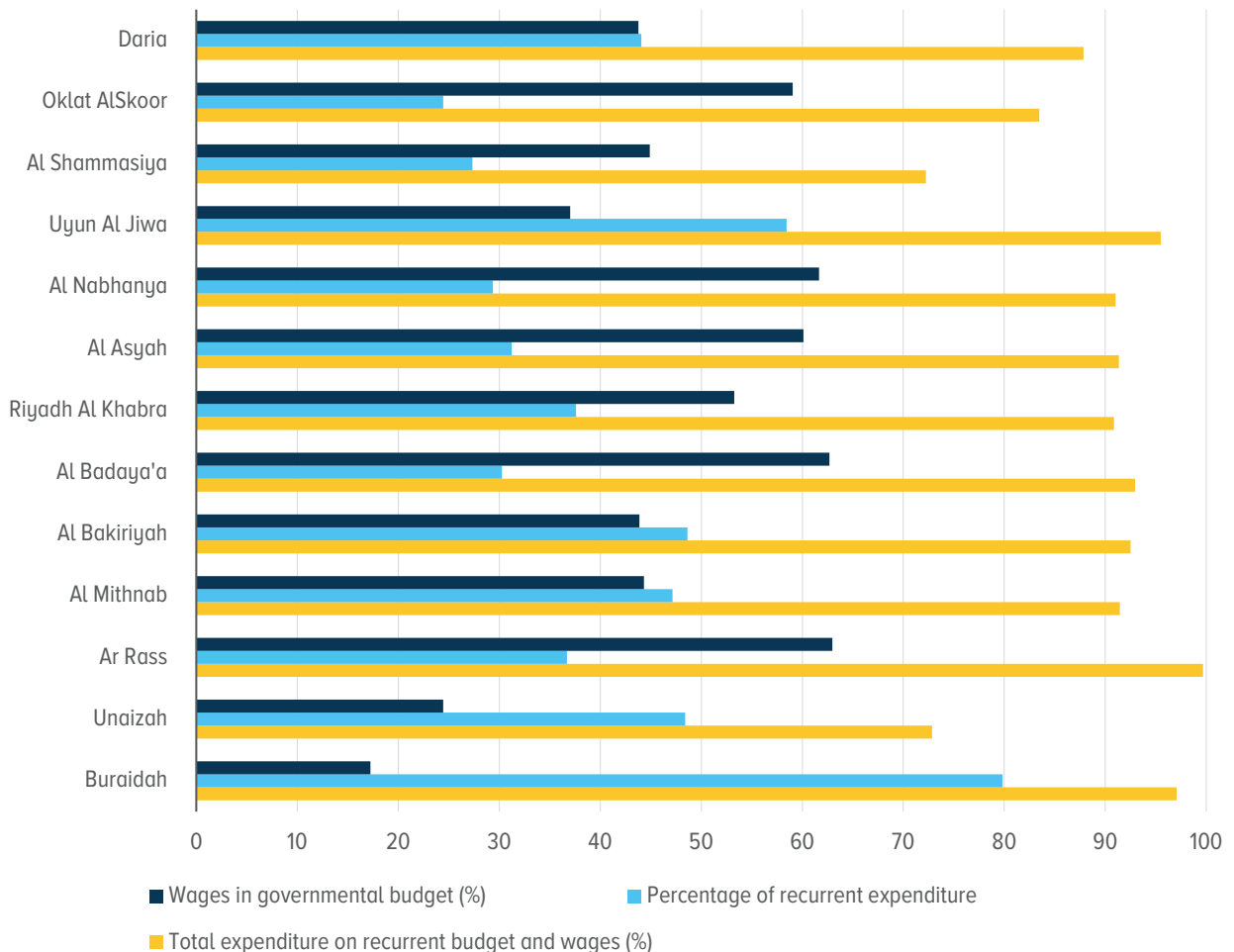
A good indicator of urban governance is how independent cities collect their revenues and run their own budgets, as well as the share of budgets spent on capital expenditure. A city that relies heavily on the central government is likely to be less autonomous to make decisions that respond to its needs and those of its residents, while a city which spends most of its budget

on recurrent expenditure is less likely to put in place the required infrastructural and social investments to accelerate its progress towards prosperity.

Most cities in Al-Qassim perform very poorly in both indicators, which is a major impediment to their accelerated growth and sustainability

in the long term. Other than Unaizah and Al Shammasiya which spent about 72 per cent of all their revenue in 2018 on either wages or recurrent expenditure, all the other cities spent upward 80 per cent of their income on the two items (see figure 4.2). In 2018, Buraidah, the regional capital, spent about 97 per cent of its income on wages and recurrent expenditure.

