

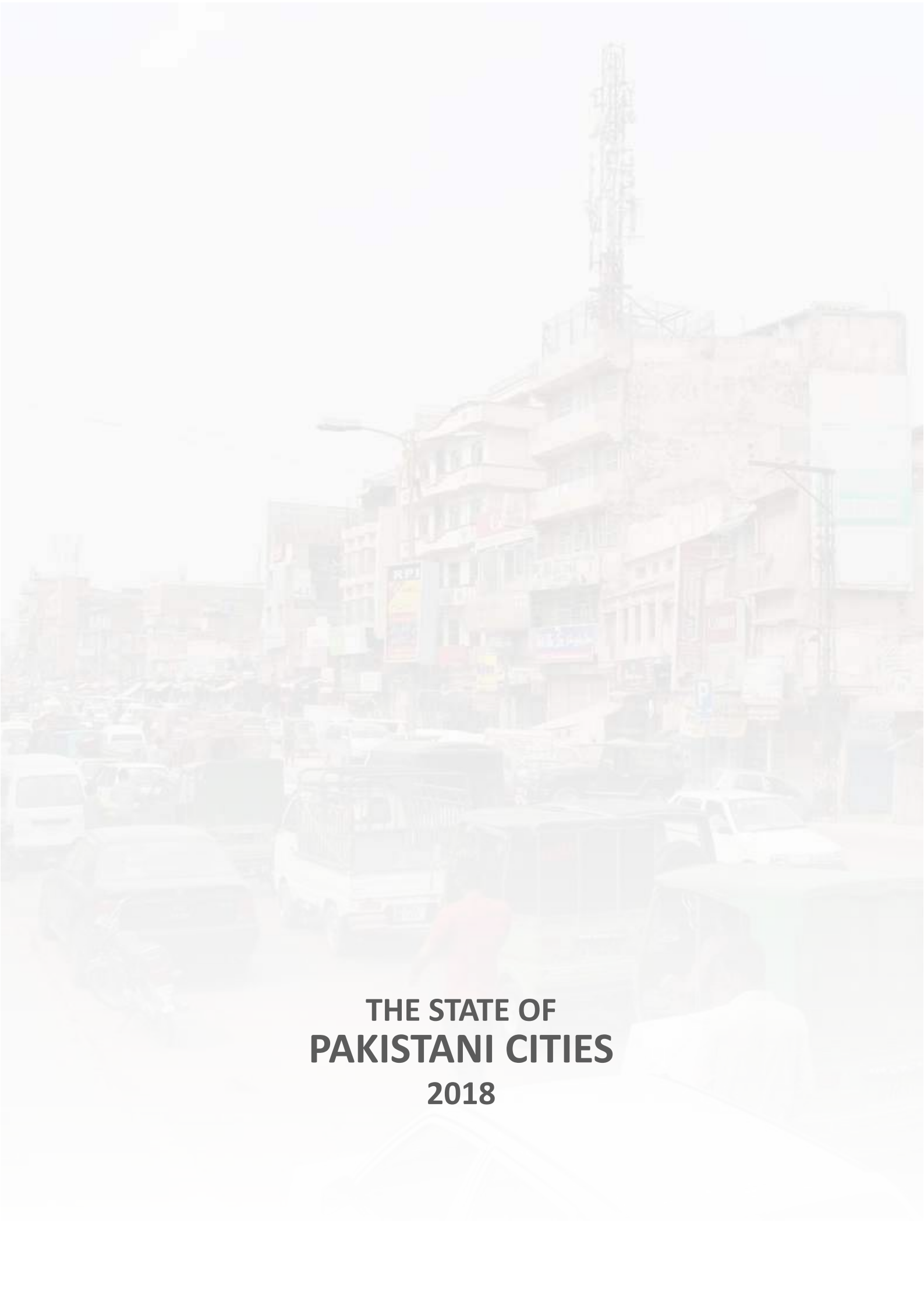
# THE STATE OF PAKISTANI CITIES 2018



**Design and photo credits:** UN Habitat, Pakistan

**Disclaimer:** The report is not for public distribution and has been furnished solely for information. The information in the report has been printed on the basis of publicly available information; internal data and other sources believed to be true and are for general guidance only but which may have not been verified independently. While every effort is made to ensure the accuracy and completeness of information contained.





**THE STATE OF  
PAKISTANI CITIES  
2018**



## Executive Summary

The State of Pakistani Cities (SPC) report is a pivotal document which identifies the underlying socio-economic drivers contributing to the state of urbanization in the ten largest cities namely Karachi, Lahore, Faisalabad, Rawalpindi, Gujranwala, Peshawar, Multan, Hyderabad, Islamabad and Quetta and their efficacy to respond to the urbanization challenges. The findings of the study reveal that the ten selected cities make up more than half of the total urban population, accounting for 54 percent of the national urban population.

Pakistani cities vary considerably in terms of their size of economy, employment and tax revenues. Services and industry are the major employment sectors in Pakistani cities. The share of the service economy in the cities is larger than the share of services in the national economy. The economies of Provincial Headquarters and the Federal Capital are more service-oriented than other cities. With the rising share of services, direct tax collection has increased, primarily because of the with holding tax regime. Pakistan generates 95 percent of its total federal tax revenue from its ten major cities and Karachi contributes 55 percent, Islamabad 16 percent, and Lahore 15 percent. Much of the tax revenue is associated with large services such as telecommunication, finance and insurance, transport and manufacturing industry, as well as higher per capita income, in cities as compared to the rural areas.

The average urban per capita income in Pakistan is PKR 46,000. Rawalpindi has the highest per capita income of PKR 82,000 while Quetta has the lowest per capita income of PKR 37,000. Islamabad and Peshawar have the second and the third highest per capita income of PKR 70,000 and PKR 67,000 respectively.

Poverty in urban areas is a major and visible phenomenon. Six out of the top ten major cities have double-digit poverty figures: Quetta, with 46 percent, has the highest poverty rate, while Multan, has 35 percent, Peshawar 31 percent, Islamabad, with 3 percent, has the lowest poverty rate. Karachi and Lahore, Pakistan's two most populous cities have 4.5 percent and 4.3 percent poverty rates.

The urban management functions of Pakistani cities are dispersed among several institutions, mostly semi-autonomous bodies, functioning under provincial government departments. The main urban management/administrative bodies responsible for different aspects of city management are municipalities, district administration, development authorities and service delivery institutions etc. The responsibility for urban planning in Pakistani cities rests with city development authorities. public land ownership in urban areas is fragmented and is divided between municipality, development authority, cantonments, industrial estates, provincial government departments. Each agency has its own building, land use and environmental control provisions and is autonomous in carrying out the development works and maintaining the facilities within their jurisdiction.

Urban planning and management remains limited due to the lack of relevant information and



---

## EXECUTIVE SUMMARY

statistical urban data. One of the key limitations is that little, if any, data is available below the district level, making it almost impossible to analyse or address intra-city disparities and shortcomings. Furthermore, city planning cycles do not take census dates into account and consequently the base data used for urban planning have to be projected or extrapolated making comparisons or measuring progress difficult.

Provision of urban services is the responsibility of government institutions. The major cities have large and increasing numbers of informal settlements, which do not have access to adequate levels of basic services. Despite the introduction of metro buses and the construction of signal-free corridors and other such measures, urban transportation remains a consistent challenge for Pakistani cities. Karachi has a complex traffic network with a large number of private vehicles contributing to major traffic congestions. In Lahore the number of registered vehicles has more than doubled in the last decade. However, Lahore constructed numerous underpasses to ease congestion and prevent the traffic congestions and established a successful Metro Bus System. Mobility in Peshawar is a major challenge. The government has recently taken steps to improve the city transportation, including establishing a sustainable and highly productive Vehicle Emission Testing Department, upgrading the Peshawar Bus Terminal to meet international standards, and maintaining computerized vehicle fitness records. A Bus Rapid Transit (BRT) project for Peshawar sponsored by the Asian Development Bank has recently been launched, which features a 26 km long corridor passing throughout the city.

Urban authorities and other sub-national bodies rely overwhelmingly on provincial or national bodies for funds for delivery of basic urban services. This long held practice of subventions from central authority has largely eliminated all incentive and initiative for the search for local self-reliance and sustainability. Since provincial authorities collect local revenues no efforts are put into strengthening the fiscal and financial capability of local bodies. Access to clean water continues to be a major problem in Pakistani cities. Only 65.2 percent of households in Pakistan's 10 major cities have access to piped water connections. The cities lack sewage treatment facilities and solid waste management which leads to severe environmental pollution and contamination of surface and ground water bodies.

Power supply remains an important sector in national performance in general and urban locations in particular. The previous decade saw an acute power crisis that crippled the national performance especially in the peak summer seasons. The load-shedding of 12-16 hours per day impacts the performance of all sectors. Cities being the principal consumers of power face this challenge to the most acute level. The recent addition of 5000 MW in the national grid has considerably improved the situation but due to inefficient transmission and distribution network the problem remains unresolved.

Pakistan has a well-articulated housing policy, but it remains unimplemented. Housing is not acknowledged as a social policy measure and Local authorities have little control on its provision. Moreover, housing is not seen as an integrative element of cities and indeed, the insistence on



## EXECUTIVE SUMMARY

segregated housing development is actively pursued. Further, increasing urbanization has created pressing demands for housing in cities. The absence of any formal provision for the lower-income urban population and the people migrating from rural areas to urban areas has resulted in the creation of large informal settlements, both in the cities and increasingly, on their periphery.

The general understanding and appreciation of the environment and heritage is low and narrowly defined. Public space in Pakistani cities has been continuously shrinking due to the high commercial value of urban space and urban land. Public space, such as green space, roads, streets, intersections, transport rights-of-way and other corridors are central to liveability, efficiency and equity in the urban areas. It must be adequately provided for but not exclusively expropriated.

Pakistani cities are not inclusive, and certain groups are deliberately and specifically (explicitly or implicitly) excluded from various aspects of city life, provision and access. The exclusion, of the poor, by market forces is perhaps the most visible in terms of housing, land and service provision, while that of women, religious and ethnic minorities and of the physically challenged by social forces is less visible precisely because they are rendered invisible by the workings of social mores and bias. The lack of acceptance of the rights and needs of large sections of the community not only acts as deterrence and an injustice to the excluded, but also deprives cities of the participation and contribution of large sections of the population. Often forced into segregated or secluded existence, these citizens also become easier to target and further isolate and exclude.

Pakistani cities need to better plan and manage their development to meet the needs and demands of their citizens and indeed of the country than they currently doing. To prosper, cities need to be more responsive to the needs of the environment and respective of available resources and to adapt and adopt technologies and economies that are less wasteful and destructive. This means taking a more realistic look at what needs and can be done without compromising our local as well as our global future.

Although the 18th Amendment opened the way to a more-decentralised governance framework, so far this decentralisation has yet to reach the cities. An important condition for implementing the 2030 Agenda and New Urban Agenda will be to incorporate the Sustainable Development Goals (SDGs) into national and sub-national plans.



## FOREWORDS

It gives me great pleasure to learn that State of Pakistani Cities (SPC) report has been developed in close cooperation between the Ministry of Climate Change, UN-Habitat and the Australian High Commission. This report is an attempt to shed light on the breadth and complexity of the urban challenges.

Our lifestyles: where and how we live have an immense impact on our environment. Pakistani's are increasingly becoming urban, with the majority expected to be living in cities by 2030. Pakistani cities are becoming both larger and more numerous and therefore exerting a greater impact on the environment. Relatively speaking, not enough attention has been paid to this phenomenon-perhaps because we see ourselves as an agricultural and therefore still a rural society. Our governance, and social and economic development policies have been shaped by rural considerations and concerns.



However, the reality is that it is cities that dominate our economy and are driving our development. Badly planned or poorly managed cities pollute the environment, and this is made worse by traffic congestion, while inadequate housing leads to slums and katchi abadis. On the other hand, cities have the great potential to improve livelihoods, drive economic growth and provide safe and affordable housing and adequate services. We need to better understand urbanization and the State of Pakistani Cities because with effective and efficient urban planning, there is a great opportunity to promote cities that are, inclusive, equitable and sustainable.

To adapt to the impacts of climate change, there is a need to introduce changes in town planning and building systems. However in Pakistan, basic information for urban areas does not exist, is outdated, or not shared. To pro-actively guide the growth of Pakistan's cities and harness urbanization as a driver of development requires resolve and action by all the provinces.

This State of Pakistani Cities report, 2018 is the result of action and inputs amongst all of the provinces and is expected to provide the basis for continued collaborative action to develop common and consistent actions, policies and strategies for Pakistani cities and ensure that the outcomes are pragmatic and reflect the ground realities across the country.

I sincerely thank all the programme partners, the Government of Australia, and UN-Habitat for supporting this initiative. The data as well as our increased capacity for understanding Pakistani cities and their development will be used for better urban planning and policy-making to improve the lives of all Pakistanis.

**Mr. Muhammad Yusuf Shaikh**  
Federal Minister for Climate Change  
Ministry of Climate Change  
Government of Pakistan



## FOREWORDS

Pakistan is one of the most rapidly urbanizing countries in South Asia. Urbanisation is inherently interconnected with economic development, social development and environmental protection. Managing urbanization well is crucial to the Pakistan's future and will influence the overall social and economic well-being of the country. Accurate and updated data on urban trends and city growth are critical for assessing current and future needs responding to urban growth. It is also a necessity for establishing policy priorities to promote inclusive and equitable urban development. To realize the transformative effect that urbanization can bring about, urban dialogues are an important element.



The State of Pakistani Cities report is a ground-breaking effort to analyse the changes and emerging challenges in the urban sector of Pakistan. Through the development of the report, a solid foundation on city-wide data and information was collected, which will help to formulate city-wide policies for enhanced inclusive urban planning and management, and contribute to an updated knowledge base for the government, private sector and business leaders for increased investment and economic opportunities in the country.

The State of Pakistani Cities report is a knowledge product which presents well-informed and evidence-based information on the state of urbanization across Pakistan. I have no doubt that this report will make an important contribution to our understanding of the current and potential economic role of cities in Pakistan, linking to sustainable national development and brings an action framework for the implementation of the Sustainable Development Goals and New Urban Agenda. I sincerely thank all programme partners and the Government of Pakistan, for supporting the implementation of this programme. In addition, I would like to thank the Government of Australia for its long-term support to the Status of Cities reports in the Asia and Pacific Region.

**Maimunah Mohd Sharif**

United Nations Under-Secretary-General and Executive Director





## FOREWORDS

It is a great pleasure to help launch the first State of Pakistan Cities report, prepared by UN Habitat with the assistance of the Australian Government. This is a very timely initiative and I applaud the Government of Pakistan for endorsing the preparation of this report, which aligns with the Sustainable Development Goals' focus on the role of cities for mankind's sustainable future.

As this report notes, Pakistan's population growth rate of 2.4 per cent since its last census in 1998 is among the highest in the world. Already home to some of the largest cities on Earth, Pakistan's metropolitan centres will continue to swell, both as a result of natural increase as well as through burgeoning migration from rural to urban settings. This of course presents both a challenge and an opportunity for the federal and provincial governments and the people of Pakistan.

The careful management of the expansion and heritage of Pakistan's cities can underpin economic growth and national prosperity, as well as promote a flourishing of the arts, culture and academic learning, generating more international contacts in all sectors, and positive image building tourism. In concert with crucial national policies such as the recently announced national water, national transport and national cultural policies, and provincial initiatives such as Punjab's Safe Cities policy, comprehensive, evidence-based urban planning can help Pakistan rise to meet the challenges posed by its rapidly growing -and increasingly urbanised population.

This report goes some way to addressing Pakistan's "data deficit" in the urban sector. A solid evidence base would allow city, provincial and federal governments, urban managers, urban service providers, private and institutional investors, donors and civil society alike to make better informed decisions which can lead to better outcomes for all.



**H.E. Margaret Adamson**  
Australian High Commissioner to Pakistan



## ACKNOWLEDGEMENT

### Acknowledgement

This report has been developed under the guidance of the Government of Pakistan, the Ministry of Climate Change. It is the culmination of around 24 months of intense and positive cooperation between many institutions and individuals which are gratefully acknowledged, as follows;

M. Irfan Tariq, Director General, Ministry of Climate Change; M. Anwar Hussain Ch, Chief of Physical Planning and Housing, Ministry of Planning and Development and Reforms, and Neil Buhne United Nations Resident Coordinator for Pakistan.

The Government of Australia, in particular the Australian High Commission in Islamabad, for generously supporting the programme, including Matthew Mowtell for his valuable contribution and support.

The Government of the Punjab for their unconditional support particularly by the Chairman, Planning and Development Department, Mian Wahid Ud Din, Member Social Infrastructure, Planning and Development Department and Dr. Nasir Javed, Chief Executive Office of the Urban Unit.

The Government of Sindh for their valuable support particularly by the Commissioner Karachi, Director General for Urban Policy and Strategic Planning and Development Department Mumtaz Ali Halepoto and Zulfiqar Ali Kumbher, Deputy Director, Housing, Urban Policy and Planning Unit.

The valuable support provided by the Government of Khyber Pakhtunkhwa particularly the Honorable Innayat Ullah Khan, Provincial Minister for Local Government, Elections and Rural Development, Srar Ul Haq, Executive Director and Adnan Salim Khan, Senior Urban Planner, Urban Policy Unit, Khyber Pakhtunkhwa.

The continuous support provided by the provincial focal points of Baluchistan government particularly, the Chief Secretary, Planning and Development, Secretary, Urban Planning and Development Department, Additional Secretary and Deputy Secretary, Urban Planning and Development Unit, Government of Baluchistan.

Lead Author Babar Mumtaz, Chapter Authors Dr. Noman Ahmed, Reza Ali, Dr. Shabbar Ali, Jawed Ali Khan, Kamil Khan Mumtaz, Fazal Noor, Fauzia Qureshi and Dr. Nadia Tahir; and Programme Coordinator Wasim Saleem and encouragement and insights provided by Tasneem A. Siddiqui and Arif Hassan.

Reviews and guidance provided by Atsushi Koresawa, Laxman Perera, Fernanda Lonardoni, Jesus Salcedo, David Thomas, Richard Ibrahim, Emile Rolland Begonya Peiro, Mohammad Farid

Habitat Programme Manager Jawed Ali Khan, Former UN Habitat Country Manager for Pakistan Bella Evidente, Jannat Durrani, GIS team -Basharat Hussain and Asad Ur Rehman, and Imran Malik. Noriko Goto, Mariko Shirakawa.