Figure 4.2 Expenditure on wages and recurrent expenditure in Al-Qassim





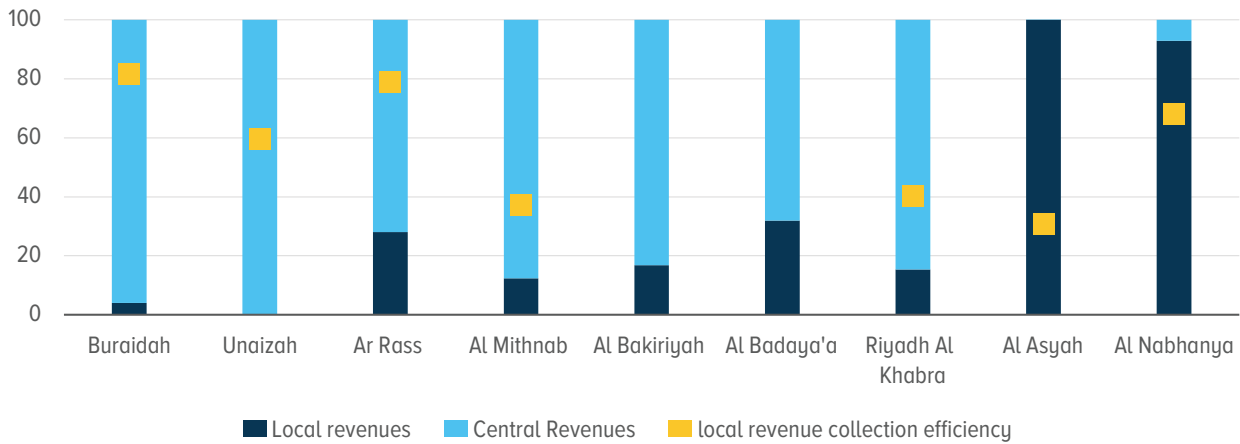
In Al-Qassim's cities, there is equally a very high reliance on central government. In Buraidah, Unaizah, Al Mithnab, Al Bakiriyah and Riyadh Al Khabra, central revenues account for more than 80 per cent of the cities' total income. As shown in figure 4.3, only revenues of Daria, Al- Asyah, Al Nabhanya and Uyun Al-Jiwa record less than 10 per cent reliance on central funds.

A common characteristic observed across the world among cities that depend unduly on central revenues is that they exhibit a weak and inefficient municipal revenue collection structure. This is also true in Al-Qassim, where the high reliance on central revenues could explain the low revenue efficiencies reported

in most the region's cities (which is below 60 per cent for majority of them). According to 2018 data from the Qassim Urban Observatory, Buraidah had the highest revenue collection efficiency at only 81.7 per cent, while in 4 of 10 cities the efficiency was less than 50 per cent.

Figure 4.3

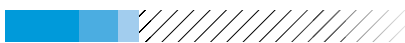
Source of revenue and revenue collection efficiency in Al-Qassim's cities



The above observed trends in revenue and city spending point to a weak budgetary governance structure in the region's cities, which is likely to impact negatively their efforts to become prosperous and

self-sustaining in the long term. To reverse this trend, major policy and budgetary changes and investments must be made in revenue management systems.

For Al-Qassim cities to accelerate their growth towards prosperity and make investment decisions that respond to the needs of their populations, they must improve their revenue collection efficiency, which will one step closer to their reduced reliance on the central revenues.



4.4 Al-Qassim cities perform poorly in public participation, but their residents are significantly satisfied with prevailing service provision

Citizen participation in decision-making and urban governance processes is an important indicator of how much urban residents own projects and their level of citizenry. Cities which engage their inhabitants in the planning process, election of leaders, budget making processes, and which integrate public feedback in the final plans and decisions are likely to respond more to the needs of their residents than those which do not. The most widely used indicators of citizen participation in urban governance include participation in electoral processes, incorporation of women in leadership positions, level of civil society consultations in decision-making, and public satisfaction with the governance and municipal services.

Overall, cities in Al-Qassim perform poorly in terms of public participation in elections and women's inclusion in leadership positions, while their inhabitants report high levels of satisfaction with the prevailing governance mechanisms.

In chapter 3, we identified that the labour market in all of Al-Qassim is male dominated, with the share of women working in the different

departments averaged only 1.4 per cent across all 13 cities. We also established that the situation is more dire in senior roles in the regional government departments where only two cities —Buraidah and Unaizah—had very few females in senior positions (representing 0.9 per cent and 3.1 per cent of the total female employees in the government departments, respectively).