## TABLE OF CONTENTS

## Table of Contents

<b>List of abbreviations</b>	1
<b>Chapter 1: An Overview of Urbanization in Pakistan</b>	3
1.1 Pakistan: A brief overview	4
1.2 Pakistan: Population	6
1.3 Pakistani cities: An overview	7
1.4 Pakistani Cities: Urbanization	10
1.5 Pakistan's Cities: Population	12
1.6 Pakistani Cities: Growth Rate	15
1.7 Pakistani Cities: Migration	16
1.8 Pakistani Cities: Expansion and Spatial Growth	17
<b>Chapter 2: Urban Economy</b>	19
2.1 Pakistan's Economic Structure	20
2.2 City Economies	22
2.3 City Economic Profiles	26
<b>Chapter 3: Urban Governance and Transport</b>	29
3.1 Urban Management	30
3.2 Urban Planning	32
3.3 Urban Transportation	36
<b>Chapter 4: Basic Services in Pakistan Cities</b>	45
4.1 Introduction	46
4.2 Water Supply	47
4.3 Sewerage	50
4.4 Solid Waste Management	52
4.5 Power Supply	55
4.6 Health care	57
4.7 Education	58
<b>Chapter 5: Housing in Pakistani Cities</b>	59
5.1 Introduction	60
5.2 Housing Providers	62
5.3 Housing Need Assessment	63
5.4 Response to Housing Demand: Government and Private Sector	64
5.5 Housing Finance	67
5.6 Some Major Housing Challenges	67
<b>Chapter 6: Environment and Safety in Pakistani Cities</b>	69
6.1 Introduction	70
6.2 Safety and Security of Citizens	79
6.3 Effective Urban Environmental and Resilience Management	80
<b>Chapter 7: Urban Heritage and Tourism</b>	85
7.1 Introduction	86
7.2 Tourism	91
7.3 Pakistan's Urban Heritage	92
<b>Chapter 8: The Way Forward for Pakistani Cities</b>	101
8.1 Introduction	102
8.2 Key Urban Issues and Proposed Responses	103
8.3 Action Framework for Implementation of the New Urban Agenda and SDGs	105
<b>Annex I Extract From VISION 2025</b>	123
<b>ANNEX II Physical growth patterns of ten selected cities</b>	125



## TABLE OF CONTENTS

## List of tables

Table 1.1	Census Definitions of Urban	12
Table 1.2	Urban Population and Main City Population 2017	14
Table 1.3	Composition of Urban Growth in provinces 1972-98	16
Table 2.1	Sectoral Shares in GDP (% at constant basic prices)	20
Table 2.2	Sector wise Employment Shares (%)	21
Table 2.3	Major export and Import partners	22
Table 2.4	Pakistan's ten major cities and their economies	25
Table 3.1	Urban governance bodies and their functions/mandates	30
Table 3.2	Total number of vehicles in major Pakistani cities	37
Table 3.3	Institutions Responsible for Managing transport in cities.	38
Table 4.1	Main source of drinking water	47
Table 4.2	Waste Generated by Cities	53
Table 4.3	Households with Electricity Connections	55
Table 4.4	Population per hospital, population per bed and share of private hospital's in cities of Punjab	57
Table 5.1	Profile of Katchi Abadis in Sindh	61
Table 5.2	Various types of houses in Pakistan	62
Table 5.3	Housing units needed per annum in Pakistani Cities	64
Table 6.1	List of Major Natural Disasters in selected ten cities	82
Table 7.1	Built heritage assets of cities	88
Table 7.2	UNESCO's tentative list of the world heritage sites in Pakistan	89

## List of Figures

Figure 1.1	Pakistan in South Asia and its neighbouring countries	4
Figure 1.2	Pakistan's Provinces and Federally Administered Areas (Land Area)	5
Figure 1.3	Pakistan's population over the years (millions)	6
Figure 1.4	Change in Provincial population from 1998 to 2017	7
Figure 1.5	Urban and Rural Growth Rates 1951-2017	11
Figure 1.6	Population of major cities 1998 and 2017.	13
Figure 2.1	Exports, Imports, Trade Deficit and Worker Remittances	21
Figure 3.1	Urban transport in cities	36
Figure 3.2	Signal free-corridors of Karachi, with Shahr-e-Faisal shown in red	40
Figure 3.3	Modal Split in Cities	41
Figure 3.4	Estimation of Households with Vehicle ownership	42
Figure 4.1	Location of Existing Wastewater Treatment Plants	51
Figure 6.1	The Planned city-Capital of Pakistan	70
Figure 6.2	Coarse Suspended Particulate Matters in Air Pm <sup>10</sup> (Particulates Size greater than 10 micron), Safe Level: 120 microgram per cubic meter WHO Standards	71
Figure 7.1	Location of World Heritage Sites in Pakistan.	87
Figure 7.2	Walled city of Lahore	95
Figure 7.3	Map of Lahore in 1912	95
Figure 7.4	The Peshawar walled city	99



## LIST OF ABBREVIATIONS

## List of Abbreviations

<b>ABAD</b>	Association of Builders and Developers
<b>ARI</b>	Acute Respiratory Infections
<b>CBOs</b>	Community Based Organizations
<b>CCHF</b>	Crimean Congo Hemorrhagic Fever
<b>CDGK</b>	City District Government Karachi
<b>CPEC</b>	China-Pak Economic Corridor
<b>CPLC</b>	Citizens- Police Liaison Committee
<b>DA</b>	Development Authorities
<b>DHA</b>	Defence Housing Authority
<b>EPA</b>	Environmental Protection Agency
<b>FATA</b>	Federally Administrative Tribal Areas
<b>FDMA</b>	Federally Administrative Tribal Areas Disaster Management Authority
<b>HBFCCL</b>	House Building Finance Corporation Limited
<b>ILO</b>	International Labour Organization
<b>JICA</b>	Japan International Cooperation Agency
<b>KANUPP</b>	Karachi Nuclear Power Plant
<b>KP</b>	Khyber-Pakhtunkhwa
<b>KPT</b>	Karachi Port Trust
<b>KSDP</b>	Karachi Strategic Development Plan 2020
<b>MDGs</b>	Millennium Development Goals
<b>MGD</b>	million gallons per day
<b>NAPA</b>	National Academy of Performing Arts
<b>NDMA</b>	National Disaster Management Authority
<b>NESPAK</b>	National Engineering Services Pakistan
<b>NGOs</b>	Non-Government Organizations
<b>NTA</b>	National Travel Advisories
<b>PDMA</b> s	Provincial Disaster Management Authorities
<b>PDS</b>	Population and Demographic Surveys
<b>PGS</b>	Population Growth Survey




---

**LIST OF ABBREVIATIONS**

<b>PHA</b>	Pakistan Housing Authority
<b>PHED</b>	Public Health Engineering Department
<b>PLDC</b>	Punjab Land Development Corporation
<b>PMD</b>	Pakistan Meteorological Department
<b>PROMISE</b>	Program for Hydro-Meteorological Disaster Mitigation in Secondary Cities in Asia
<b>RDPI</b>	Rawalpindi, Islamabad Multi Hazard Risk Mapping
<b>SBP</b>	State Bank of Pakistan
<b>SDGs</b>	Sustainable Development Goals
<b>SDPI</b>	Sustainable Development Policy Institute
<b>SWM</b>	Solid Waste Management
<b>TMA</b>	Tehsil (or Town) Municipal Administration
<b>TSP</b>	Total Suspended Particulates
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>WHO</b>	World Health Organization

# Chapter 1

## URBANISATION

Pakistan-like most other countries is becoming more urban. However, the definition of urban used for most policy and planning purposes is based primarily on administrative boundaries, and not on any functional, occupational, density or other attribute. This severely under-estimates the urban population and distorts the development and delivery of public policy and intervention. While the “*de jure*” urban population is put at around 30%, the “*de facto*” urban population probably exceeds 50%. Moreover, the nature and causes of urban growth vary across Provinces and between cities and any response to urbanization needs to be far more nuanced than it currently is.

## AN OVERVIEW OF URBANIZATION IN PAKISTAN







## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

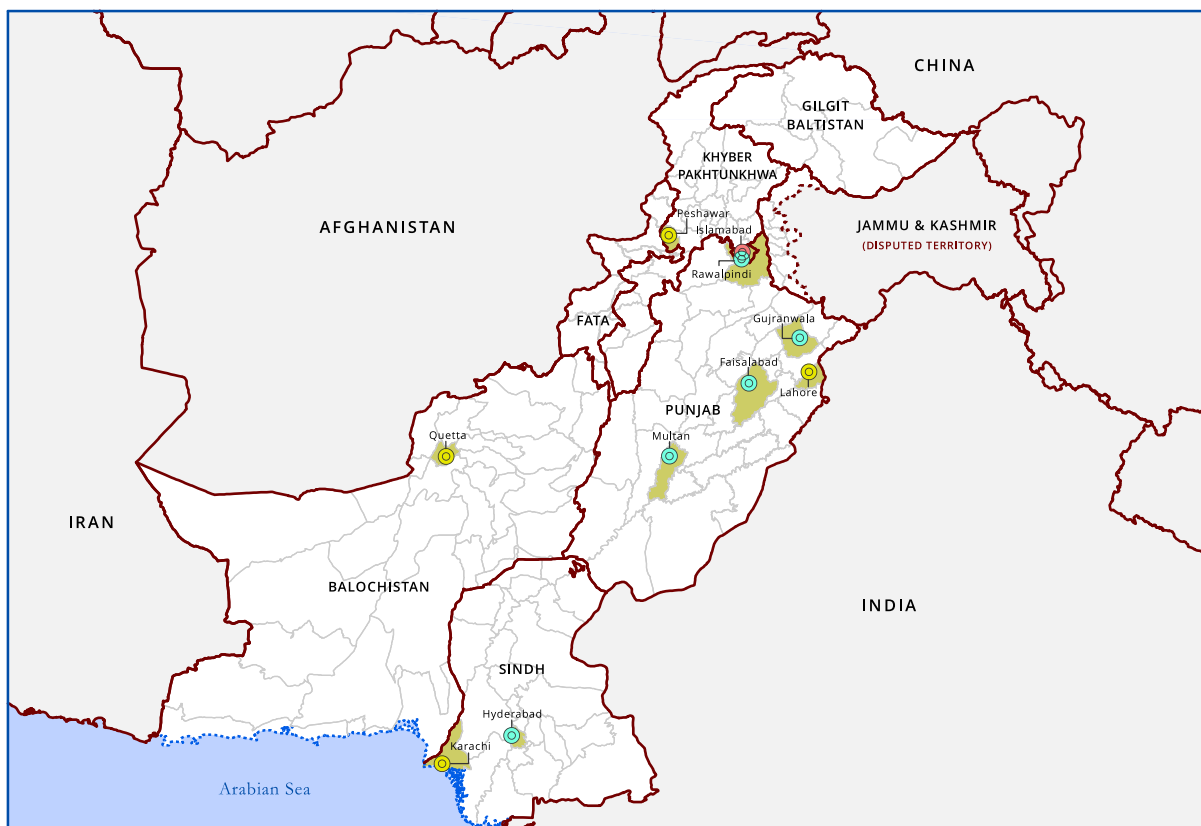
## 1.1 Pakistan: A brief Overview

Pakistan was created in 1947 by the partitioning of British India into two countries: Pakistan and India. Pakistan has a total land area of 796,096 square kilometres and shares its borders with Iran and Afghanistan in the west; India in the east; China in the north and has the Arabian Sea to its south.

Pakistan is a federation that is administratively divided into five provinces (Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan, and Gilgit Baltistan), the Federally Administered Tribal Areas (FATA), and the Islamabad Capital Territory. Among the five provinces, Balochistan has the largest area (with 43.7% of the country's total area) and Gilgit Baltistan has the smallest (9.2% of the country's total area).

Figure 1.1

Pakistan in South Asia and its neighbouring countries

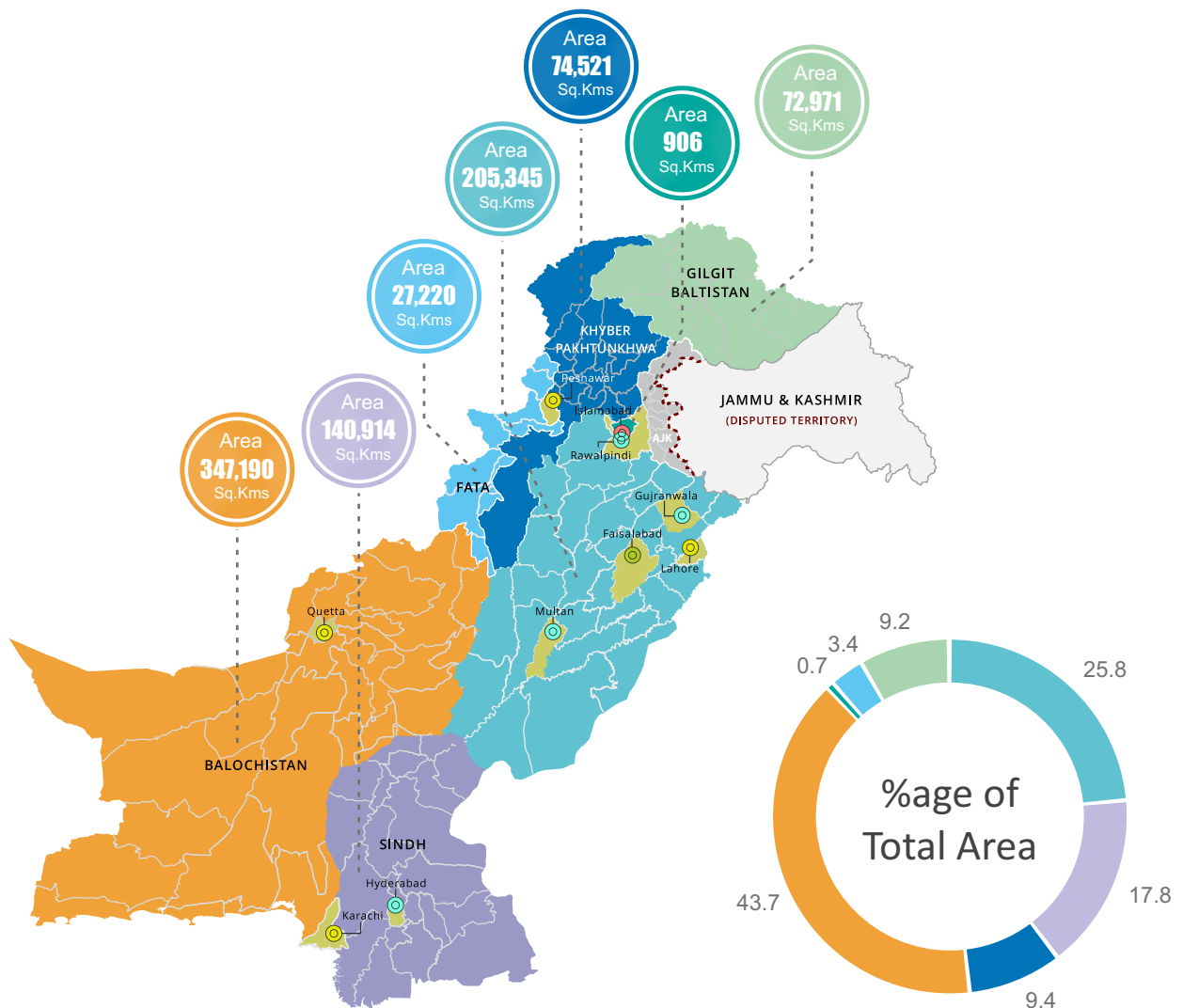


Source: Population Census 2017

CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

Figure 1.2

Pakistan's Provinces and Federally Administered Areas (Land Area)



Source: Population Census 2017



## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

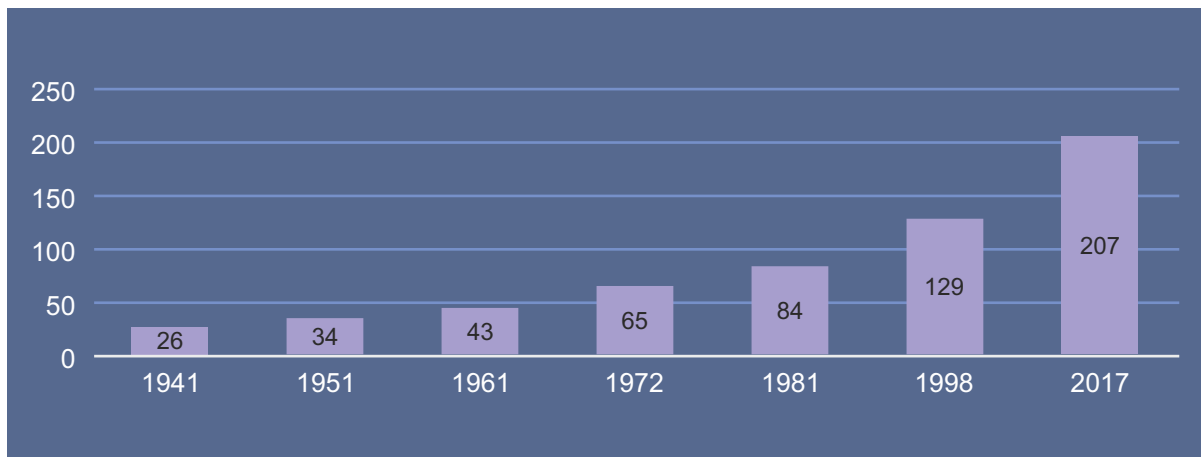
## 1.2 Pakistan: Population

Pakistan is the sixth most populous country in the world with a total population of 207 million<sup>1</sup>. During the 19 years, since the previous census in 1998; its population grew by 75 million at the rate of 2.4% per year<sup>2</sup>, which is one of the highest in the world. With this growth rate, the country's population might increase to 455 million by 2050.

The population growth rate has changed over time: it was relatively slow, averaging about 2% a year over a 20-year period between 1950 and 1970. However, during the next twenty-year period it grew 3.1% per year. On the other hand, a slight decline in the growth of population was observed between 1990 and 2010; it grew at 2.5% a year as compared to 3.1% a year in the preceding twenty-year period. Figure 1.3 shows Pakistan's population since 1951 showing a steady and continuous growth.

**Figure 1.3**

**Pakistan's population over the years (millions)**

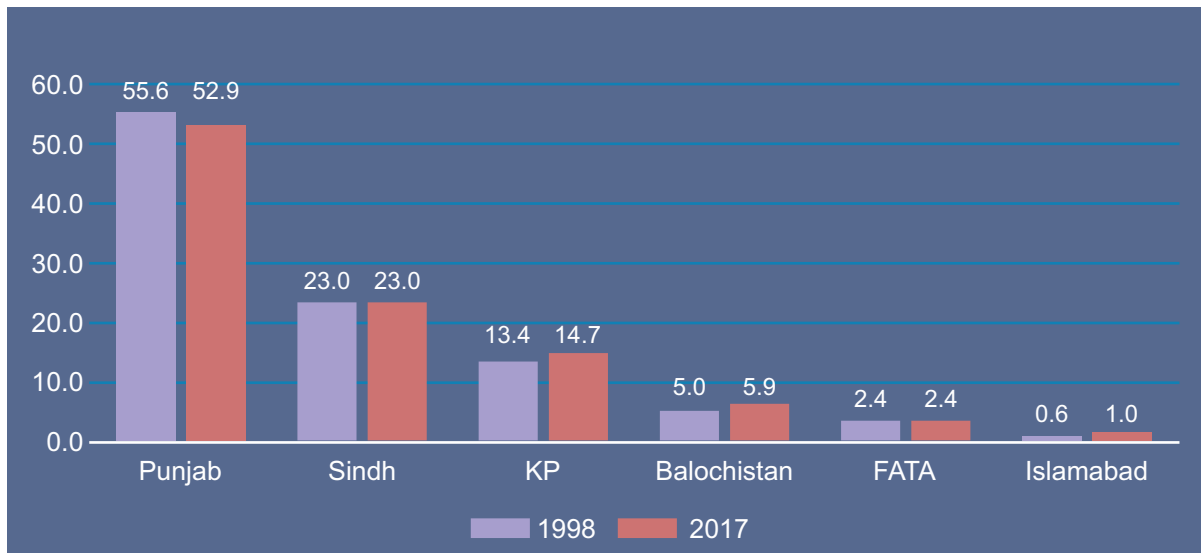


Punjab, the most populous province, has a total population of 110 million, which is 53% of the country's population<sup>3</sup>. The relative position of the provinces in terms of population has remained the same since Independence; however, the population proportion of Punjab to the country's total population has decreased from 61% in 1951 to 55.63% in 1998 and 53% in 2017<sup>4</sup>. On the other hand, the population proportion of Sindh has increased from 18% in 1951 to 23% in 1998 but this proportion has remained the same during the last 19 years<sup>5</sup>. Conversely, the population proportion of Khyber Pakhtunkhwa has increased from 13.4% in 1998 to 14.7% in 2017. Similarly, the population proportion of Balochistan has increased from 5% in 1998 to 5.9% in 2017. Despite these increases, KP and Balochistan have remained the third and the fourth most populous provinces, respectively.





## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

**Figure 1.4** Change in provincial population from 1998 to 2017


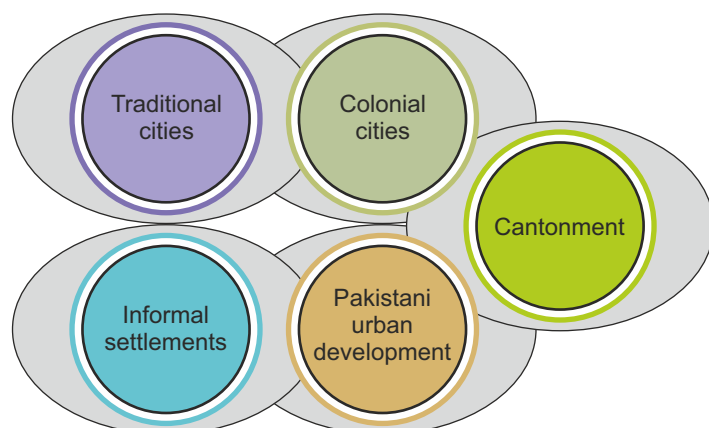
However, the relative ranking of the provinces changed during the inter-census periods due to variations in the population growth rates. It grew at the fastest rate in Balochistan during 1972-81 but during 1981-98 Khyber Pakhtunkhwa had the highest growth rate. The pattern changed again in 2017 when a growth rate of 3.37% was observed in Balochistan, the highest among all provinces. Despite changes in ranking, the growth rate variation among provinces has narrowed due to a decline in inter-provincial migration during the last two decades.

### 1.3 Pakistani cities: An overview

Although Pakistan had some of the earliest cities, it was not particularly urbanised. Historically, most of the cities were staging posts along the ancient trade routes, mainly on the transition between hill and plain, the edge of the desert or at river crossings. The British transformed this transit pattern through-route into the North West Frontier of its Indian Empire. Since Independence, and the creation of the State of Pakistan, the role and development of cities has modified further.

There are five basic components that make up Pakistani cities:

#### Pakistani Cities Structure



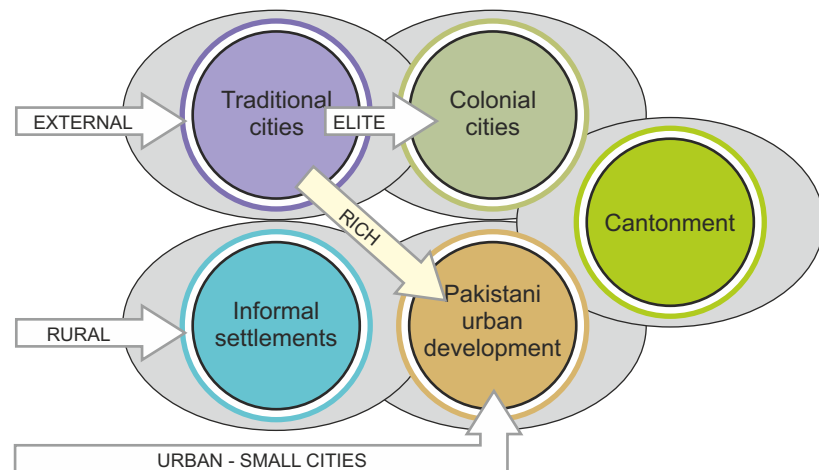


## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

The traditional city, often but not always fortified-with a rather amorphous pattern based on mohallas and neighbourhoods separated by bazaars and penetrated by branching networks of streets. The traditional city was based on walk ability and had a human scale with mixed-use, mixed-income development with work and residence often housed in the same building.

**The colonial city**, built by the British from about 1857 to 1947, usually adjacent to the traditional city, to house the civilian administration and its administrators. As well as separating them from the indigenous power and people, it provided a setting for displaying and deploying the supremacy of the Empire by erecting monumental structures to house even the most modest of functions and functionaries. By incorporating local motifs and styles, these also proclaimed that they were taking over and meant to stay.

### Pakistani Cities Migration



**The cantonment**, where the military was garrisoned, provisioned and stockpiled its munitions. While using some of the “show and awe” devices of the colonial city, the cantonment was cordoned off from and for the civilian authority.

**The modern city**, built from about 1947 onwards, initially by extending the colonial city and mimicking its bungalows, soon launched into the emerging global “modern” style made possible by reinforced concrete, by requiring less design discipline and allowing more stories than bricks and mortar alone ever could. The urban plans were based on vehicular circulation, with shopping malls and plazas, these harsh, brash and gaudy structures have resulted in sprawling cities with little of the leafy elegance that graced the colonial city.

**The informal city**, that emerged in response to the needs for housing of those who came looking to the city looking for opportunities but were too poor to afford being housed by the modern city. Deprived of access to the city's services and infrastructure, these settlements are not pre-planned, and are therefore likely to be congested with insufficient health and education provision, with minimal access and few open spaces.

The actual provision and relative share of these components in any given city is a function primarily of when it was founded and its role in the national and provincial set-up. Thus, for example the



## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

cities founded by the British or after the creation of Pakistan (Faisalabad, Islamabad) do not have a traditional city component. Cities not on the frontier or staging posts for the army (Hyderabad, Gujranwala) do not have cantonments built by the British, but most cities have since added Pakistani versions. While no city is without its informal settlements, they are the more likely in cities that offer more opportunities (Karachi, Lahore).

City	Traditional City	Colonial City	Cantonment	Modern City	Informal City
Karachi	X (Fishing Village)	✓	✓	✓	✓
Hyderabad	✓	X	✓	Latifabad	✓
Lahore	✓	✓	✓	✓	✓
Rawalpindi	X	X	✓	✓	✓
Faisalabad	X	✓	X	✓	X
Gujranwala	✓	X	✓	✓	X
Multan	✓	X	✓	✓	X
Peshawar	✓	X	✓	Hayatabad	✓
Quetta	X Destroyed	✓	✓	✓	✓
Islamabad	X	X	X (Rawalpindi)	✓	X

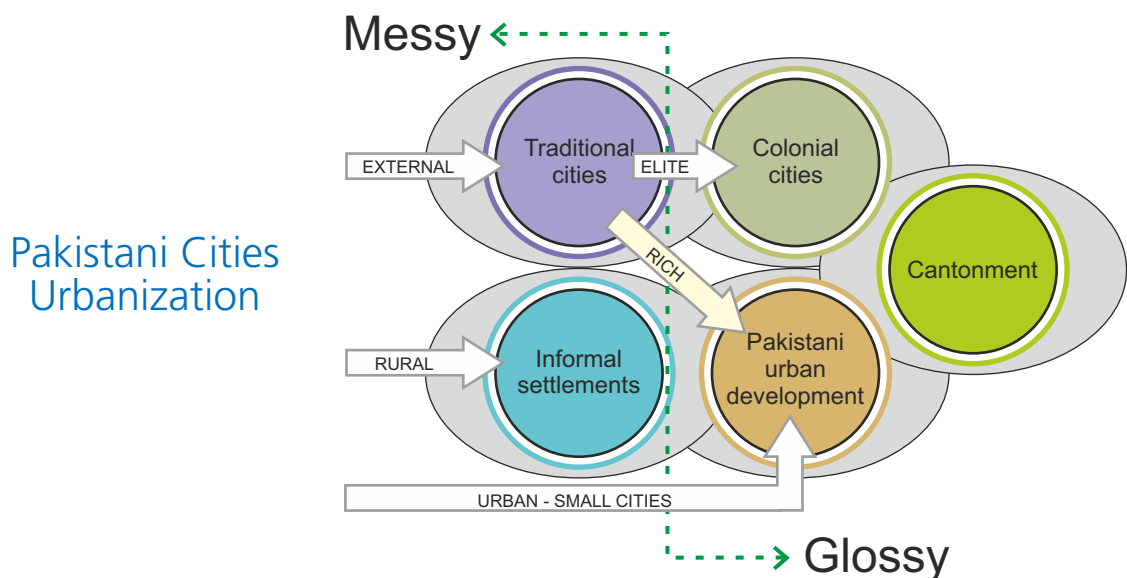
The greatest impact on the extent, direction and form of development of Pakistani cities has been because of migration. The first migration was internal: of people moving out from the traditional city to the colonial city; the second was a result of Independence, when there was a large influx of population from India, but emigration to India. To some extent, migrants coming to Pakistan were able to take over properties vacated by the emigrants, especially in Lahore, Karachi and Hyderabad. However, the main rural-urban migration mainly took place during the decades 1960-80 when Pakistan pursued a policy of industrialisation. As a result of which rural employment opportunities declined while urban public and service sector jobs grew. There then followed an influx of migrants (refugees) caused by events in Afghanistan and Bangladesh (refugees) as well as disasters in the Northern Areas (earthquakes), Sindh and Baluchistan (floods). More recently, there has been



## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

further rural-urban migration as the educated rural populations and those from smaller cities seek better job opportunities and access to education and other urban services in the larger cities.

The combined impact of these population movements has been an increased growth in the larger cities, just when their own natural population growth is beginning to have a major impact. Pakistan is poised on the verge of a renewed urban explosion, not so much from rural-urban migration, but due to the urban transformation of rural settlements and from intra-urban migration from smaller cities. These are relatively well-off, educated households, globally aware, politically and technologically savvy, and already have connections within the bureaucracy and other power centres. At the same time, for want of options within the existing cities, many are beginning to settle “outside” the cities, on the periphery and along transport routes. Real estate developers are fuelling these movements by converting agricultural land into housing “towns”. The poorer urban households and in-migrants can only find accommodation in (and on top of) existing informal settlements by infilling and vertical extensions. The result has been the continued development of a two-track urbanisation process: the Glossy showcased urbanisation and the Messy urbanisation that most governments tend to ignore, not least because they do not know have the resources to deal with these issues.



### 1.4 Pakistani Cities: Urbanization

The urban population of Pakistan has increased over the years both in terms of numbers and in proportion to the total population. It has increased from less than 45 million to 75 million, in absolute numbers, during the last two decades. The 2017 census showed that 36% of the total population lived in the urban centres or urban peripheries. In the period between 1941 and 1998 urban population increased more than 11-fold from 4 million in 1941 to 45 million in 1998. During

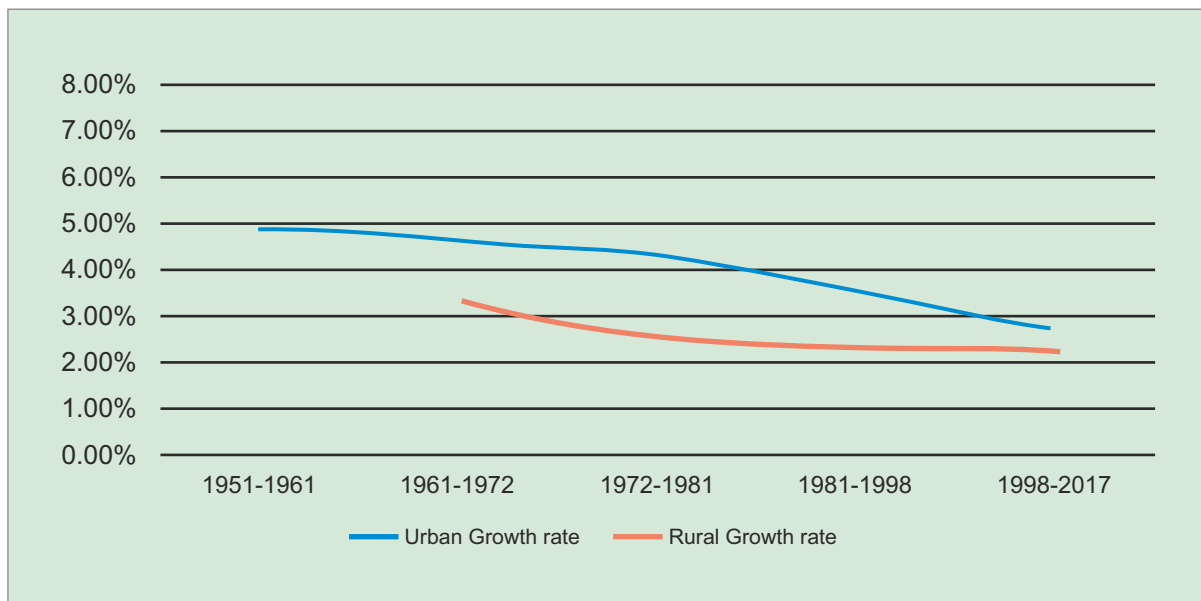


## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

the same period, the rural population increased by only three-and-half times. The urban growth rate has clearly outpaced the rural growth rate over the last 50 years. However, the urban growth rate has declined during the recent years. The provincial shares in the urban population follow the same hierarchy as their share of total population in the national population. Punjab has the largest urban population and Gilgit Baltistan has the smallest urban population. Among provinces, both Punjab and Sindh have 85% of the total urban population in urban places<sup>6</sup>.

Figure 1.5

## Urban and rural growth rates 1951-2017



Censuses in Pakistan usually underestimate the urban population and growth rate due to disagreements and debate over the definition of urban areas. A large number of researchers and demographers have pointed out the underestimation of Pakistan's urban population in the census<sup>7</sup>. 'Administrative Status' as an exclusive criterion in recognizing a place as urban in the 1981 census excluded city spill-over and expansion beyond the boundaries of designated urban units. It has been argued that the "rural-urban definition of the census measures attributes of administrative areas and does not adequately reflect the process of urbanization and agglomeration".



## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

Table 1.1

## Census definitions of urban

1951 Census	1961 census	Census 1981 and 1998	Census 2017
<p>“Urban Areas include (a) Municipalities, cantonments and notified areas irrespective of population size; (b) any other continuous collection of houses inhabited by not less than 5,000 persons and having urban characteristics.”</p>	<p>“Urban Areas include: (a) Municipalities as well as civil lines and cantonments not included within municipal limits; (b) any other continuous collection of houses inhabited by not less than 5,000 persons and having urban characteristics which the Provincial Director of Census decided to treat as urban for census purposes;” and in certain cases (c) “areas which had urban characteristics but less than 5,000 population.” Census of Pakistan 1961.</p>	<p>“Urban areas - All localities which are metropolitan corporation, municipal corporation, municipal committee or cantonment at the time of the census were treated as urban.” Census of Pakistan 1981 and 1998.</p>	<p>“Urban areas - All localities which are either metropolitan corporation, municipal corporation, municipal committee, town committee or cantonment at the time of the census were treated as urban.” Census of Pakistan 1981 and 1998.</p>

## 1.5 Pakistan's Cities: Population

The total number of cities and towns and their population has continually increased over the years. According to 2017 census, there are 624 urban places in Pakistan: Punjab had 257, Sindh 197, Khyber Pakhtunkhwa 62, and Balochistan 61. Punjab has 5 of the top 10 major cities thus making it a province with the most urban population.

The ten largest cities make up more than half of the total urban population. They have a population of over 40 million accounting for 54% of the national urban population. All these ten cities have population of more than a million (million-plus). Karachi, the former capital, with a total population of over 14 million people<sup>8</sup>, is the largest city of Pakistan. It is regarded as the economic hub of the country as most of the trade flows into the country through this city. It used to be the only port city for many years and still has the largest number of industries. Lahore, with a population of 11 million people, is the 2<sup>nd</sup> biggest city of Pakistan<sup>9</sup>. Its population has more than doubled since 1998. Karachi and Lahore make up one-third of the total urban population of the country. Other major cities

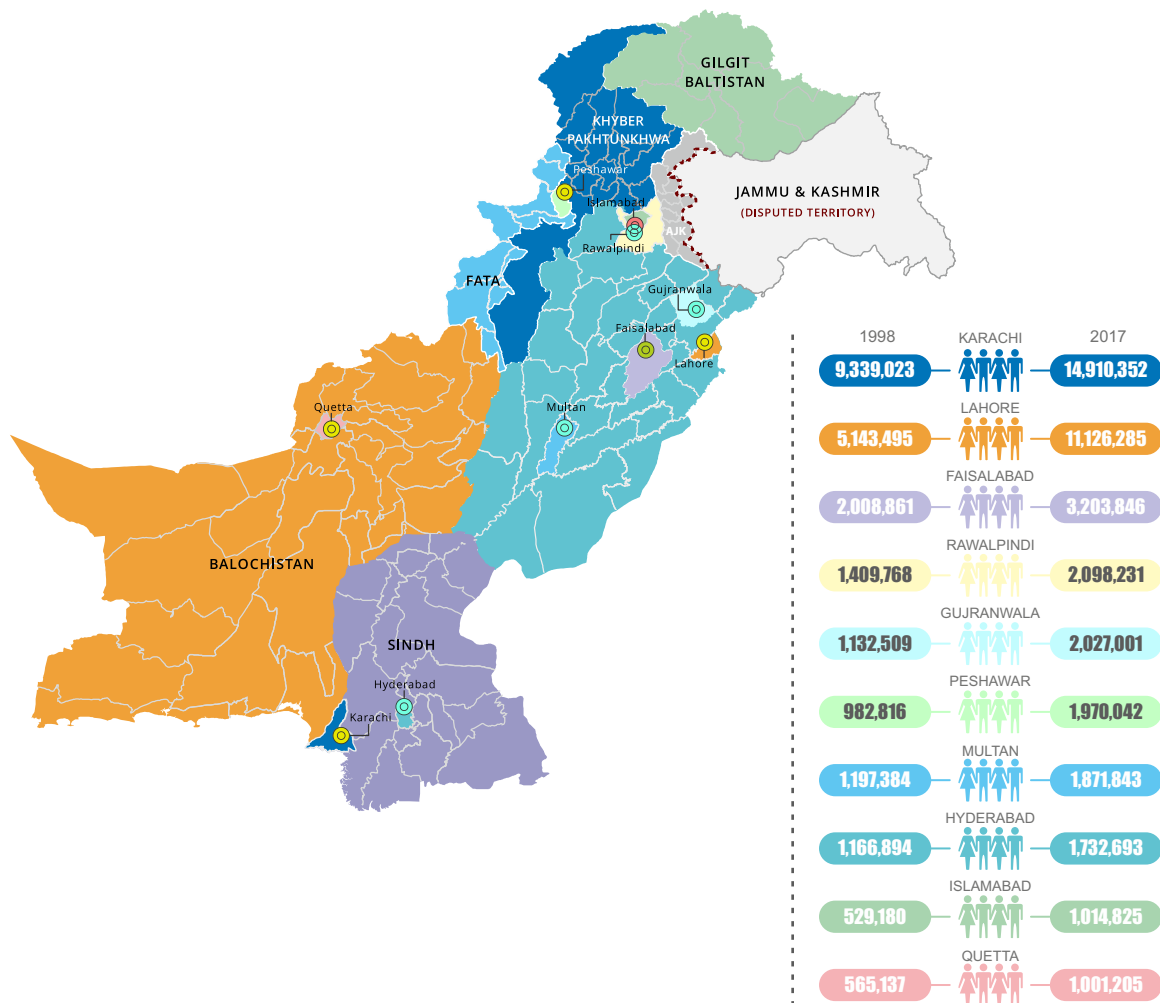


## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

include: Faisalabad, Rawalpindi, Gujranwala, Peshawar, Multan, Hyderabad, Islamabad Metropolitan area, and Quetta. The population of these cities is expected to grow significantly over the next few years. Karachi is expected to be 28 million, Lahore 16 million, Faisalabad over 6 million, Rawalpindi over 4 million, Islamabad, Gujranwala, Multan and Hyderabad over 3 million each, Peshawar 2.8 million and Quetta 2 million by 2030<sup>10</sup>.

Figure 1.6

## Population of major cities 1998 and 2017.



Over the years, different categories of urban places have gained major share of the urban population. Although the contribution of the ten largest cities to the national urban population has





## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

remained the same since 1951, the subcategory of “million-plus cities” has gained importance. Similarly, the urban units comprising “500,000” population has increased from over 28% in 1951 to over 51% in 1998. Another category, of over “100,000”, has also gained significance reflecting the emergence of large cities. The share of urban population in these cities has increased from 40% in 1941 to over 70% in 1998. The proportion of urban population in places of less than 10,000 has lost its significance; it has been reduced from 15.4% in 1998 to 1.14% in 2017. Similarly, the “10,000 -25,000” category is reduced from 16% to 7% over the same period. The same national pattern is seen in the provinces as well: the five 'million-plus cities' in the Punjab account for nearly 50% of the urban population of the province; while the two 'million-plus cities' in Sindh have over 67% of its urban population; Peshawar, the provincial capital of Khyber-Pakhtunkhwa, has nearly one-third of the total urban population of the province; while Quetta, the provincial capital of Balochistan, has over 29% of the total urban population of the province.

**Table 1.2** Urban population and main city population 2017

Province / City.	Urban Population	% of Provincial Urban	% of Provincial Total	Growth Rate (% p.a)
<b>Punjab</b>	40,387	100	53.43	3.0
• Lahore	11,126	27.5	14.72	4.1
• Faisalabad	3,204	7.9	4.24	2.5
• Rawalpindi	2,098	5.2	2.78	2.1
• Gujranwala	2,027	5.0	2.68	2.7
• Multan	1,872	4.6	2.48	2.4
<b>5 Main Cities</b>	20,327	50.3	26.89	3.3
<b>Sindh</b>	24,910	100.0	32.96	2.8
• Karachi	14,910	59.9	19.73	2.5
• Hyderabad	1,733	7.0	2.29	2.1
• Sukkur	720	2.9	0.95	4.1
<b>3 Main Cities</b>	17,363	69.7	22.97	2.5
<b>Khyber Pakhtunkhwa</b>	5,730	100.0	7.58	3.5
• Peshawar	1,970	34.4	2.61	3.7
• Mardan	439	7.7	0.58	3.1
<b>2 Main Cities</b>	2,409	42.1	3.19	2.9
<b>Balochistan</b>	3,401	100.0	4.50	4.2
• Quetta	1,001	29.4	1.32	3.1
• Khuzdar	277	8.1	0.37	6.0
<b>2 Main Cities</b>	1,278	37.6	1.69	2.6

Source: Based on Census of Pakistan 2017





## 1.6 Pakistani Cities: Growth Rate

Urban population growth is composed of (i) net natural increase; (ii) net migration-in-country rural-urban, urban-urban and international; and (iii) net reclassification-rural settlements being considered as independent new towns for administrative and census purposes (or in rare cases, existing towns losing their status as towns and being classified as rural) and the spatial expansion of cities and towns to annex surrounding areas within the city.