This poor performance in women's involvement in the labour force is exacerbated by low levels of public participation in electoral processes, where the voter turnout in most cities is below 70 per cent. According to data from the Qassim Urban Observatory, only 27 per cent of registered voters participated in municipal elections in Buraidah, which was the least turnout of the six cities for which data on this indicator was available. Al Mithnab recorded the highest voter participation (70.1 per cent) followed by Riyadh Al Khabra (61.8 per cent), Al Badaya'a (60.5 per cent), Ar Rass (58.3 per cent) and Al Bakiriyah (50.7 per cent).ⁱ⁾ These figures are significantly low but are close to the global voter turnout of 66 per cent reported

during the 2011–2015 period,⁴ albeit at a different scale (municipal for Al-Qassim's cities versus national elections for world average). While the low voter turnout in Al-Qassim's cities could be associated with the broader governance structure in Saudi Arabia, each city should encourage more participation in the electoral processes, which might be a good way of promoting visions that respond to their needs.

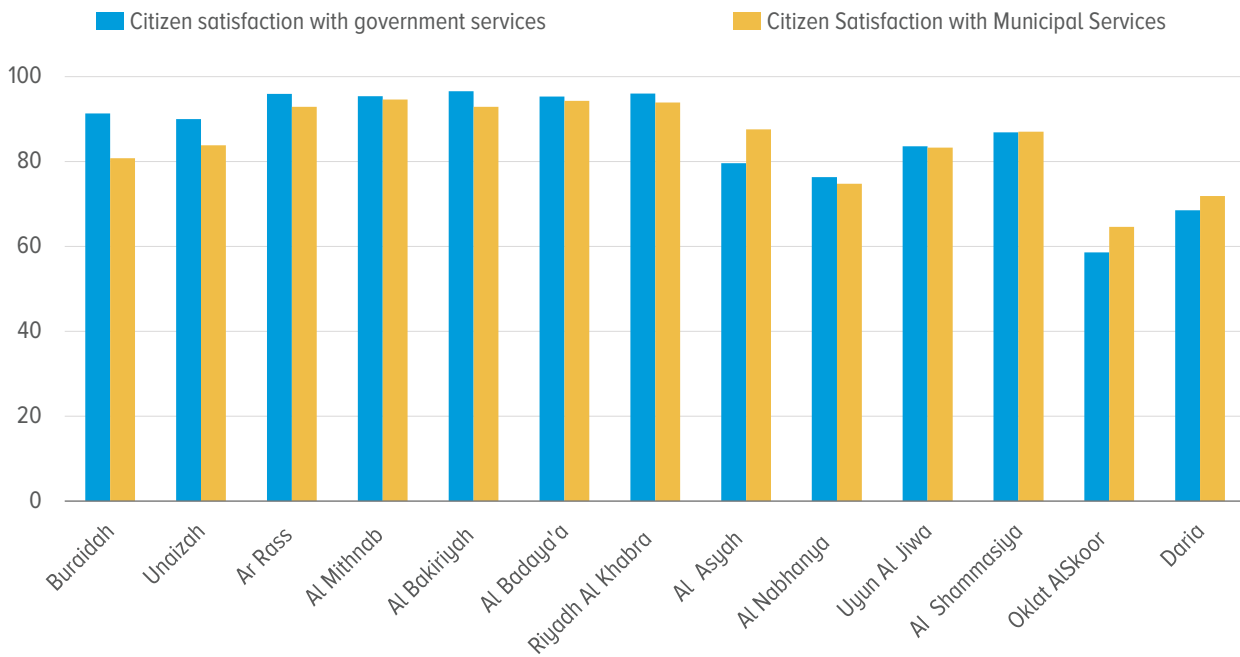
Despite the low voter turnout and the limited involvement of women in the labour force, the combination of service delivery modes discussed in chapter 3 and the way in which urban administration is implemented throughout Al-Qassim is largely satisfactory to the residents of most cities; the majority of them are happy with the government and municipal services (see figure 4.4). It is only in Al Nabhanyaa, Alskoor and Daria where public satisfaction with the government and municipal services falls below 80 per cent. In general, this indicates that the regional and municipal governments have put in place measures to respond appropriately to the needs of their inhabitants.

Public participation and engagement in urban planning and decision making processes are key to ensuring development integrates the needs of the urban populations, encourages a sense of belonging and creates responsible citizens who care for and promote their city.

i). Data for Buraidah is for 2018 while for the other 5 cities is from 2016



Figure 4.4 Citizen satisfaction with government and municipal services in Al-Qassim



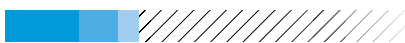
The positive public reviews should be used as a motivation by the city administration and related structures to engage their public further on ways to improve municipal services.