The census data in Pakistan estimates natural increase, in-country migration, and the classification as new towns (and vice versa). However, international migration does not get adequate treatment and representation in the census data. Information on annexation of areas into existing cities and towns is only possible to obtain through detailed computations for each parcel of area around the city. Therefore, in the estimation of components of growth of city and town population presented below, the effect of annexation by existing cities and towns is not presented separately.

Following the mass migration at Independence, natural growth of urbanization has been the most significant factor, which contributed over 78% to urban population growth during 1972-81 and 70% during 1981-98<sup>11</sup>. The natural increase during 1962-65 is estimated as 2.7% per year compared to the 1961-72 increase of 3.04% per year as recorded in the 1972 census. However, PDS reported a gradual decline in the rates in the period between 2007 and 2008. The share of natural increase and internal migration for the last two inter-census periods (1972-81 and 1981-98) was broadly similar in Pakistan as a whole. Significant differences in the contribution of natural increase to city and town population were seen in case of Balochistan province and Islamabad Capital Territory during 1981-98. The large internal migration rather than natural increase account for 38% and 50% in the urban population of Balochistan and Islamabad, respectively. However, a very low internal migration was observed in the Punjab and Khyber Pakhtunkhwa provinces. Majority of people migrate from KP to Karachi and that is considered one of the main reasons behind low internal migration within KP.

A significant increase in urbanization as a result of 'reclassification', i.e. rural settlements granted administrative status and considered as towns, was observed during 1981-98. Except Sindh, the rest of the provinces have shown a major increase: Punjab (11.3%), Khyber Pakhtunkhwa (18.4%) and Balochistan (20.9%).



## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

Table 1.3

Composition of urban growth in provinces 1972-98

Inter Census Period	Area	Percentage		
		Natural Increase	Internal Migration	New Urban Places
<b>1972-81</b>	Pakistan	78.4	19.1	2.6
	Pakistan	70.3	20.1	9.7
	Punjab	74.2	14.5	11.3
	Sindh	70.6	24.8	4.5
<b>1981-98</b>	Khyber Pakhtunkwa	70.0	9.1	20.9
	Balochistan	43.7	37.9	18.4
	Islamabad Capital Territory	35.1	64.9	-

## 1.7 Pakistani Cities: Migration

Migration has a significant impact on the extent, direction and form of development. The first migration was “internal” (within the same cities): of people moving out from the traditional city to the colonial city; the second as a result of Independence, when there was a large influx of population from India to Pakistan and vice versa. To some extent, in-migrants were able to take over properties vacated by out migrants, especially in Lahore, Karachi and Hyderabad. The third, which was the main migration, was rural-urban, took place during the period between 1960 and 1980 when Pakistan pursued a policy of industrialisation, which resulted in the decline of job opportunities in the rural areas and better economic prospects attracted people to the urban units. Migrations were not always spurred by economics reasons alone: man-made and natural disasters also contributed to it immensely. The war and terrorism in Afghanistan; the earthquake in the Northern Areas; and floods in Sindh and Baluchistan contributed much to urbanization through mass migration. Disparities in Education and other facilities also add to rural-urban migration. Many educated people from rural areas or smaller cities migrate to urban areas and bigger cities in search of better job opportunities and facilities. These population movements have contributed exponentially to urbanization.

Pakistan is currently also home to 1.7 million Refugees<sup>12</sup>. While this number is down from a high of over 3 million, it is still one of the largest in the world. While most of the refugees from Afghanistan settled in camps on the urban peripheries, tens of thousands settled in Pakistan's major cities: Islamabad, Peshawar, Lahore, Quetta, and Karachi. The influx of Afghans in the late seventies and afterwards has been a significant factor in changing the demography of Khyber Pakhtunkhwa, Balochistan, and Karachi. A large proportion of them live in and around the cities and towns in



## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

Khyber Pakhtunkhwa, particularly, in Peshawar, Nowshera, Mingora and Haripur. Quetta, the capital city of Balochistan, contains major concentrations of Afghans. They have become part of the social fabric in the city population and they compete for employment and services within these areas and also they contribute to the local economy as entrepreneurs and consumers.



Katchi Abadies (Islamabad)

### 1.8 Pakistani Cities: Expansion and Spatial Growth

The pattern of the spatial growth of urban areas has been the subject of some discussion over the years. Pakistan's spatial development is very different; this phenomenon which leads to the emergence of significant urban agglomerations can be summarized<sup>13</sup>:

- City populations have extended outside the administrative boundaries of the municipalities to infill within the developed areas of the city and densification. This is not just a growth of informal settlements but also of the public and 'formal' private sectors which lie outside the city boundary.
- Settlements peripheral to the cities, capitalizing upon their proximity, transport links, employment opportunities and access to urban services, have grown substantially. They have acquired some 'urban characteristics', but they do not have any institutional arrangement for provision of basic civic services.



## CHAPTER 1- AN OVERVIEW OF URBANISATION IN PAKISTAN

- Ribbons of development along the highways, between major urban centres and industrial satellite areas, have developed largely due to accessibility to transport links, availability of skills and services, and tax and tariff incentives. This kind of development can be seen along the highways and roads connecting major cities throughout the country. A review of occupational structures shows that people residing in the rural areas of these districts have a strong occupational interface with the urban areas.
- A separate, but related, phenomenon is also apparent in the more rural areas, where the population settlement pattern shows higher densities of population along the major road corridors. These roads provide easier access to the higher-level services in the cities and towns and will possibly play a significant role in the transformation of the rural areas into urban areas.
- Increased urbanization, connectivity and integration of services and industries across city boundaries are some of cumulative effects of these developments which have resulted in the emergence of clearly identifiable urban agglomerations. Maps showing physical growth patterns of ten selected cities are presented at Annex II



# Chapter 2

## ECONOMY

Though urban areas make by far the largest contribution to Pakistan's economy - and this is recognised and responded to by the thousands of people who regularly come to cities looking for employment and economic opportunities-the cities and city governments have no mandate or response to making cities more attractive places to invest in. Indeed, economic data is rarely compiled or desegregated to the city level, and that makes it very difficult to assess economic performance or potential. One indicator of this is that fastest growing sector is neither industry nor transport but the service sector, and within that, it is the "informal" sector, which is neither regulated nor facilitated by public policy or intervention

## URBAN ECONOMY





## 2.1 Pakistan's Economic Structure

Pakistan is a lower-middle-income economy with a per capita income of US\$ 1,629<sup>14</sup>. The GDP growth rate of the Pakistan in 2016-17 was 5%. The average annual GDP growth rate during last ten years was 3.7%. Traditionally an agricultural country, Pakistan is moving to a more service-based economy. The share of the services sector in total GDP is almost 60% and increased by 7 percentage points during 1999-00 to 2016-17. The change in sectorial shares indicates the rapid development of the non-agricultural sectors: industry and services. Table 2.1 below shows the sectorial shifts in GDP composition since 2000.

**Table 2.1**

**Sectorial shares in GDP (% at constant basic prices)**

	1999-2000	2009-10	2016 -17
<b>Agriculture</b>	27.08	22.03	19.53
<b>Industry</b>	19.31	21.04	20.88
<b>Services</b>	53.61	56.93	59.59

Source: Pakistan Bureau of Statistics

During 2005-06 to 2016-17, on average almost 1.1 million people entered into the labour market every year. The unemployment rate in Pakistan is said to be only 5.9%<sup>15</sup> because the employed labour force is overestimated since it includes unpaid family workers who contribute to the agriculture sector employment<sup>16</sup>. The agriculture sector absorbs 42% of the total labour force whereas the services sector absorbs 34%. Due to the relatively high demand for skilled labour, the share of the services sector in total employment has also decreased slightly during the last ten years. The industrial sector has shown an increase in employment share but its share in GDP is nearly constant (See Table 2.2 above). This shows that an increase in labour has not had any impact on productivity.



Raja Bazar (Rawalpindi)



## CHAPTER 2 - URBAN ECONOMY

Table 2.2

## Sector wise employment shares (%)

	2005-06	2010-11	2015-16
Agriculture	43.4	45.1	42.3
Industry	20.7	21.2	23.6
Services	35.9	33.7	34.2
Total Employed (million No)	47.4	54.4	57.4

Source: Various issues of Pakistan Economic Survey

Pakistan, like many of its neighbouring countries, is believed to have a large informal economy estimated to be around 18.2% to 47.6% of the GDP<sup>17</sup>. In terms of employment the share of informal employment in non-agriculture employment is 73%. In the last ten years on an average, the informal sector absorbed 470,000 workers annually<sup>18</sup>. This is 2.5 times more than the employment in the formal sector<sup>19</sup>.

One of the major challenges to the economy of Pakistan is the consistent level of trade deficit. USA is the largest export market for Pakistan and China is the largest import market for Pakistan. Remittances are one of the major source of foreign currency in Pakistan.

Figure 2.1

Exports, imports, trade deficit and worker remittances  
(as % of GDP)

Source: Economic Survey of Pakistan 2016-17



Table 2.3

## Major export and import partners

Major Export Markets	Exports % Share	Major Imports Markets	Imports % Share
USA	17	China	27
China	8	UAE	12
Afghanistan	7	Saudi Arabia	5
United Kingdom	8	Kuwait	3
Germany	5	Indonesia	5
U.A.E	4	India	4
Bangladesh	3	U.S.A	4
Italy	3	Japan	4
Spain	4	Germany	2
France	2	Malaysia	2
Other	39	Others	32
<b>Total Exports US \$ Billion</b>	20.8	<b>Total Imports US \$ Billion</b>	32.5

## 2.2 City Economies

Pakistani cities vary in terms of their size of economy, employment and tax revenues. Services and industry are the major employment sectors in Pakistani cities. (See table 2.4) The share of the service economy in the cities is larger than the share of services in the national economy. The economies of Provincial headquarters and the Federal capital are more service-oriented than other cities. With the rising share of services, direct tax collection has increased, primarily because of the withholding-tax regime.

Since information on the GDP of cities, migration, and employment status is not routinely collected, the PSLM 2014-15 data is one of the few sources that shed light on city economies. This is the only survey that presents district level data and provides information on income and employment. The collection of city level data has not yet been institutionalized.

### 2.2.1 Contribution of Cities to the total Federal Tax Revenue

Pakistan generates 95% of its total federal tax revenue from its ten major cities through direct and indirect taxes<sup>20</sup>. While the share of direct and indirect taxes vary, Pakistan's cities are key contributors





## CHAPTER 2 - URBAN ECONOMY

to federal revenue generation. Karachi contributes 55%, Islamabad 16%, and Lahore 15%. Much of this tax revenue can be associated with large services such as telecommunication, finance and insurance, transport and manufacturing industry, as well as higher per capita income, in cities as compared to the rural areas.

### 2.2.2 Cities and their Per Capita Income

The average urban per capita income in Pakistan is PKR 46,000. However, 7 out of the 10 major cities have larger per capita income than the average. Rawalpindi has the largest per capita income of PKR 82,000 while Quetta has the lowest per capita income, which is PKR 37,000. Islamabad and Peshawar have the 2<sup>nd</sup> and the 3<sup>rd</sup> highest per capita income of PKR 70,000 and PKR 67,000 respectively. People in Karachi and Lahore, Pakistan's two most populous cities earn, on average, PKR 56,000 and PKR 60,000 per annum, respectively. (See table 2.4)

### 2.2.3 Cities for Business

Among the ten major cities, Faisalabad is ranked 1<sup>st</sup> on the 'Ease of doing business index' which means Faisalabad is more likely to be competitive and do better in terms of attracting foreign and domestic investment. On the index, Lahore is ranked the 3<sup>rd</sup>, Islamabad the 4<sup>th</sup>, and Karachi at the 9<sup>th</sup> position. Businesses face 47 types of taxes in Pakistan; however, the share in profit from these taxes is a mere 32%. There are 10 procedures for starting a business in the cities, but their cost varies in terms of time and money. For example, Gujranwala needs, on average, 24 days to start a business whereas the same business can be started in 16 days in Islamabad. Similarly, the cost of moving a container for exports is the highest in Lahore (US\$ 791) and the lowest in Karachi (US\$ 611). Moreover, the cost of imports is also higher in Lahore as compared to Karachi. A total of US\$ 1,088 is required to move a container of imports in Lahore and US\$ 680 in Karachi to do the same. In addition to that, enforcing contracts is even more difficult in Pakistani cities. It can take 2,190 days, on average, in Peshawar to enforce a contract and 730 days in Faisalabad<sup>21</sup>.



Samundri road (Faisalabad)



## CHAPTER 2 - URBAN ECONOMY

### 2.2.4 Employment in Cities

The services sector drives the employment figures in the cities. In every major city more than 50% of the total employed persons are in the services sector. Islamabad, with an 87% share in the services sector, has the highest ratio as compared to the other major cities of the country. Peshawar and Rawalpindi have the 2<sup>nd</sup> and the 3<sup>rd</sup> major shares in the services sector, respectively. Some of the cities have a larger industrial base and hence absorb more labour force into industrial sector. For instance, 49% of the total employed persons in Faisalabad and Gujranwala work in the industrial sector. The share of agricultural employment in the cities is very low.

### 2.2.5 Urban Poverty

Poverty in urban areas is a major and very visible phenomenon. 6 out of the top 10 major cities have double-digit poverty figures: Quetta, with 46%, has the highest poverty rate, while Multan, has 35%, Peshawar 31%, Islamabad, with 3%, has the lowest poverty rate. Karachi and Lahore, Pakistan's two most populous cities have 4.5% and 4.3% poverty rates, which are relatively low figures.



Raja Bazar (Rawalpindi)

Table 2.4

## Pakistan's ten major cities and their economies

City	Contribution to federal tax revenue	Per capita income (PKR)	Major industries	City employment rate	Poverty rate	Major employment sectors	Ease of doing Business rank
<b>Karachi</b>	55%	56,000	Coke and Petroleum, Chemical Products, Textiles, Transport, Food and Beverages etc.	36.8%	4.5%	Services 64% Industry 36%	9
<b>Lahore</b>	15.1%	60,000	Food and Beverages, Textile, Paper Products, Rubber and Plastic Products etc.	36%	4.3%	Services 66% Industry 33% Agriculture 1%	3
<b>Faisalabad</b>	1%	56,000	Textiles, Food and Beverages, Wearing Apparel	36.9%	19.4%	Services 51% Industry 49%	1
<b>Rawalpindi</b>	2%	82,000	Petroleum, Chemical Products, Food and Beverages, Textiles.	33.4%	7.5%	Services 84% Industry 15% Agriculture 1%	10
<b>Gujranwala</b>	0.5%	43,000	Food and Beverages, Basic Metals, Textiles.	33.5%	14.0%	Services 51% Industry 49% Agriculture 1%	6
<b>Peshawar</b>	2%	67,000	Food and Beverages, Chemical Products, Electrical Machinery and Transport Equipment, Furniture.	29.6%	31.5%	Services 86% Industry 14%	8
<b>Multan</b>	2.9%	44,000	Textiles, Food and Beverages, Chemical products, Leather Products.	39.1%	35.7%	Services 67% Industry 32% Agriculture 1%	2
<b>Hyderabad</b>	0.9%	55,000	Textiles, Food and Beverages, Chemical Products, Machinery and Transport Equipment.	38.4%	25.7%	Services 64% Industry 35% Agriculture 1%	13
<b>Islamabad</b>	16.1%	70,000	Food and beverages, Nonmetallic Minerals, Basic Metals	35%	3.1%	Services 87% Industry 13%	4
<b>Quetta</b>	0.9%	37,000	Coke and Petroleum, Chemical products, Transport Equipment, Food and Beverages.	31.5%	46.3%	Services 74% Industry 22% Agriculture 4%	12

Source: FBR Year book 2014-15, PSLMS 2014-15, CMI 2005-06, World Bank doing business in Pakistan, UNDP Multidimensional Poverty in Pakistan

\*District wise poverty head count \*\*for top 13 cities of Pakistan



## 2.3 City Economic Profiles

### Karachi -The Port City

With a population of 14.9 million, Karachi is Pakistan's biggest city contributes more than half of the total federal tax revenue. Being a port city, the location of Karachi gives it a comparative advantage over other cities as most of Pakistan's international trade passes through Karachi port, making it the business and financial hub of the country. The city's main industries include coke and petroleum, chemical products, textiles, transport, food and beverages, wearing apparel, and equipment, non-metallic, mineral and basic metals. Of the city's total labour force, 37% are employed, out of which 64% are employed in the services sector while the rest, 36%, are in the industrial sector. With a population of about 15 million, the per capita income of the city is PKR 56,000, which is above the average urban per capita income of PKR 46,000. The shares of direct taxes and indirect taxes in Karachi's total tax revenue collection were 35% and 65%, respectively.

### Lahore -The Affordable City

With a population of 11.1 million, Lahore is Pakistan's second largest city and has seen the lowest rise in general prices as compared to all the major cities during 2014-15. This makes Lahore one of the most affordable cities. However, despite being the 2<sup>nd</sup> largest city, Lahore's contribution to the total federal tax revenue is a mere 15% which is less than the contribution of Islamabad. People in Lahore, on average, earn more than PKR 60,000 per annum, which is 28% higher than the average urban per capita income. Lahore ranks in the top 3 on the 'ease of doing business' ranking. Of the total city labour force, 36.6% are employed, out of which, 66% are working in the services sector, 33% in the industrial sector and 1% in the agriculture sector. Major industries include food and beverages, textiles, paper and paper products, rubber & plastic products and machinery and electrical apparatus. The share of direct and indirect taxes in total tax collection is 45% and 55%, respectively.

### Faisalabad -The Industrial Hub

With a population of 3.2 million, Faisalabad is third largest city of Pakistan and it is ranked 1<sup>st</sup> on the 'ease of doing business index' thus making it the most attractive destination for foreign and domestic investment. Faisalabad is generally regarded as an industrial city with the presence of 6.9% of the overall large-scale manufacturing in the city. Major industries include textiles, food and beverages and wearing apparels. The large share of agro based industries shows huge demand for agriculture intermediates by the city and strong urban rural linkages. The employment rate in Faisalabad is 37% out of which 51% are in services sector and 49% in the industrial sector. Per capita income is PKR 56,000; which is greater than the national urban average. The share in total federal tax revenue is only 1%. The lower tax collection is mainly due to the predominant presence of agro-based and export industries which are mostly exempted from taxes. The share of direct and indirect taxes in the total revenue is 68% and 32% respectively.

### Rawalpindi - The Richest City

With a population of 2.1 million, Rawalpindi, with the highest per capita income of PKR 82,000, is the richest among the ten major Pakistani cities. This is significantly higher than the national





## CHAPTER 2 - URBAN ECONOMY

average urban per capita income of PKR 46,000. However, Rawalpindi is also the most expensive city to live in among the ten major cities. The general prices increased the most in Rawalpindi during 2014-15. The largest sector of Rawalpindi's economy is the services sector, which employs almost 84% of the total employed persons. Rawalpindi's proximity with Islamabad makes it a hub of the services sector, which also contributes to the relatively higher per capita income. Most of the people who live in Rawalpindi work in Islamabad's services sector. The city's employment rate is 33%. The share of Rawalpindi in total federal taxation is 2% while the share of direct and indirect taxes are 65% and 35%, respectively.

### Gujranwala -The Informal Economy

Gujranwala is a medium-sized city with a total population of 2 million, which is 2.6% of the total urban population. The per capita income of the city is PKR 43,000 which is 8% lower than the national urban per capita income. Gujranwala has a large informal sector, which employs most of the labour force. According to the official figures, 33.5% of the total city labour force is employed in the formal sector, out of which the share of services is 51% while that of industry is 49%. The main reason for the low per capita income is the presence of small-scale industry in the city, the productivity of which is less than the large-scale industries such as manufacturing, food and beverages, basic metals and textile. Gujranwala contributes only 0.5% revenue to the total federal tax collection. Its informal economy is the main reason of the low share in tax collection. The shares of direct and indirect taxes are 56% and 44% respectively.

### Peshawar-A Services Based Economy

With a population of almost 2.0 million, Peshawar is the largest city of KP province and has the third highest per capita income among the major cities. Of the total employed person, 86% are working in the services sector. This makes Peshawar the second biggest service economy in the country. The services sector figures are driven by social and community services. On average, a person in Peshawar earns PKR 67,000 per year. However, Peshawar has the lowest employment rate among the major cities with 29% of the total labour force employed. The share of industry is very low, indicating the low production base of the city. The share of Peshawar in national large-scale manufacturing is only 0.6%. Major industries include: food and beverages, electrical machinery, chemical material, and furniture. The presence of the furniture industry shows its links with forestry. The federal tax collection from Peshawar is 2% of the total tax revenue. The share of direct taxes is 53% and the share of indirect taxes is 47%. The presence of big service economy is the main reason of relatively higher share in direct taxes

### Multan-Smaller City, Larger Contributor

Multan is Pakistan's 7<sup>th</sup> most populous city with a total population of 1.9 million and has a total per capita income of PKR 44,000, which is 7% less than the average urban per capita income<sup>22</sup>. However, despite the low per capita income, the share of Multan city in total federal tax revenue is the 4<sup>th</sup> highest among the ten major cities. Multan contributes 2.9% to the total federal tax revenue. Its share in direct and indirect taxes is 40% and 60% respectively. The higher share of indirect taxes indicates the presence of a large production base because most taxes are imposed on goods production. The top four major industries include: textiles, food and beverages, chemical



## CHAPTER 2 - URBAN ECONOMY

Industry and the leather Industry. The textile industry is the largest in the city because south Punjab has the highest share in cotton production. Multan has the highest employment rate among all the ten major cities with a total employment rate of 39%. Of the total employed, the share of services sector is 67%, industry 32%, and agriculture 1%.

### Hyderabad-Higher Incomes, Lower Contributions

With a population of 1.7 million, Hyderabad has a higher per capita income than the average urban per capita income. It is also the least expensive city to live in. Among ten major cities, Hyderabad has the 2<sup>nd</sup> highest employment rate of 38%. Of the total employed, 64% work in services sector, 35% in industrial sector and 1% in agriculture. Hyderabad possesses 2.6% of the total national large scale manufacturing industry. Major manufacturing includes textile industry, food and beverages, chemical industry, machinery and transport equipment. The city's share in total federal tax revenue is only 0.9%. The share of direct and indirect tax is 54% and 46% respectively. Hyderabad is ranked 13<sup>th</sup> "on the ease of doing business index" thus making it difficult for the city to compete with other cities for investment.

### Islamabad-The Capital

With a population of 1 million, Islamabad has the largest service sector economy with 87% of the total employed persons working in the service sector. Islamabad is also the 2<sup>nd</sup> highest contributor to the federal tax revenue (direct and indirect) collection with a total contribution of 16%. The share of direct and indirect taxes in total revenue is 51% and 49% respectively. It has the 2<sup>nd</sup> highest per capita income of all the major cities with PKR 70,000. The employment rate is at a decent 35%. The industrial sector employs 13% of the total employed labour force. The dominance of services sector and the lowest share of industry in employment indicate the small industrial base of the city. The share of Islamabad in total industrial production is only 0.8%. Major industries include food and beverages, non-metallic minerals, basic metals and electrical machinery. It is ranked 4<sup>th</sup> on the 'ease of doing business index'.

### Quetta-The Smallest Economy

With a population of 1 million, Quetta is the capital of Balochistan province. It has the lowest per capita income among the major cities i.e. PKR 37,000 which is 22% lower than the average urban per capita income of PKR 46,000. Employment rate is the 2<sup>nd</sup> lowest among the major cities with a total employment rate of only 31%. Most of the employment is concentrated in the services sector, which employs 74% of the total employed persons. The share of industrial sector in the total employment is 22%, which is the third lowest among the ten major cities. The share of Quetta in large-scale manufacturing is only 0.6%, reflecting its small industrial sector. The major industries include petroleum and chemical, transport and equipment, and food and beverages. The small size of the economy and small share of large-scale industry are the main reasons for the low share of Quetta in the federal tax revenues, which is the lowest among all the cities. The total revenue collection from Quetta is PKR 24 billion and the shares of direct and indirect taxes are 63% and 37% respectively.



# Chapter 3

## TRANSPORT

Pakistani cities rely almost exclusively on private transport for their mobility needs. However, by far the major share of investment and attention has been in channelling public funds to private transport through major road construction projects, with inadequate consideration of the needs of pedestrians or of women generally. Private, individual transportation cars and motor cycles-dominate, and even public transport is largely based on buses and mini-buses and rickshaws operated by private operators, though Metro and RBT systems have been introduced recently in a few cities. The biggest obstacle to efficient transport flow in Pakistani cities continues to be the lack of planned transport infrastructure, poorly implemented regulations and traffic management, parking space-on and off street and the persistent and largely unchecked selfish behaviour of car owners. With cities getting ever larger, effective and efficient urban transport will become even more urgent.

## URBAN GOVERNANCE AND TRANSPORT





## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

### 3.1 Urban Management

Historically, cities in Pakistan existed as a combination of administrative centres, local markets, trading places and fortification for defence purposes. For instance, cities such as Lahore and Multan were centre of arts, crafts and religion while cities of Peshawar and Karachi were transit trade points and military cantonments. Under the British, the cities were administered by the Provincial Governors including land management, water supply and construction. However, after independence, and as the urban population increased over time, first because of migration from India and then because of high population growth rate and rural-urban migration, the urban management structure changed as well.

Today, the urban management functions of Pakistani cities are dispersed among several institutions, mostly semi-autonomous bodies, functioning under Provincial Government departments including the municipality or elected local councils. The main urban management/administrative bodies responsible for different aspects of city management are shown in the Table below

**Table 3.1** Urban governance bodies and their functions/mandates

Agency	Function	Status
<b>Municipality</b>	Responsible for supply of water, road maintenance, street lighting, drainage and solid waste management, safety and health and education. In larger cities, also responsible for local transport, managing parks and zoo,	Have elected councils but administratively part of the provincial local government department. Limited to municipal limits and not able to recruit staff, raise funds and pass administrative order independently in their own jurisdiction.
<b>District Administration</b>	Responsible for maintenance of law and order, local magistracy, overseeing land management and coordinating urban services delivery.	The hierarchy of district administration starts from the Chief Secretary of the Province, to Commissioner at Divisional level, Deputy Commissioner (DC) at District level and Assistant Commissioner at tehsil or town level. The DC is the main focal point for all the development and non-development
<b>Development Authority</b>	Main function is to plan and implement land development schemes. Development Authority have different roles including building controls and supply of services. Also prepares 10-15 years master plans for the city.	They are semi-autonomous bodies under the Provincial Department of Housing and Town Planning. Capital Development Authority of Islamabad works under the Federal Cabinet. Major cities have one Development Authority. Karachi has 3 Development Authorities - Karachi, Malir and Lyari



## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

<b>Water and Sanitation Authority</b>	<p>Main function is development of infrastructure for water supply and sewerage system.</p> <p>Also responsible for supply of water and maintenance of sewerage and recovery of costs</p>	<p>They are semi-autonomous bodies under the Development Authority. In Karachi, the Water and Sewerage Board is a semi autonomous body separate to the Karachi Development Authority</p>
<b>Cantonment Board</b>	<p>Main function is to provide housing and services for the armed forces. Lately, the cantonments have opened up their land and acquired additional land for Defense Housing Officers housing schemes.</p>	<p>Operates under the Federal Ministry of Defence</p> <p>Committee set up under the Core Commanders of Army and Heads of Naval and Air Force in the region oversees operation and management of housing schemes in their respective cantonments</p>
<b>Industrial Estate</b>	<p>Manages industrial areas including land development and infrastructure construction and maintenance. Also does retailing of water supply and other services.</p>	<p>Many of the Industrial Estates' building control and development are responsibility of the development authority</p> <p>Sindh Industrial Trading Estate (SITE) is a corporate body of the Provincial Government</p>
<b>Utility Organizations</b>	<p>Provides mainly electricity and gas. Acquires land, builds infrastructure and regulates and recovers utility charges</p>	<p>Corporate bodies with Federal Government representation</p>
<b>Disaster Management Authority</b>	<p>Disaster response and risk management</p> <p>Coordinates response and risk management with other government departments</p>	<p>National and provincial government authorities.</p> <p>Works through district government at local level and through provincial government departments</p>
<b>Federal Government Organizations</b>	<p>Provision of services related mainly to transport and trade activities</p> <p>Pakistan Railways is major example. In Karachi, the Green Line Bus Rapid Transit is an example</p>	<p>Operates under Federal Ministries</p>
<b>Provincial Government Organizations</b>	<p>Provision and management of services, mainly related to transport, social services, etc.</p> <p>Provincial health and education and transport departments are examples</p>	<p>Works under provincial ministries and have own budgetary provisions and reporting hierarchy</p>
<b>Trade bodies</b>	<p>Regulates occupations, professions and trades. Includes market committees that maintain markets and regulates safety conditions</p>	<p>Registered with federal and provincial governments under different laws</p> <p>Autonomous bodies with own elected representatives</p>



## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

### 3.2 Urban Planning

Most of Pakistan's major cities have large informal settlements and have grown beyond the boundaries of the planned urban areas. The new, planned city of Islamabad has largely managed to avoid its share of informal development only because of its proximity to Rawalpindi. The responsibility for urban planning in Pakistani cities is of each city's City Development Authority. The City Development Authority was originally established by the Provincial Housing and Town Planning Department to facilitate urban expansion through the development of new areas of land, which are designated as "housing schemes". Later they took on the task of preparing city master plans (usually for a period of 10-15 years) to provide a framework for their housing schemes. The City Development Authority coordinates with other provincial departments for the provision of services and utilities, land development and transportation, etc. The actual schemes are designed and implemented by private sector contractors.



Khayaban-e-Sir Syed (Rawalpindi)

Pakistani cities have witnessed increased rural to urban migration over the years. The peripheral areas of cities transformed and developed along the main roads. The influx of people into cities often settled in Katchi Abadis (informal settlements), and later in more formal, planned townships and housing schemes (mainly for the middle and upper income groups) such as Bahria Towns, DHA and Cantonment areas. These townships have extended the de facto urban limits making it difficult for the authorities to guide the urban growth as planned. For example, in Islamabad, housing growth has created demand for infrastructure and services in directions other than the planned growth of Islamabad's sectors.





## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

While the City Development Authorities are mandated to make city plans, it would be more effective if representative municipal councils were also involved and participated in the urban planning and development process. Municipal councils have limited say in the planning and management of Pakistani cities. City planning and development are based on discretionary measures taken by the Provincial and Federal Governments. The municipality is given the responsibility of urban management, but the management decision-making, including financial decision-making, is taken by various other government departments including the district administration. Consequently, private and individual actions and interventions and government administration do not come together, but rather, conflicting situations are created that require crisis management more than planned interventions. Involving the municipal councils in the urban planning and management is crucial to integrating public concerns into development projects and their implementation.

### 3.2.1 Land Management

Public land ownership in urban areas is fragmented. Institutional land ownership is divided between municipality, development authority, cantonments, industrial estates, provincial government departments such as the Katchi Abadis department, and Federal Government departments such as Pakistan Railways. Each agency has building, land use and environmental control provisions of their own and is autonomous in carrying out development works and maintaining the facilities within their jurisdiction. Utility companies like gas and electric supply are companies with shares held by the Federal Government and they have their own management and planning process and standards for construction of infrastructure. As a result of this fragmentation, institutional control of land-use has become difficult and speculative market trends have taken control. This is leading to unplanned growth creating traffic problems and limiting infrastructure and services development.

### 3.2.2 Financing Urban Management and Development

Urban areas receive development and non-development costs through provisions in the provincial budgets. Major development projects financed by Federal Government are implemented through Federal Government institutions and corporations, at times formed particularly for the project. The Green Line Bus Company in Karachi is an example. Since the Federal and provincial governments are responsible for the collection of sales taxes, their disbursement back to the local government is based on an allocation formula of the provincial government. The investment into infrastructure and services are through the provincial government departments like physical planning and development, housing, health, etc. Development budgets are made part of Annual Development Program (ADP). The cities also recover local taxes in the form of fees and charges such as parking fees and licensing charges, etc. These are mainly used for regular maintenance and partial payment of operational costs. In cases like the parking fees, the contracts are awarded through auction.



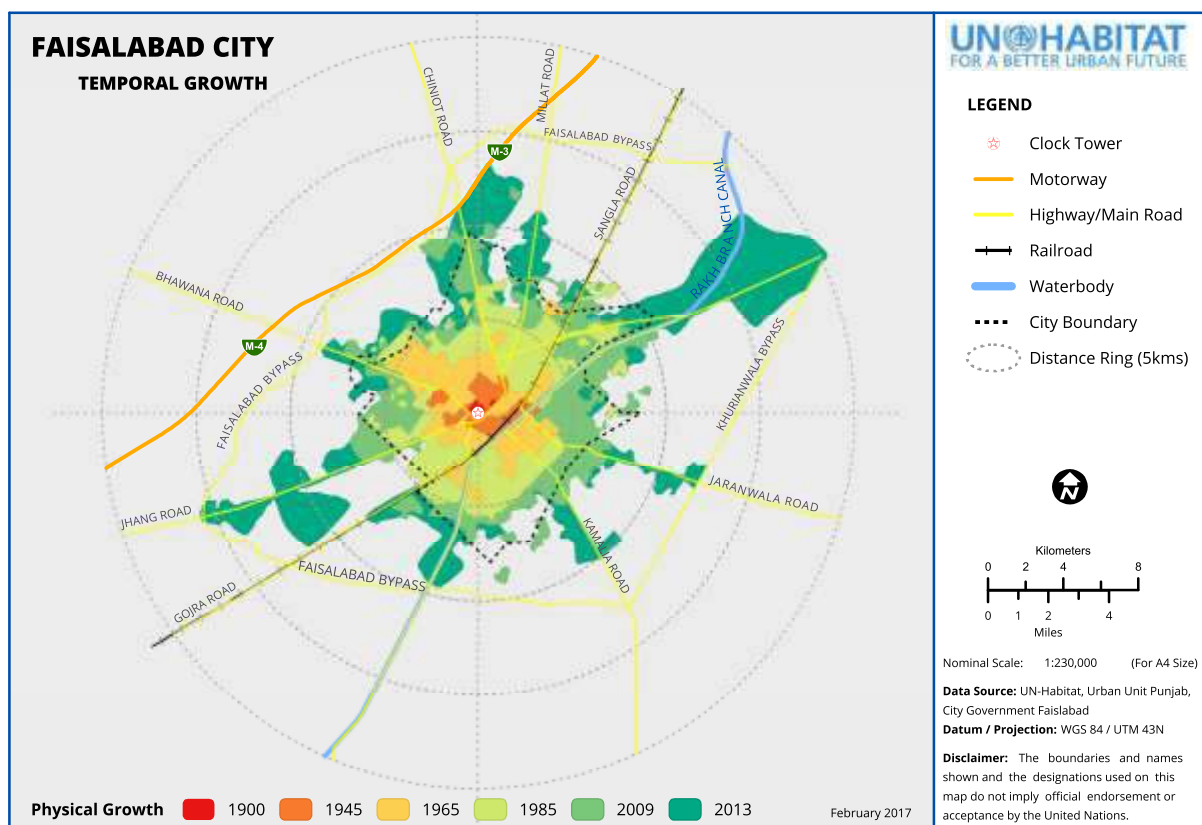
## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

### 3.2.3 Urban Data

Urban planning and management is limited due to the lack of relevant information and statistical urban data. One of the key limitations is that the city planning cycles do not take census dates into account. Subsequently, the base data used for urban planning are projected and at times extrapolated. Also planning models used for urban planning and management in Pakistan are based on external models of development, mostly by professionals trained in planning and development used in other countries. Planning based on external models and inadequate data resulted in planning decisions that are difficult to implement, high cost and depends on external assistance.

### 3.2.4 Basic Urban Services

While the provision of urban services is the responsibility of government institutions, the major cities have large informal settlements, which do not have access to many of the basic services. In the absence of provision of basic services by the government, the informal sector operators control the provision of services such as water supply, solid waste disposal, transport, medical and educational facilities and recreational centres. The informal sector is not regulated, but they interface with the formal sector through mutually acceptable "terms of reference". While citizen and neighbourhood organizations sometimes work as partners with the informal sector to innovate urban processes and infrastructure development for low income and marginalized communities, these rarely get incorporated into the formal structure.







Katchi abadies (Islamabad)





## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

### 3.3 Urban Transportation

Urban transportation has been a consistent challenge for Pakistani cities over the years, especially with cities expanding in recent years. Although the Pakistan Economic Survey (2007-08) describes the country's transport infrastructure as 'reasonably developed', some may argue that this is far from the case. There is a total of 11.6 million of vehicles in Pakistan's 10 major cities<sup>23</sup>. The large number of vehicles makes commuting a difficult and time-consuming task resulting in large traffic congestion. Inefficiencies arising from the poor quality of transportation infrastructure (including trade logistics) results in losses equal to roughly 4-6 percent of GDP per year<sup>24</sup>.

Transportation is almost solely dependent on roads, which contributes to fuel-inefficiency, traffic accidents and heavy congestion because there are no alternatives more efficient and safer. World Health Organization estimates road traffic fatalities of 25,781 annually in Pakistan and media reports around 30,000 accidents take place in Karachi alone annually<sup>25</sup>. Pakistan's road density is (0.32 km/km<sup>2</sup>) with 91% of passenger traffic and 96% of freight is carried by roads. Nominal developments in railways and public transport hasn't relieved the pressure on urban roads. The country requires mass transit solution for its cities.

**Figure 3.1**

#### Urban transport in cities



Railway station chowk (Faisalabad)

**Table 3.2**

**Total number of vehicles in major Pakistani cities**

Vehicle Type	Karachi	Lahore	Rawalpindi	Faisalabad	Gujranwala	Peshawar	Multan	Hyderabad	Quetta
<b>Motor Cars, Jeeps and Wagons</b>	998,920	1070243	127468	86797	25001	96973	150283	9914	30519
<b>Motorcycles</b>	1,296,481	2763872	557330	946623	608883	238005	948852	20951	182748
<b>Trucks</b>	28,212	36265	16574	8441	2516	159276	4474	9,735	27586
<b>Delivery vans</b>	104,097	130344	38862	11943	9037	29846	16266	2,986	15379
<b>Buses</b>	22,313	50519	20362	5653	2041	21497	6847	8985	4066
<b>Taxis</b>	47,165	17404	6825	3245	2691	0	5580	5014	498
<b>Auto rickshaws</b>	105,684	149562	20264	21292	7096	22133	10392	9325	13258
<b>Tractors</b>	3,535	47356	4313	30476	31421	8301	48463	8,655	8573
<b>Others</b>	8173	22097	1219	101	608	159276	1857		11048
<b>Total</b>	2,614,580	4287662	793217	1114571	689294	607109	1193014	75,565	284766



## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

## 3.3.1 Urban Transportation Management Bodies

Like city governance, transportation in urban areas is managed by different entities. These include provincial and urban transport departments, National Highway Authority (NHA). The bodies of urban transport management sometimes result in overlapping responsibilities/mandate. Also, different bodies managing transport of a specific area poses challenges for a coordinated approach to the overall city transportation plan. The following table shows the different bodies responsible for various aspects of transportation in cities.

**Table 3.3** Institutions responsible for managing transport in cities.

Activity	Institutions Managing the Activities
<b>Caniageways</b>	City District Governments (CDG), Development Agencies (DA), Traffic Engineering and Planning Agency (TEPA)*, Communication and Works (C&W), Cantt. Board, Defence Housing Authority (DHA), NHA**
<b>Footpaths</b>	CDG, DA, TEPA*, C&W, Cantt. Board, DHA, NHA
<b>Pedestrian passes</b>	CDG, DA, TEPA*, C&W, Cantt. Board, DHA, NHA
<b>Street lights</b>	CDG, DA, TEPA*, C&W, Cantt. Board, DHA, NHA
<b>Traffic signals</b>	CDG, DA, TEPA*, C&W, Cantt. Board, DHA, NHA
<b>Parking areas/services</b>	CDG, DA, C&W, Cantt. Board, DHA, NHA
<b>Landscape</b>	Parks and Horticulture Authority (PHA), CDG, DA, C&W, Cantt. Board, DHA, NHA
<b>Traffic Enforcement</b>	Traffic Police
<b>Roadside drainage</b>	Water And Sanitation Agency (WASA), CDG, DA, C&W, Cantt. Board, DHA, NHA
<b>Public transport</b>	Transport Department, CDG
<b>Bus stations</b>	Transport Department, CDG
<b>Bus depot</b>	Transport Department, CDG
<b>Bus/Truck Workshops</b>	Transport Department, CDG
<b>Freight/trucking</b>	Transport Department, CDG
<b>Zoning regulations</b>	CDG, DA, Cantt. Board, DHA
<b>Landuse regulations</b>	CDG, DA, TEPA, Cantt. Board, DHA
<b>Building bye-laws</b>	CDG, DA, Cantt. Board, DHA
<b>Master plans</b>	Planning & Development Department (P&D), Housing and Urban Development (HUD), Local Government & Rural Development (LG&RD), CDG, DA, Cantt. Board, DHA
<b>Provincial plans</b>	P&D, HUD, LG&RD
<b>Regional plans</b>	Planning Commission, P&D, HUD, LG&RD

\* TEPA is only in Lahore

\*\*Highways under the NHA passing through the urban areas

Source: Urban Transport Policy Study for Five Cities of Punjab Province, P&D department, Punjab, Final Report, November 2008.



## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

### 3.3.2 Urban Transportation in Cities

More than 75 million people live in Pakistan's urban areas<sup>26</sup>. The growth of cities and their populations has continuously put pressure on city transport management bodies to meet the growing needs of city transport. Issues like large number of vehicles, lack of efficient public transport system, including for women, encroachments, damaged road surfaces and poorly designed intersections, make it difficult to commute within the cities. The public transport network is under-developed and there is a great gap between the demand and provision of an efficient and environmentally friendly public transport system. One of the reasons for this gap is that the public transport did not develop at the same rate as the population. Therefore, a large number of small private operators were permitted to fulfil this gap in a fragmented way. As a result, a chaotic mass of individually-owned small vehicles (wagons, qingqis, rickshaws etc.) operate in Pakistani cities, competing for road space. Due to rapid motorization, there has been an increase in traffic volume over the last two decades. The arterial roads have become very heavily congested, resulting in increased travel delays and reduced bus travel speeds, implying a less competitive public transport network, especially where commercial and trading activities are concentrated.

The National Transport Policy of Pakistan 2018, approved by the Government of Pakistan on 29 May 2018, details comprehensive objectives and policy directions for Pakistan's transport sub sectors, including urban transport. The policy acknowledges the rapid urbanisation of Pakistan, the growing demand for transport, and the challenges Pakistan is facing in developing a world class transport sector. The policy states that its successful implementation shall require the collective effort of all concerned ministries and divisions of the federal government, as well as all provinces and territories.



Lahore





## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

The following sections summarise the current state of transportation in the major cities.

## Karachi

Karachi has a complex traffic network with a large number of total private vehicles contributing to large traffic jams. There are a total of 2.6 million vehicles in Karachi<sup>27</sup>. The number of private motor vehicles in Karachi grew by 9% in 2013, adding 280 vehicles per day to the already high number of private vehicles. The large number of vehicles<sup>28</sup> leads to immense traffic congestion causing time loss, economic loss and poses health hazards. The traffic congestion cost of Karachi in 2013 was estimated at 688 million USD per year, which is almost 2% of the total revenue of Pakistan<sup>29</sup>. To address Karachi's transport problems, the government introduced three signal-free corridors. Corridor I, comprised of three flyovers (at Shahra-e-Faisal, National Stadium and Hassan Square) and three underpasses (at Gharibabad, Liaquatabad and Nazimabad); Corridor II connected Shahra-e-Faisal with Surjani Chowrangi using flyovers at five locations (Nagan Chowrangi, Sohrab Goth, Gulshan Chowrangi, Millennium Mall, and JauharMor); and Corridor III was a 28 km-long corridor connecting Saddar with Toll Plaza. Despite these measures, there has been little improvement in traffic or transport in Karachi.

**Figure 3.2** Signal-free Corridors of Karachi, with Shahra-e-Faisal shown in red.





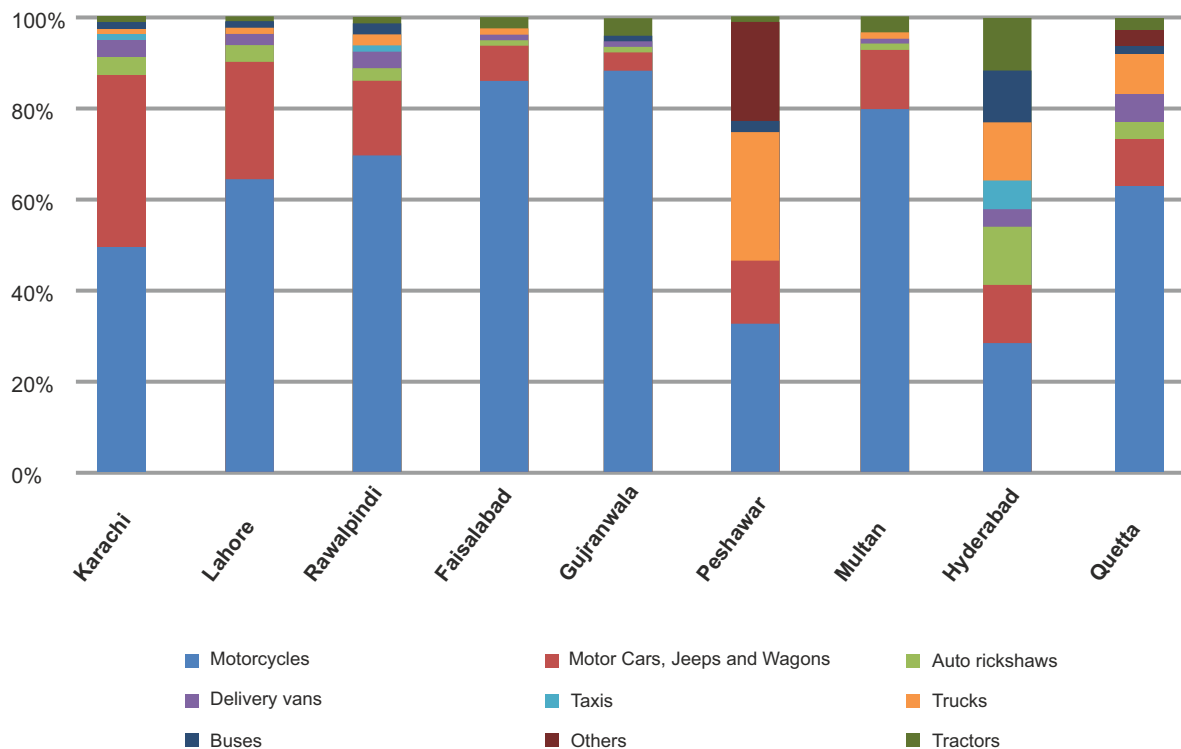


## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

Public transport in Karachi is dominated by Rickshaws and Qingqis (a motorcycle-rickshaw) as they are relatively faster, comfortable and have a low, fixed fare. However, their questionable safety standards, the congestion they cause and the ethical issues on part of the enforcement agencies that inevitably result from allowing a prohibited vehicle to operate on a route, there is a need to regulate Qingqi. Together Rickshaws and Qingqis make about two-third of the total vehicles in Karachi. Another challenge to the safety of city's traffic is the rise of non-standard vehicles and practices. An example is garbage trucks moving around the city and spilling a significant portion of the garbage on the road, thereby not just polluting the surroundings but also causing inconvenience and hazards for motorists.

Figure 3.3

## Modal split in cities



## Lahore

More than 4.3 million vehicles are registered in Lahore. Motorcycles make up for more than half (65%) of all registered vehicles, while cars represent 25% of the total registered vehicles. The number of registered vehicles has more than doubled in Lahore in the last decade<sup>30</sup>. Estimates show



### CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

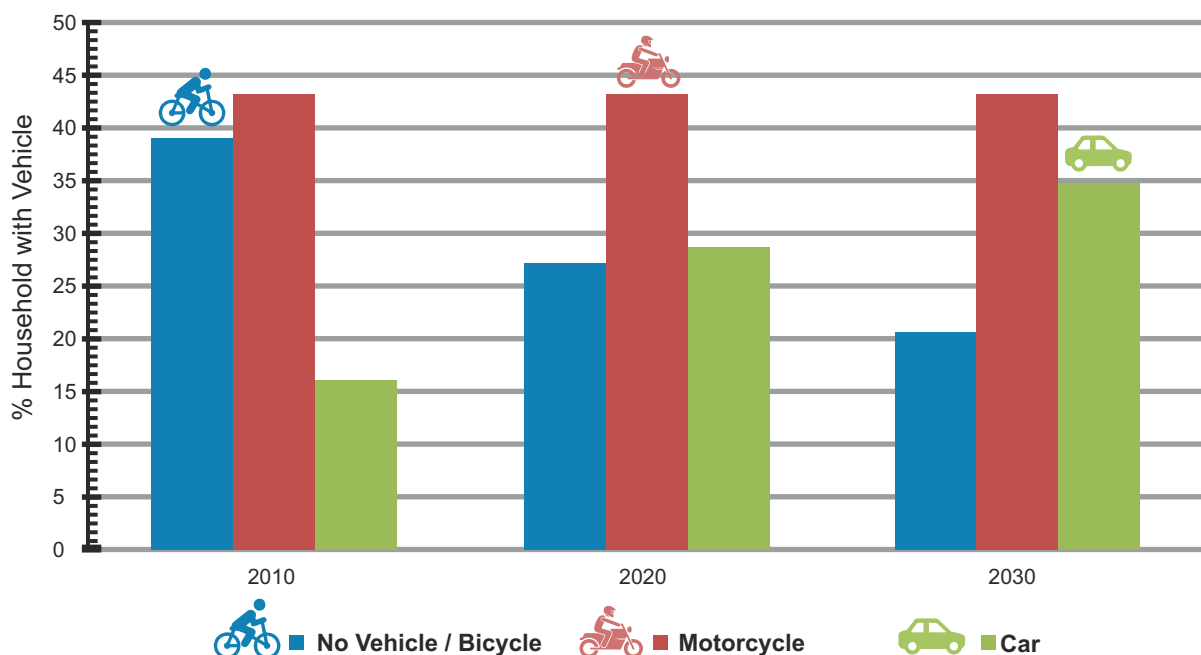
that the car ownership is forecasted to grow to 29% in 2020 and 43% in 2030, respectively. A study<sup>31</sup> conducted in 2016 reported Qingqis as preferred mode of travel across the city. The reason was that the public had to wait less for Qingqis compared to other forms of public transport. Rickshaws are considered the cheapest and, for women, one of the safest individual forms of public transport. However, Lahore constructed numerous underpasses to ease congestion and prevent the traffic jams, and established a successful BRT system - The Metro Bus. The central Metro Bus line runs from the northern tip of the city (Shahdara) to the (currently) southern-most town (Gajju-Matta). The buses are frequent, air-conditioned, safe and comfortable.

The scarcity and cost of taxis on the streets of Lahore resulted in auto-rickshaws having cornered the market. Recently, however, taxi-on-demand services have started to provide an alternative to both rickshaws and hailed taxis. Introduced by international operators, these taxis charge fixed fares and are strictly monitored and managed. While these companies have also added rickshaws to their fleet, other, local taxi operators have started emulating similar systems.

In 2017, the Australian Government supported the delivery of UN Women's Global Flagship Program 'Safe Cities Safe Public Spaces' in Pakistan and assisted the Punjab Government in piloting this approach in Lahore to make public transportation facilities accessible, safe and harassment-free for women and girls. The success of that pilot has seen the project replicated in Khyber Pakhtunkhwa and it is hoped other provinces will follow suit.

**Figure 3.4**

#### Estimation of households with vehicle ownership



Source: JICA 2012.



## CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

### Peshawar

Mobility in Peshawar is a major challenge. Due to increasing population in Peshawar, the demand for public transport is increasing with time. The demand for public transport is inadequately met by inefficient operators using buses and vans that emit smoke causing air pollution and are ill maintained and provide low quality service. The management, operation and maintenance of bus terminals are far below standards as most of the existing bus terminals are old fashioned and lack the basic public transport facilities. Most of them are privately owned with no maintenance. The public transport is overcrowded and subsequently unsafe. Women face problems in their daily commute in the city. There is less number of seats for female commuters. Women face misconduct by the conductors and drivers. Complaints of inappropriate approaches are frequently in the news.

There is a blend of pedestrians, two-and three-wheelers on Peshawar roads, which increases traffic congestion and poor road safety. There are also inadequate car parks in public places such as in shopping malls. The car parks are either too small or are located in congested, hard-to-access areas. The city lacks significant facilities for pedestrian such as foot paths, zebra crossings, lighting arrangement, underpasses, walk ways and crossing facilities which seriously restrict the accessibility and mobility of thousands of people. There are many illegal encroachments on the major roads of Peshawar which have reduced the right of way of road traffic which leads to traffic congestion and is a major hindrance to pedestrian and vehicular traffic.

The government has recently taken steps to improve the city transportation. Some of these steps include establishing a sustainable and highly productive Vehicle Emission Testing Department, upgrading the Peshawar Bus Terminal to meet international standards, and maintaining computerized vehicle fitness records. A Bus Rapid Transit (BRT) project for Peshawar sponsored by the Asian Development Bank has recently been launched, which features a 26 km long corridor passing throughout the city.

### Other Major Cities

Quetta has historically been well connected to the rest of the country by rail, road and air, with airlines connecting the city to key destinations around the world. Rail connects Quetta with Karachi, Lahore and Peshawar. The recent CPEC projects are expected to usher in a new era of accessibility and development in Balochistan in particular, due to the strategic link between the Gwadar sea port and China. Proposed links include rail links from Gwadar to Quetta and China. Roads connect Quetta with Afghanistan and cities like Mastung, Taftan, Nushki, Kalat, Khuzar, Lasbela and Dalbandin.

The high rate of population growth in Faisalabad, Multan, Gujranwala and Rawalpindi has resulted in an overcrowded, deteriorated environment with poor level of service provided by various modes of transportation, including the mechanical and the animal driven vehicles. Motorcycles, Rickshaws and Qingqies are predominantly used in these cities as mode of public transportation. Rawalpindi



### CHAPTER 3 - URBAN GOVERNANCE AND TRANSPORT

and Multan has their own Bus Rapid Transit which provides a much safer and affordable environment to the public; especially women.



Multan



Faisalabad



Rawalpindi



# Chapter 4

## INFRASTRUCTURE AND SERVICES

The provision of urban services and infrastructure in most Pakistani cities lags some 2 or 3 decades behind the needs of their current populations. Virtually every service has a parallel or dual source and system of provision and delivery, whether health, education and other social services or water, sanitation and sewerage. One is provided by the public sector, the other by the private. The parallel services co-exist in the same space, though their relative share and presence varies between areas. Publicly provided services are generally priced lower and provided for areas used by the better off groups, while privately provided services, being higher priced, are generally used by poor and lower-income who have no other option. However all groups use some of the public services (water and sanitation for example), wherever they are available, while other services (education and health for example) are used even by those who can ill-afford them because they are considered more effective and offer better value. A way to improve service provision would be to make them more local and their management decentralised with local oversight.

## BASIC SERVICES IN PAKISTAN CITIES





## CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES

### 4.1 Introduction

Despite provision of better basic services like access to clean water, power, and sanitation etc. in the urban areas as compared to the rural areas, a great deal of shortage of these services is still felt in the urban regions. For instance, Pakistan's largest city, Karachi, has severe water supply problems. The supply of clean water to Karachi's resident has long remained at 550 million gallons per day (mgd) against a standing demand of 1100 mgd. Similarly, sewerage system is a major issue in Pakistani cities as a large chunk of the sewage is disposed into rivers without treatment which contaminates the rivers. The presence of dumping sites close to the population and water reservoirs is due to the lack of optimal planning in dealing with the sewer. Pakistan Sanitation Policy (2006) observes that most of the sewer is disposed without treatment into natural water bodies which results in severe contamination of natural water and endangers human and aquatic life. Increasing urban population and greater consumer spending are giving rise to increased quantities of solid waste generation. Cities' management in Pakistan is finding it difficult to cope with the growing amount of waste thrown around. As a result, large chunks of waste (litter) can be seen around neighbourhoods causing major health concerns. Pakistan has less than one (0.78) doctor per 1000<sup>32</sup> while the school survival rate is 66%<sup>33</sup>. Pakistan, in 2016, allocated a mere 4.6%<sup>34</sup> and 11.4%<sup>35</sup> of its total expenditures to health and education, respectively. Besides this, Pakistani cities face major power shortages especially in the summers. In cities, power outages of up to 16 hours/day were observed in the last few years and this was still better than the situation in rural areas where power outages of 22 hours were observed. The large cuts in power supplies affected industries the most since they were less able to be either more flexible in their demand for power nor switch to alternatives.



Solid waste dumping area (Islamabad)



## 4.2 Water Supply

Access to clean water continues to be a major problem in Pakistani cities. There are only 65.2%<sup>36</sup> of households in Pakistan's 10 major cities with access to piped water connections. Karachi, with a population of 15 million people, faces severe water shortages. Water supply shortages are the worst in the thickly populated zones of Karachi such as Orangi, Baldia, Qasba, Korangi, and Landhi. The aforementioned zones comprise half of the total population of the city and a great majority of the people living in these areas purchase drinking water through bowsers and water tankers. The local communities usually take recourse to unconventional practices to get access to clean water. They use suction pumps, boring etc.; some gangs puncture water mains for commercial sales; and tankers supply semi-brackish water. While Karachi's population over the last decade has increased considerably, the areas that have access to piped water in the city has not increased. Less than one-third of all consumers pay water bills while majority of them use illegal connections in the absence of proper mechanism. In areas of acute water shortage, some people rely on informal water supply such as water tanker suppliers. The water tanker operators supply water and collect revenue from over 50,000 tanker trips estimated to be done every day. Most of these transactions are informal and cash-based in nature.

**Table 4.1**
**Main source of drinking water**

City	Piped Water	Motorized Pumping	Filtration Plant	Tanker/Truck or Vendor	Hand Pump	Others	Total
Karachi	85.4	1.0		9.8	0.9	2.9	100.0
Lahore	73.2	6.9	18.7		0.1	1.0	100.0
Faisalabad	18.2	30.6	7.5	39.8	2.6	1.3	100.0
Rawalpindi	46.6	32.3	13.8			7.4	100.0
Gujranwala	9.2	68.7	17.7		4.4	0.0	100.0
Peshawar	78.5	16.9	0.5		4.0	0.0	100.0
Multan	18.9	69.8	9.7		0.9	0.7	100.0
Hyderabad	72.0	15.2	4.7	3.0	3.5	1.5	100.0
Islamabad	20.8	37.1	27.8	3.5	1.8	9.1	100.0
Quetta	70.9	2.0		18.6		8.6	100.0









## CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES

**Lahore** depends almost exclusively on ground water sources for its water supply. Citizens access water through piped water supply facilitated by Lahore Development Authority (LDA) / Water and Sewer Authority (WASA), piped network of various Cantonment Boards and ground water wells at household level. It is reported that 87% of households within the WASA service areas are connected to a supply network<sup>37</sup>. Various studies show that the quality of water is within WHO standards. In addition to these problems, power break-downs and load-shedding cause ruptures in the piped water supply. Despite installations of standby generators by WASA, many areas continue to face severe water shortages.

**Islamabad** receives its water supply from Simly Dam (about 107 mgd) and ground water sources. Spring water is diverted from Saidpur, Nurpur and Shahdra Hills. Despite the claims about improvement of water supply made by the Capital Development Authority (CDA), the situation remains challenging especially during summers. People residing in many neighbourhoods, including the peri-urban locations of Bhara Kahu, Alipur and Tarla iKalun routinely resort to using water tankers. Many city dwellers rely on water supplied through water tankers by private operators at high prices. The total production of water supply does not go beyond 84 mgd against an average demand of 176 mgd<sup>39</sup>.

**Peshawar's** net water need is estimated to be 96 mgd by 2020<sup>40</sup>. Much of the supply comes from ground water sources through tube wells. Two projects namely Jabba Dam and Bara Dam are planned to be constructed by 2018, with each aiming to supply 20 mgd).

**Quetta** faces a number of challenges in the water supply services. The city and its surrounding areas depend upon water supply from the ground sources. The water re-charging process, which depends on rainfall and snowfall, is an important factor in determining the nature and quality of the service. The actual estimated need of the city is about 150 mgd but WASA Quetta provides only 40 mgd,. About 335 tube wells have been installed in the city to make up for the poor water supply but many of them dry up due to the lowering of the ground water table due to excessive extraction<sup>41</sup>. In the absence of proper provision of water, private tankers provide an expensive alternative source for water supply. The people unable to afford such a service resort to informal arrangements such as the use of water carried in by buckets from nearby sources. Over reliance on ground water, lack of regulatory control on illegal installation of tube wells and rise in demand are some of the factors that impact the water supply in the city.

**Faisalabad** receives water from several different sources in the Chiniot Well Field area. According to WASA, 29 tube wells in the vicinity of Chenab River pump water into the city. This site is about 27 km away from the terminal reservoir of the city. In addition to this, 20 mgd is received through 25 tube wells along Jhang Branch Canal and this source is 13 km away from the reservoir. Moreover, 8 mgd are drawn from Rakh Branch Canal through 8 tube wells within the city limits, while 45 mgd water is acquired through surface water treatment at Jhal Khanwan water works. Despite this, the



## CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES

commissioned supply of 66.5 mgd, the overall situation is far from satisfactory<sup>42</sup>. Many citizens resort to digging tube wells on their own which causes unregulated water supply and often leads to consumption of poor quality water due to unchecked impurities in the ground sources.