This should particularly be applied in the planning process, where satisfaction with the participation in planning is quite low. For example,

in Buraidah, only 63.5 per cent of residents were satisfied in 2018 with respect to citizen participation in the planning process.

Endnotes

1. World Bank Group, 2019. Ease of Doing Business 2019. Washington DC PP1
2. World Bank Urban indicators database, 2019; World Bank Group, 2019. Ease of Doing Business 2019. Washington DC
3. World Bank Group, 2019. Ease of Doing Business 2019. Washington DC
4. Solijonov, A, 2016. Voter Turnout Trends Around the World. International IDEA







Conclusion and Recommendations

The Qassim Urban Observatory was set up to respond to the need for timely and relevant data at city level to inform local decision-making and investments in Buraidah city. Over the last decade, the most important achievement of the observatory has been increased investment in local data collection and management systems, increased availability of local data across sectors and more reliance on data in policy and decision-making processes. The success of the urban observatory in Buraidah led to the expansion of the observatory's operational scope and mandate to the entire Al-Qassim Region covering all the major cities. Today, observatory produces data on 229 indicators in 13 cities, providing

city authorities with previously unavailable timely and relevant data for policy and decision-making.

Over the last decade, data generated or compiled by the observatory has also been instrumental in analyzing and communicating to policymakers' performances in different thematic areas. Examples include the production of the *Buraidah Voluntary Local Report 2018*, which outlined the status of performance against SDG 11 indicators and the required actions to accelerate attainment of sustainable urbanization in the city. Some specific actions that have been implemented as a result of recommendations from the observatory's reports and data include installation of environmental

monitoring stations to track air quality, investments to increase the number of children beds in response to identified infant mortality rates within the cities, and general support for broad policy and decision-making processes within the municipalities. Tracking should be continual.

From analysis of data on more than 100 indicators presented in this report, cities in Al-Qassim Region perform differently across sectors. Emerging from the analysis and discussions in this report are the following key observations and recommendations which, if adopted, would accelerate the progress of the 13 cities of Al-Qassim towards prosperous growth and sustainability.

1



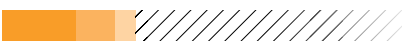
Rapid urbanization without a regional development strategy and urban plans poses sustainable urbanization challenges in Al-Qassim's cities

Like many cities in Saudi Arabia and the larger Arab States region, the 13 main cities in Al-Qassim Region experience rapid spatial expansion. In Al-Qassim, where agriculture is a major economic activity, this rapid rate of urban expansion will not only continuously convert fertile agricultural land to urban land uses, but will also make it more expensive to connect households to basic services such as water and sewerage.

A more significant challenge is that Al-Qassim and its main cities lack a clear urbanization strategy or urban plans to guide their growth, which if not well addressed could result in haphazard development. Several cities are

already experiencing challenges in access to basic services since they have expanded prior to layout of the core municipal infrastructure of water and sewerage.

In cognizance of this challenge, the regional government and the individual city governments have been taking important steps to formulate a regional urbanization strategy and city plans, and also to expand the main water and sewer infrastructure, which is likely to have positive impacts on the quality of life of their citizens. The need for formulation of urban plans and a regional development strategy, which is currently still at the conceptual stages, may however need to be fast-tracked.



2



Cities in Al-Qassim have a literate and youthful population, which creates massive opportunities for accelerated prosperity if they make the right policies and investments

Al-Qassim's cities may harness benefits from their high number of literate youthful population if they make the right policies and investments. This population not only ensures steady supply of highly knowledgeable people over the next few decades, but also presents opportunities for economic diversification into the productive sectors. To encourage these populations to

stay within Al-Qassim in the long term, there is however need for creation of job opportunities and economic diversification to reduce their high rate of unemployment. One of the areas where these populations can be engaged is in the manufacturing, pharmaceutical and ICT sectors which seem to have high potential for rapid growth.

3



Al-Qassim's cities should expand their employment opportunities and diversify their economies

Cities in Al-Qassim record a high reliance on the public sector for employment and high youth and female unemployment rates. This is despite high literacy rates among youth and women. There is need for programmes on economic diversification to create more employment

opportunities outside the public sector, as well as deliberate efforts to create new employment opportunities for youth and women to ensure inclusive and equitable development where no one is left behind.