In **Gujranwala**, WASA Gujranwala manages water supply service in the city<sup>43</sup>. The total water coverage of the city is estimated to be 35%. The city depends upon 75 tube wells that pump ground water to the city. In addition, 10 overhead reservoirs have been constructed at different locations to facilitate water supply through gravity flows.

**Multan**, in Southern Punjab, extends water supply coverage to about 70% of the 1.9 million city dwellers. Due to its proximity with Chenab River, Multan has an advantage to access water supply in an appropriate manner but the quality of water is a major issue. Multiple studies confirm that water from various sources is unfit for drinking. A research conducted by scientists of the National Institute of Health says that the use of contaminated water causes Hepatitis C, Diarrhoea, and Gastroenteritis<sup>44</sup>.

### 4.3. Sewerage

Water and Sanitation Agencies (WASAs) manage the tasks of sewerage in various cities of Pakistan except **Karachi** and **Islamabad**. The National Sanitation Policy (2006) says that 'large and intermediate cities have underground sewer systems which might collapse due to poor management and negligence<sup>45</sup>. The Sanitation policy observes that inadequate sanitation access in slums and katchi Abadis, limited number of public toilets, dysfunctional sewer; improper working of solid waste management system, and lack of capacity of government agencies to plan and implement sanitation programmes are some of the common issues facing the city dwellers of Pakistan.



Informal settlement (Rawalpindi)





CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES

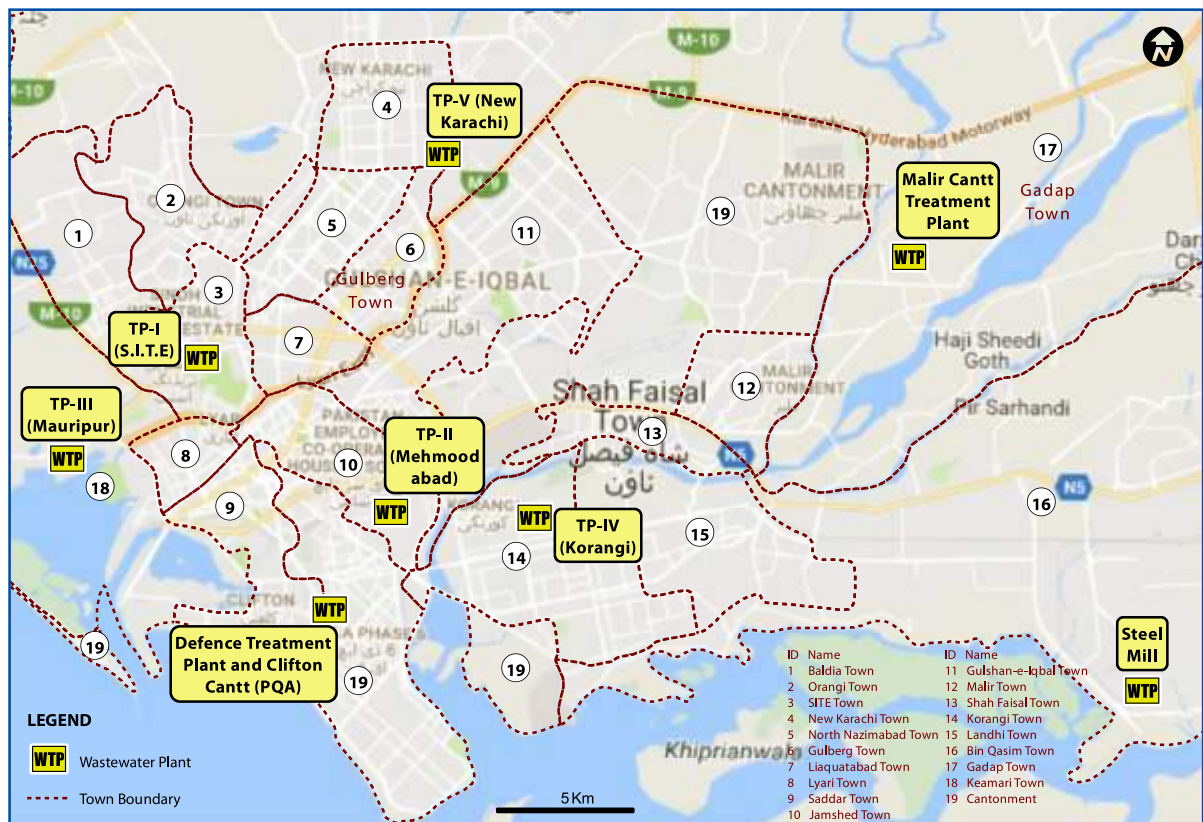
infrastructure: Lateral lines (8"-15") 2844 km, sub-mains 500 km; trunk sewers amount to 200 km; 03 municipal treatment plants; 18 pumping stations; 32 automatic sewer cleaning machines, and 11 ejectors. The Cantonment Boards, Karachi Port Trust and other autonomous agencies possess their own range of underground infrastructure and maintenance hardware. Government agencies estimate that municipal sewer system serves 90% of the city's population. However, many independent researchers and institutions believe that the actual range of coverage is below this figure. Various neighbourhoods commonly display puddles of sewage water along the main roads and streets. According to an estimate, from Karachi alone, about 475 mgd of waste-water is dumped into the sea without any treatment.



Karachi

Figure 4.1

Location of existing wastewater treatment plants



Source: Karachi Strategic Development Plan 2020



## CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES

The situation is more or less the same in other major cities of the country. Much of the sewer either directly, or through local drains such as the Hadiara Channel, is dumped into the Ravi River in **Lahore**. The absence of treatment facilities causes severe environmental pollution to these important surface water bodies. Similarly, in **Faisalabad**, the municipal and industrial waste-water is drained into the Ravi River through Madhuana drain while Paharay drain ejects this effluent into the Chenab River. Besides, a large quantity of waste-water is deposited into informally designated depressions and sub-branches of canals running through the city. 70% of **Rawalpindi** depends upon an open sewer system<sup>46</sup>. The Nala Lai which passes through the city, collects sewer water and disposes it into Soan River. The informal settlements impact the water bodies that supply drinking water. They cause environmental pollution as the generated sewage is directed into canals or other water bodies. In **Hyderabad**, numerous residential encroachments exist on Phuleli canal. These houses are constructed in such a manner that the waste-water produced in domestic activities is discharged into this vital water body which is a source of drinking water for the city dwellers.

### 4.4. Solid Waste Management

Municipal and other forms of waste management have long been a responsibility of local government institutions. However, the changing status of local governments, crafting and re-crafting of their charters and nature of relationships with federal and provincial governments, have deeply impacted their performance.



Westidge III (Rawalpindi)

## CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES

In Karachi, Master Plan 2020 indicates that around 9000 tons of solid waste generated per day and conservative estimates confirm that the total waste generated per day is about 15000 tonnes<sup>47</sup>. The solid waste has several different categories: the urban solid waste comprises waste from wholesale fruit and vegetables market and other hubs of transactions within the city areas; domestic solid waste from multiple range of neighbourhoods; hospital and healthcare waste; electronic waste; and commercial and industrial waste<sup>48</sup>. The municipal administration does not have the capacity to lift the garbage and meet the increasing demand. Common observations show that heaps of garbage are visible throughout the city. Solid waste is commonly disposed of at open dumping sites located near water streams which often block the flow of water in these natural drains. Dumping of garbage is also utilized as a supporting enterprise for informal land reclamation. For instance, Machar colony, which is close to the sea, receives hundreds of tonnes of waste every week for extending the land area that is "carefully" subdivided and sold by the local land sub-dividers. The garbage is dumped at the three designated disposal sites where it is then burnt periodically which also contributes to air pollution.

Table 4.2

## Waste generated by cities

City	Waste Generation (Tons per day)
Karachi*	9000
Lahore*	5000
Faisalabad*	902
Rawalpindi**	818
Gujranwala*	756
Peshawar*	564
Multan**	947
Hyderabad****	1600
Islamabad***	500
Quetta*	247

Source:

\*SBP, Special Section 1: Waste Management: Recent Developments in Pakistan, Government of Pakistan

\*\* Lahore Waste Management Company Presentation to Home Minister

\*\*\* <http://nation.com.pk/21-Aug-2014/historic-waste-generation-in-capital>

\*\*\*\* MS Korai (2014), assessment of Power Generation Potential from Municipal. Solid Wastes: A Case Study of Hyderabad City, Sindh, Pakistan, Pak. J. Anal. Environ. Chem. Vol. 15, No. 1 (2014) 18 – 27





## CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES



Solid waste management is a major problem and has become an area of public concern in the Punjab province. It is collected in a haphazard manner and dumped or burnt on the sides of roads. There are many reasons which contribute to this mismanagement; such as, insufficient regulatory control, lack of clear citywide solid waste management strategy, lack of awareness among residents regarding municipal solid waste management, lack of comprehensive SWM administration, manpower shortage, absence of private sector, and community participation. The Government of Punjab established the Lahore Waste Management Company (LWMC) in 2010. This company claimed to have lifted over 2 million tonnes of waste during 2016<sup>49</sup>. It extends consultancy support to similar companies being formed in **Gujranwala**, Sialkot, **Faisalabad**, **Rawalpindi**, **Multan** and Bahawalpur. These companies have begun work and seem to be stabilizing their grip on the complex waste management scenario in the province.

**Peshawar** faces enormous challenges to its urban environment due to solid waste mismanagement. About 564 tonnes of waste is collected every day by the municipal administration but only 40% of it reaches the final dumping sites in Hazar Khwani and Lundi Akhune Ahmed<sup>50</sup>. Like other large and medium towns, scavengers sift through the waste, extract recyclable materials and sell them to the waste dealers. The incumbent provincial government intends to acquire about 540 kanal of land for a disposal project at Mauzam Sara Akhail. The project is also expected to generate 12 MW of electricity through a waste to energy operation.



## 4.5 Power Supply

**Table 4.3**
**Households with electricity connections**

	% of Household have electricity connection
<b>Peshawar</b>	96.00%
<b>Rawalpindi</b>	96.80%
<b>Faisalabad</b>	91.50%
<b>Gujranwala</b>	97.50%
<b>Lahore</b>	95.40%
<b>Multan</b>	96.50%
<b>Hyderabad</b>	86.00%
<b>Karachi</b>	97.30%
<b>Quetta</b>	99.20%
<b>Islamabad</b>	100.00%
<b>Total</b>	95.7%

Source: Pakistan Social and Living Standards Measurement (PSLM Survey) 2014-15.

Power supply remains an important sector in national performance in general and urban locations in particular. The previous decade saw an acute power crisis that crippled the national performance especially in the peak summer seasons. A load-shedding of 12-16 hours per day impacts the performance of all sectors. Cities being the principal consumers of power face this challenge to the most acute level. While the situation has marginally improved, it is far from satisfactory. The National Power Policy of 2013 shows a gap of 4500-5500 MW in supply and demand of electricity; the total demand is 18,000 to 19,500 megawatts (MW) which reaches up to 20,223 MW during peak summer and the supply is 15,700 MW which adjusts according to hydel and thermal production cycles<sup>51</sup>. 62% of the total electricity is generated through thermal fuel sources which make the production not only expensive but also environmentally degrading<sup>52</sup>. City-based distribution companies receive power from the National Transmission and Dispatch Company (NTDC) and distribute it within the remit of their allocated spheres. **Karachi** and many adjoining locations in Sindh and Balochistan receive electricity from Karachi Electric (KE), which is a private entity. It provides services to more than 2.2 million domestic, industrial and commercial consumers. Paying consumers receive better service while areas having pilferage and illegal tapping suffer from announced and unannounced load shedding. Some of these companies suffer huge losses including line losses. Line losses are account for 23-25% losses while additional losses over Rs 140 billion in both urban and rural locations.



#### CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES

Unpredictable power supply has constrained the growth of small and medium scale enterprises in many cities across the country. Some entrepreneurs run part of their production cycles on standby generators as an alternative energy source. During 2014 and 2015, 20.4% rise in generator imports was recorded. Pakistan Bureau of Statistics reported that the surge in generator imports rose by 34% in 2016 and amounted to US\$ 1.83 billion<sup>53</sup>. Punjab became the major market of this trade as the province is not only hit by power load-shedding but also unprecedented gas outages. These generators have now become an important component of power supply services in all kinds of establishments such as high-rise buildings, shopping malls, hospitals, colleges, schools, university campuses, government buildings and houses of various kinds.



Solar panels (Islamabad)

Solar devices, a visible phenomenon in Pakistani cities, serve several purposes. The local private sector has played a very important role in this regard. The accessories now commonly traded and installed include solar powered air coolers, batteries, invertors, charge controllers, solar fans and lights. A visit to peri-urban settlements reveals that the usage of various ready-fix solar gadgets and systems has increased to a significant extent. One finds several shops and workshops dealing in solar products and providing after-sales services to a broad range of customers. In many low-income neighbourhoods in **Karachi**, households have resorted to install the solar powered gadgets to economize their power bills. Liaquatabad, Federal B. Area, Surjani Town, Orangi, Landhi, Korangi and Baldia now possess many service delivery outlets for solar devices. The main city markets in **Karachi, Lahore, Rawalpindi, Faisalabad, Multan**, Sukkur and many other small and medium towns regularly sell solar devices and gadgets to an increasing clientele. Much of the activity is managed by the informal sector.

**Table 4.4** Population per hospital, population per bed and share of private hospital's in cities of Punjab

	Population per Hospital	Population per bed	% share of Private Hospitals
<b>Faisalabad</b>	168,623	910	63
<b>Gujranwala</b>	126,688	1,226	50
<b>Lahore</b>	206,042	750	17
<b>Multan</b>	133,703	1,126	14
<b>Rawalpindi</b>	190,748	709	36
<b>Islamabad</b>	112,758	402	NA

Source: Punjab Development Statistics and Statistical yearbook, PBS

## 4.6 Health care

Healthcare in Pakistani cities is usually provided through public, private and welfare based facilities. The Federal Ministry of Health regulates health services and controls medical and para-medical education, immunization programmes, and drug affairs. City district headquarter qualifies to acquire major tertiary healthcare facilities in the form of hospitals and other specialized form of medical centres. Municipal bodies such as Cantonment Boards and corporations also own and operate tertiary healthcare facilities. The status of tertiary care facilities is mixed and many require a deeper probe. Observations and literature inform that facilities in the federal and provincial headquarters are better compared to medium sized and smaller cities. Provincial government oversees these hospitals slightly more efficiently than those in other cities. It is commonly found that people from smaller towns and cities travel to **Karachi, Lahore, Islamabad, Peshawar** and **Quetta** for advanced healthcare services. As a result, the public hospitals obviously become overburdened. It is also found that certain types of treatment options are limited in provincial headquarters such as Quetta.

Besides public hospitals, a range of private hospitals is operational in big cities. Some of these hospitals provide health care services at subsidized rates to the poor patients. Despite differences in model of health care system, the facilities providing quality care are generally crowded by patients from everywhere. Cities become the nodal points for extension of health care service to people from very wide catchment areas. In addition to large hospitals, small and medium-scale health care facilities operate on commercial basis though some of them claim to be not-for-profit in nature. There are issues relating to regulatory checks on the quality of health care services, hygiene and cleanliness of the facility, infection control and schedules of charges.



---

**CHAPTER 4 - BASIC SERVICES IN PAKISTAN CITIES**

## 4.7. Education

There are several systems and ways of education in Pakistani cities such as public sector education through government sponsored institutions, private sector institutions owned and run by educationists, and seminaries providing religious education. The 18<sup>th</sup> constitutional amendment devolves higher education to the provinces whereas elementary and secondary education was already a provincial subject. There is a government system of education that functions through provincial departments of literacy and education. A system of government schools and colleges exists in all the four provinces, including the major cities, which follow the prescribed curricula and regulatory procedures. Educational boards examine the students for secondary and higher secondary school certificates. The universities are autonomous institutions which run specialized programs in various disciplines and award degrees. According to Pakistan Bureau of Statistics report of 2015, there were 11,491 registered seminaries. Seminaries usually receive the bottom strata of the youth as intake.



# Chapter 5

## HOUSING

Housing in Pakistani cities has a dual track existence. Housing for the upper income is provided by speculative developers who provide land and houses built to the most lavish (perhaps, wasteful) standards while the low income have to largely manage the construction of their own housing on land provided by developers. Both sets of developers work with the tacit, if not implicit, support of the authorities, and where necessary (as in most land-grabs) with political support. While upper-income housing is planned well in advance and in anticipation of growth, lower-income housing has to wait for the build-up of demand and desperation. No city has a plan or even strategy for accommodating the increase in population that it knows will take place. As a result, upper income housing areas double in extent

## HOUSING IN PAKISTANI CITIES





## CHAPTER 5 - HOUSING IN PAKISTANI CITIES

### 5.1 Introduction

There is a general consensus that there is a “housing problem” in Pakistan, especially in its cities. “The present housing shortfall in Pakistan is 10 million units and it is expected to double in the coming ten years (including depletion of some of existing housing stock). According to the latest statistics, the total number of houses built every year in Pakistan is somewhere between 0.15-0.3 million while all estimates indicate that formal supply covers less than 50 percent of new demand.<sup>54</sup>

Housing in Pakistan is also routinely stated to be unaffordable, both because of poverty and due to the lack of formal housing finance. It is also said to be of poor quality and over-crowded, with the majority being in “slums”-or “katchi abadis” (which literally means temporary settlements) is the general term for slums, and in particular informal settlements. The term was originally used by “patwaris” (the government land record keepers) to indicate, in pencil rather than ink, structures and settlements that did not have formal sanction at the time, but would likely be regularized in due course-or 59 literally be rubbed off the record. It is estimated that 30% to 50% of urban dwellers live in katchi abadis<sup>55</sup>.

Most katchi abadis are on publicly-owned land, especially on reserves or unused/excess land where their initial settlement often goes unnoticed, or is tolerated for a consideration. However, as they are unauthorised, they are informal settlements, with inadequate access to public services, infrastructure, and social facilities.





## CHAPTER 5 - HOUSING IN PAKISTANI CITIES

Under political pressure, various Provincial governments have regularized katchi abadis, often giving titles and the right to remain, as well as providing or improving infrastructure and services. However, in practice, less than 50% of katchi abadi houses have actually been regularized, while additional new katchi abadis continue to proliferate. Currently, about 50% of Karachi's population lives in katchi abadis the majority of which are below the poverty line.

However, the ground reality of the housing problem is not often portrayed accurately. First of all, despite being unaffordable, the majority of the urban population (74%) own their houses, in the sense of having paid for them. For many cities, such as Gujranwala and Hyderabad, over 80% of households own their houses. Ownership is lower only in cities with significant (recent) in-migration, while other cities, such as Rawalpindi and Islamabad with large number of government employees, have many rent-free or heavily subsidized housing. Not only is the home-ownership higher by far than home-ownership in most European countries or in the United States, most Pakistanis own their houses outright and do not have an outstanding loan or mortgage. Moreover, most of the urban houses have their roof and walls built of brick, reinforced concrete or other durable material and most houses have more than one room.

The real housing problem is that as many as 60% of them are in informal settlements that do not have legal status, and therefore lack tenure security. That, in turn, means that the households are less likely to improve or extend their houses, nor are they likely to get access to services or connections to infrastructure.

Table 5.1

Profile of katchi Abadies in Sindh<sup>56</sup>

Location	No. of KAs in the Master List	Non-Regularizable KAs			Regular-izable KAs Col (2-5)	Kas Notified so far	Kas to be Notified Col (6-7)	Total No. of KAs taken up for Regularization
		Private Land	Hazardous Location	Total				
1	2	3	4	5	6	7	8	12
<b>Karachi</b>	564	30	43	73	489	450	39	452
<b>Hyderabad</b>	417	35	25	60	357	280	77	201
<b>Mirpurkhas</b>	141	05	02	07	134	92	42	58
<b>Sukkur</b>	175	23	17	40	135	119	16	67
<b>Larkana</b>	112	17	08	25	87	75	12	53
<b>Total:</b>	1409	110	95	205	1202	1016	186	831

Table 5.2

## Various types of houses in Pakistan

National & Urban District	OWNED	RENTED	RCC/T-iron ROOF	BRICK WALLS	ONE ROOM
<b>Pakistan</b>	84	8	69	79	28
<b>Urban</b>	74	18	86	96	24
<b>Rural</b>	90	2	59	69	30
<b>Islamabad</b>	37	26	95	99	9
<b>Rawalpindi</b>	51	31	99	100	12
<b>Faisalabad</b>	79	16	93	99	30
<b>Gujranwala</b>	83	12	79	98	21
<b>Lahore</b>	71	21	96	100	28
<b>Multan</b>	78	16	83	98	28
<b>Hyderabad</b>	87	10	92	95	43
<b>Karachi</b>	66	24	84	100	19
<b>Peshawar</b>	62	25	81	93	12
<b>Quetta</b>	60	35	71	86	9

Source: Pakistan Social and Living Standard Measurement Survey 2014-15

## 5.2 Housing Providers

The main actors in housing production have been the National and Provincial Governments, the private sector and the low-income households themselves. The Urban Development Authorities had the mandate and responsibility to acquire, assemble and develop land for housing and urban development. However, during the last two decades, private housing developers have virtually displaced the Government and taken over control of the land development process, establishing financially profitable and successful land and housing market based development models. The Defence Housing Authority (initially through access to Cantonment lands) and Bahria Town (a Rawalpindi-based private real estate developer – reputed to be amongst the largest in South Asia) have emerged as the leading developers along with other cantonment authorities and ABAD builders. Provincial governments and development authorities have increasingly turned to facilitating private developers in acquiring land for housing development. Most of this development has been aimed at the upper and middle-income sector, and the increased activity has been a stimulus for the land market, resulting in land for housing becoming unaffordable and beyond the reach of the lower income households in cities. Moreover, the upper-income demand has been for large, low-density developments, and with poorly implemented urban planning, has resulted in increasing urban sprawl and the transformation of environmentally valuable agricultural land to housing.