4



Al-Qassim's cities are connected to others locally and globally, which expands their options for economic growth and prosperity

Cities in Al-Qassim are highly connected to others within the region, the rest of Saudi Arabia and the world through the intertwined network of physical and virtual infrastructure. The high connectivity makes them accessible and reduces wastage and system losses in the production processes while also expanding the markets for locally produced goods and services. The high Internet connectivity across all cities

equally links their residents to a vast global marketplace, where they can interact, trade and generate incomes. The high virtual connectivity and high Internet usage combined with a highly literate and youthful population should be leveraged to attain economic diversity to ICT-based economies such as business process outsourcing.

5



There is need for investment in public transport in Al-Qassim as the private car driven transport modes are unsustainable

Cities in Al-Qassim largely rely on private cars, and barely integrate green (for example, walking) and public transport modes. This demands regular expansion of roads to cater for an ever-increasing number of private cars, which in turn translates to more (and regular) capital investments as well as increased air pollution. While traffic congestion is currently not a major

challenge in most cities within the region, Buraidah, the largest city, records the highest amounts of time spent in traffic each year, a situation that may worsen in future. In their bid to become more prosperous and sustainable, all cities in Al-Qassim need to invest in public and green transport infrastructure systems in the short to long terms.

6



Cities in Al-Qassim should put in place strategies to reduce water wastage and invest in water recycling

Water is a scarce resource in Al-Qassim as in the rest of the country. Despite this scarcity, cities in Al-Qassim consume water at rates equivalent to those of water-abundant countries. This, combined with an annual water wastage that exceeds 9.5 per cent of the total water produced in the cities, is a worrying trend for the sustainability of the resource, as is the amount of energy required to desalinate water.

To safeguard Al-Qassim's underground water reserves and enhance the region's long-term agricultural productivity, there is need for a water management strategy to promote reduction in water usage and wastage at the household and business levels. The cities should also invest in water recycling infrastructure, wherein wastewater could be used for agriculture.

7



Cities in Al-Qassim must reduce their waste generation and invest in waste recycling infrastructure

Cities in Al-Qassim produce more waste per capita annually than the global average, yet the waste management strategies rarely incorporate recycling. The waste disposal methods, which largely comprise burying, pose a major environmental concern. Actions to reduce

waste production and to promote reuse and recycling should be put in place. These should be integrated into all the current and future developments for all cities within the region, and into the local and regional development strategies and policies for enhanced uptake.

8



To attain self-reliance, cities in Al-Qassim must improve their revenue collection efficiency and reduce their reliance on central revenues

Cities in Al-Qassim rely heavily on central revenues for their budgets. Moreover, their revenue collection is below average, which has serious negative impacts on their self-sustenance. If the cities are going to accelerate

their growth towards prosperity and make investment decisions that respond to the needs of their populations, they must reduce their reliance on the central revenues through improving their revenue collection efficiency

9



Increased investment in capital expenditure will increase Al-Qassim cities' chances of accelerated prosperity

The current spending model in most of Al-Qassim's cities, where more than two thirds of incomes are spent on recurrent expenditure and wages, present major risks to the economic growth of the region. Without investment in new infrastructure —such as public transport systems, roads and ICT —which encourage other

investments like manufacturing by the private sector, cities in Al-Qassim will continue to have low levels of economic diversification. Finding optimal strategies of diversifying their economies is, therefore, one of the most urgent areas of intervention needed by city governments.



Overall, the data production and reporting activities of the Qassim Urban Observatory and the commitment of Al-Qassim Municipality and Al-Qassim Regional Government to use data, continuously, to inform decision-making processes and investments presents a global best practice on how the urban observatory model should be linked to decision-making mechanisms within the city for maximum impact on citizens' lives. Equally, the multi-stakeholder and consultative model of the Qassim Urban Observatory, where data is sourced from different government departments, institutions, surveys and community engagements is critical to ensuring that the produced data is accurate and that it responds to the needs of the populations. At the higher level, cooperation between the observatory and UN-Habitat's Data and Analytics Unit (the global coordinator of urban observatories) further promotes production of standardized indicators in line with global agenda and globally accepted methodologies, while also promoting best practices sharing and peer learning. Partnerships between the urban observatory and learning

organizations and research centres, such as Qassim University's Sustainable Development Centre, further contribute to new research in the area of urbanization as well as in formulation of workable recommendations which are based on the most recent global trends.

The data produced by the observatory, and which is presented in this report, is relevant for local decision-making and puts Al-Qassim's cities on the global map, wherein performances can be compared with other cities across the world, and experiences learned on the most workable interventions against a diversity of urban challenges. The data is currently used as a baseline and reference in the information bank of Al-Qassim Region, from which evaluation of progress will be undertaken. In addition, by openly sharing city-level data, local populations are able to track progress, provide inputs to planning and decision-making processes, provide feedback on performance and suitability of projects, and hold the city governments accountable.