## CHAPTER 5 - HOUSING IN PAKISTANI CITIES

The National Housing Policy (NHP) 2001, which was, unfortunately, never formally enacted, called for legislative and administrative measures to ensure tenure security, increased accessibility to affordable land, finance, housing services and technology, especially to the low-income communities for habitable, safe and appropriate housing. The NHP also called for private sector investment in the housing schemes. Instead, the Government provided ad hoc incentives to buyers, developers, constructors, and other stakeholders including commercial banks to help reduce the housing deficit. It also carried out institutional reforms especially for mortgage housing and even developed low cost technology solutions to increase access to affordable housing, but in practice, most of these mainly addressed the upper income, more profitable end of the market. A comprehensive review of NHP to understand how the actual development of the cities occurred is useful to further enhance policy interventions.



Low income flats



Upper income housing societies



Katchi Abadies



Community-based infrastructure

### 5.3. Housing Need Assessment

Increasing urbanization has created pressing demands for housing in Pakistani cities. The absence of any formal provision for the lower-income urban population and the people migrating from rural areas to urban areas has resulted in the creation of large informal settlements, both in the cities and

increasingly, on their periphery. There have been various assessments about the total housing units needed per year in cities.

**Table 5.3****Housing units needed per annum in Pakistani cities**

Year	Housing units needed per anum	Source of Information
2004	300,000	Arif Hasan (2004)
2009	320,000	World Bank (2009)
2016	400,000	Shaikh, H (2016)

Arif Hasan (2004) estimated a housing need of 300,000 housing units annually in the urban areas with 65% of the need coming from the lower income groups. He estimated that 15% of the shortage would likely be accommodated by the densification of inner city areas, 10% by the growth of Katchi Abadis and 60% through the Informal Subdivision of Agricultural Land (ISAL). The lack of any programmatic response over time has meant that the need for housing has increased. The World Bank (2009) estimated the need to be 320,000 units per year. By 2016, it was estimated that urban areas were facing a shortage of 4 million housing units, mainly “amongst the weaker segment of the population” (Shaikh, H; 2016). With a majority of the urban population residing in the ten largest cities, it is safe to assume that the urban housing need over the next decade will also be concentrated in the major cities. The World Bank (2017) indicates that there is an acute need to increase the supply of housing in the range of PKR 1 to 3 million (US\$10,000 to US\$30,000) in the main urban centers. Ahmad, N. et al (2002) estimated housing demand elasticity by size of cities and income, and found that in the larger urban areas of Sindh housing shortage was the greatest and this shortage was mainly felt by the low-income communities.

#### 5.4 Response to Housing Demand: Government and Private Sector

In response to growing housing need and in line with the recommendations provided by National Housing Policy, the Government opened up “land for plot-development” schemes for the land developers in the urban periphery, relaxing building codes and making institutional reforms for high-rise development in city areas. The three main responses by Developers to this strategy were:

1. PHA (Pakistan Housing Authority) Foundation: Apartment housing schemes in Islamabad, Karachi, Lahore and Peshawar
2. Punjab Land Development Corporation (PLDC): Ashiana Housing schemes in Lahore, Faisalabad, Sahiwal, Bahawalpur, Chiniot, and Kasur
3. Apna Ghar Housing Finance of the Bank of Punjab



## CHAPTER 5 - HOUSING IN PAKISTANI CITIES

Despite government support and the provision of free or highly subsidised land, none of these schemes were adequately developed and largely failed to meet their stated objectives of providing “affordable housing”. In many cases, considerable funds and finance was provided to the developers, and large construction contracts awarded, but the houses failed to materialise, and with subsequent change in governments, the schemes also lost their political support and were effectively shelved.

### **Punjab Land Development Company's Ashiana-e-Quaid Scheme, Lahore**

Ashiana-e-Quaid scheme is spread over 86 acres of land and is located in Lahore near the Airport. The scheme has over 2500 housing units of 60 sq yd and 90 sq yd plots. The scheme had been launched by PLDC in 2011 but it has not been fully occupied yet. Housing units are available in the scheme for sale and rent. The average sale price is Rs. 42,000 per sq yd for built housing and the average monthly rent ranges between Rs.15,000 to Rs.20,000. The scheme has its own commercial area, educational and health facilities, graveyards and other social and recreational facilities. One has to have a domicile of Punjab, be aged less than 55, and have an income less than Rs.50,000 per month to get a plot in Ashiana schemes. In addition to these requirements, the person must not possess any other house and must be living in a rented accommodation to be eligible for the scheme. Besides Ashiana-e-Quaid, PLDC had other ongoing schemes, in Lahore, Faisalabad and Sahiwal and 3 schemes were in the pipeline for Bahawalpur, Chiniot, and Kasur

In the private sector, Bahria Town (a Rawalpindi-based Real Estate development company - reputedly one of the largest in South Asia) and Defence Housing Authority (DHA) have successfully built large townships on the urban peripheries; however, these townships cater to the demands of upper-middle class. Due to an increasing demand for secure and safe housing schemes, these housing schemes attracted a large number of people to their gated communities and secure townships. Through the Development Authorities, they acquired large tracts of land, subdivided it for housing, and sold it through estate agencies to private buyers. Land was opened up in phases and infrastructure development was slow, giving time for speculators and real estate agents to play with the market.

Besides the large township schemes, Open-Plot schemes (land for building houses) are being offered by developers and builders in city and sub urban areas. In Karachi and Lahore, the existing housing schemes planned by the Development Authorities (DA) were quickly built upon through the housing cooperatives approach, while new schemes emerged as a result of partnerships between the DA, developers and the landowners. None of these schemes are aimed at or can cater to the low-income groups that form the majority of the urban population.

### 5.4.1 Informal Subdivision of Agricultural Land

Large tracts of agricultural fields were turned into housing schemes to cater to the needs of Low-income communities and new migrants seeking home-ownership in cities. This process of informal subdivision of agricultural land, creating katchi abadis, is the major route to access land and is



## CHAPTER 5 - HOUSING IN PAKISTANI CITIES

mainly resorted to by low-income communities. The trend started in the periphery of large urban areas, and later became popular also in intermediate and small towns. Such schemes have accelerated with the construction of urban bypasses, which were meant to keep traffic from entering the cities have instead become roads that opened up agricultural areas for development. Bypasses, ring roads and expressways, and road widening helped transform not only agricultural and grazing land, but also natural landscape areas, including declared conservation areas and ecologically dangerous zones, to housing. In small towns and intermediate cities as bypasses developed, plots adjacent to the bypasses were converted into mixed land uses and housing schemes. This trend is now common in smaller land parcels belonging to villages in Islamabad, Karachi, Lahore, Peshawar, Quetta, Gujranwala, Faisalabad and Hyderabad Districts.

### 5.4.2 Incremental Housing Development

Incremental Housing is usually regarded as an effective tool in meeting housing demand of low income groups since it allows for the gradual development of housing in line with financial capacity. In Pakistan, incremental housing was successfully introduced and implemented by Hyderabad Development Authority (HDA) in Hyderabad City. The incremental development of housing scheme was launched in Hyderabad and became popularly known as Khuda Ki Basti (KKB). The scheme was successful in targeting the urban poor households which provided them with small plots of 80 sq yds and 120 sq yds. The households made a down payment for the cost of land, plus a small cost for development, and paid monthly instalments for incremental development of infrastructure and facilities as they lived there. The development authority carried out the development work. As the households formed into communities, community organizations came into being and took on the responsibility of maintenance of the scheme and the wellbeing of the residents in partnership with Government departments. The first scheme was started in the early eighties, and seeing the success of the scheme, KKB II was started in Karachi, followed by small schemes in various small towns of Sindh, which came to be known as Sasti Basti. There have been number of other, experimental initiatives, to cater to the growing housing needs of cities focusing private sector engagement and creating a special purpose vehicle (SPV) to allow the investor to raise funds.

### 5.4.3 Apartments in Cities

Increased demand for living close to the city has led to the construction of apartments in Pakistani cities. Apartments were initially constructed as walk-ups but due to an increasing demand they were increased to 20-40 storey structures. These apartments allow the emerging middle class and households with salaried incomes to invest in housing. The nuclear urban families demand is for walk-up apartment blocks of 4-5 storeys, which are located in or close to commercial areas. The lower-middle-income households, with 7-8 persons, prefer apartments of 1-3 rooms while the upper-middle income families with 4-6 persons opt for 4-7 room apartments. Upper end apartments have their own security guards, electric generators, and elevators. The water supply is through tankers, and there are parking facilities and community space. Lower-end apartments are usually walk-up, which do not have the aforementioned facilities, and individual apartments that





## CHAPTER 5 - HOUSING IN PAKISTANI CITIES

do not have attached bathrooms and toilets. In Karachi, apartment housing became popular with low-income communities in the old city areas where the housing stock required replacement and gentrification. Buildings on small plots were demolished and replaced with 8-10 storey walk up apartments with small and poorly ventilated rooms with a bathroom and a toilet.

### 5.5. Housing Finance

The majority of housing in Pakistan uses no formal housing finance, and none is constructed without access to informal finance. Most housing uses multiple sources, means and ways of assembling the funding required. Nevertheless, for those who can access housing finance, always do so, not least because it is generally subsidized and often lax about defaults.

That said, a surge in housing schemes was seen when commercial banks entered the mortgage housing market in 2003. However, the financial crisis of 2007 caused a dip in the market. The period 2003 - 2007 also saw an increase in micro finance activities led by Pakistan Poverty Alleviation Fund (PPAF) support. Micro financing caused an indirect investment into rural housing by the low-income borrowers as their income and savings increased.

In the last decade, Islamic housing finance has proved to be highly effective in Pakistan and the participation of Islamic financial institutions has surpassed that of the commercial banks and other financial institutions. Of the total housing credit extended in 2016, the share of Islamic banking was more than that of the commercial banks, public banks and House Building Finance Corporation. The share of private commercial banks, public banks, Islamic banking and House Building Finance Corporation (HBFCL) in housing finance stood at 32%, 7%, 38% and 23% respectively. A total of 69,523 persons took housing mortgages in 2016. Mortgage finance to GDP ratio of Pakistan is 0.5 percent which is extremely low compared to the South Asia average of 3.4 percent. The borrowers were mainly salaried individuals (61.3%), business people (31%) and self-employed (7.7%). About 89% of the borrowers were men. Data presented by banks (Bank of Punjab) loan products were categorized as outright purchase (66%), construction (24%) and renovation (11%). Islamic banks took the lead in financing outright purchase while HBFCL took lead in financing construction and renovation. The main stakeholders in the housing finance markets are the 28 financing institutions (HBFCL, Public banks, Private banks, Islamic banks), 5 micro finance institutions, State Bank of Pakistan (SBP), Pakistan Mortgage Refinance Company (Potential Stakeholder), Building Control Institutions (mainly Sindh Building Control Authority and Development Authorities), Land registration authorities (Boards of Revenue), estate agents and agencies, developers and builders (Association of Builders and Developers) and borrowers. There are also different Non-Government Organizations and public and statutory bodies concerned with housing development and environmental and social protection.

### 5.6 Some Major Housing Challenges

1. Housing is still seen as a monolithic, undifferentiated entity, and policies and most housing studies treat it as such. As a result, there is very little information available on the impact of



## CHAPTER 5 - HOUSING IN PAKISTANI CITIES

housing on particular groups such as women, youth or the disadvantaged. To have any meaningful housing policies, more needs to be known about housing needs, supply and demand and impact of housing on different groups and locations.

2. The increase in rural-urban migration during the last two decades has also increased the demand for urban housing. The World Bank estimates that housing shortage in Pakistan is up to 10 million units and the deficit is largely in urban centers<sup>57</sup>.
3. Certain section of the new generation of migrants are better educated and more skilled than their predecessors and gain employment with secure income. They are expected to opt for apartments and gated housing due to higher insecurities in urban areas and rising incidents of violence.
4. Young people lack access to the housing market, as there are few options for entry-level housing and a small rental market while women have significantly less security of tenure, land ownership and access to finance, exacerbating gender imbalances and restricting their earning potential.
4. Land for housing is allocated unfavorably, allowing developers to cater to the speculative market causing an oversupply for the high-end market. Siddiqui, T (2014) analyzes that low-income households forming 68% of the urban population live on 1% of the city's land<sup>58</sup>, while the middle-income households, who are 23% of the population, live on 43% of the land. The upper income households are 12% of the population and live on 56% of the urban land. Shaikh, H (2016) believes that inequality is increasing and 47% of urban Pakistanis live in poor quality houses<sup>59</sup>.
5. Evictions have increased and are poised to increase further as mega development projects require land. With land in squatter settlements and informal housing schemes being cheaper and much easy to acquire than land in formal housing schemes, evictions and displacement of urban poor are rising.
6. Mixed housing neighborhoods are giving way to segregated ethnic and sectarian neighborhoods. Due to the incidence of violent extremism, street crimes and growth of illicit trades, families are finding greater security in living with their own communities and relatives.
7. Policies that favour real estate developers have been behind development in urban areas. This has in turn caused spiraling of land and housing prices
8. Cost of houses is increasing due to the increasing cost of materials and cost of construction. Inflationary trends in materials costs have gained ground since 2011. Government taxation measures and reliance on imported materials for construction has also led to increasing costs
9. Housing finance costs have increased including cost of processing. HBFCL continues to finance at flat rate and Islamic financing has not yet reached out to the low-income households. These conditions demand clear and comprehensive Housing Strategy, which underscores importance of working on housing finance market solutions for all.

# Chapter 6

## ENVIRONMENT

Pakistani cities are located in one of the most fragile environments, in a country that is subject to a variety of natural forces that regularly result in disasters of a vast and devastating scale, ranging from floods and droughts to earthquakes and landslides. Because of increasing numbers and higher concentrations of people, inadequate spatial planning and preparedness and the ineffective management of resources, what used to be “natural events” are increasingly becoming “natural disasters”. More recently, a number of measures have been initiated including the establishment of disaster-management institutions, plans and procedures, and these may help alleviate some of the impact of future calamitous events. However, greater attention needs to be paid to the impact of poorly managed water resources, the poor treatment and discharge of wastes solid and liquid into the rivers and aquifers, as well as the growing pollution in most cities from industry and transport.

## ENVIRONMENT AND SAFETY IN PAKISTANI CITIES







## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

### 6.1 Introduction

Environment and urban development are inextricably linked with economic growth and social development. However, the development in the recent decade show tremendous increase and stress on the natural resource base, pollution, environmental degradation and climate change in Pakistan. The Government of Pakistan has undertaken a number of measures to protect the natural environment of the country such as enacting legislation, setting standards, developing and implementing policies. Despite these initiatives, Pakistani cities face several environmental challenges such as, air, water and land pollution. Air pollution is a serious issue as the level of particulate matter (PM) and nitrous oxide (NO)<sup>60</sup> are found higher than the permissible limits of National Environmental Quality standard (NEQS) in the major cities. Solid waste management especially its inadequate collection and inappropriate dumping contribute to water and soil pollution in the urban centres. The exponential growth in population further adds to the environmental hazards in Pakistani cities. These risks are further aggravated by rapid urbanization, increasing industrialization, encroachment of flood plains, and lack of safer land use planning etc. As per World Bank report the cost of environmental degradation has increased from 6 per cent of GDP in 2006 to 9 per cent in 2015<sup>61</sup>. The magnitude of the costs indicates that environmental degradation has become a serious development concern.

**Figure 6.1**

**The Planned city-Capital of Pakistan**



The climate change issue is also adding an additional and inescapable stress upon the burden of managing environmental sustainability. Pakistan is ranked seventh most vulnerable country to





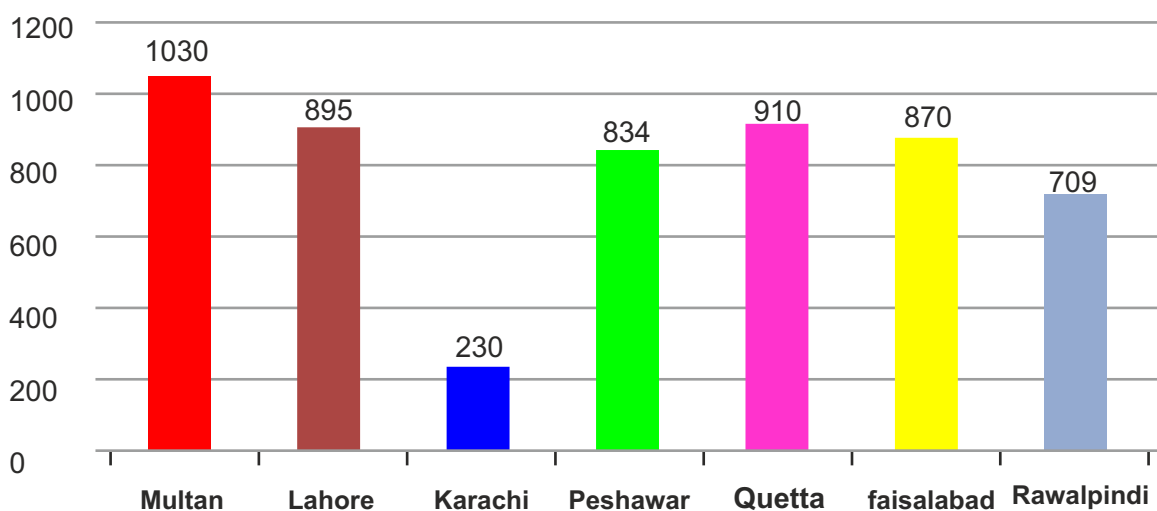
## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

impacts of climate change<sup>62</sup>. The present GHG emissions in Pakistan is 369 million tons carbon dioxide which is estimated to increase manifold in the coming decades<sup>63</sup>. The most serious and visible impact of climate change in Pakistan includes floods, droughts, cyclones and heat waves. The frequency of occurrence of floods in the region in general and Pakistan in particular has considerably increased since past several years, because of global warming and rapid climate change. That is why Pakistan has faced consecutive flood events during the past six years i.e. 2010, 2011, 2012, 2013, 2014 & 2015, which indicates that flood has now become an annual feature in the country. Pakistan has suffered a cumulative financial loss of more than US\$ 38.165 billion during the past 68 years. Around 12,177 people lost their lives, some 197,230 villages damaged/destroyed and an area more than 616,598 Sq.km was affected due to 23 major flood events which were triggered by climate change impacts<sup>64</sup>.

### KARACHI

Karachi is the largest metropolitan city of Pakistan. It is confronted with severe environmental challenges due to expansion of the built-up space and increased densification. These have resulted in increasing the pressure on basic urban services and transport. The level of air pollution (Suspended Particulate Matters in Air PM<sup>10</sup>: 230 ug/m<sup>3</sup>) in the city exceeds the limits set by the World Health Organization (WHO) and the National Environmental Quality Standards of Pakistan<sup>65</sup>. Emissions from fuel inefficient motor vehicles especially diesel-run buses with high sulphur content and two-stroke engine rickshaws cause 86% of air pollution. The city witnesses unprecedented levels of traffic congestion and environmental pollution with increasing rates of motorization<sup>66</sup>.

**Figure 6.2** Coarse Suspended Particulate Matters in Air Pm<sup>10</sup> (Particulates Size greater than 10 micron), Safe Level: 120 microgram per cubic meter WHO Standards.



Source: Pak/EPA-JICA study 2010



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

The existing treatment plants treat only 12% of the sewage and leave 88% untreated; however, if optimally used, these plants can treat 32% of the sewage.

The industrial waste is disposed of in vacant plots, roadsides, graveyards, and residential areas. The coastal areas and the sea are considered to be the worst-affected because of untreated discharge of industrial effluents from Korangi, Landhi, and Karachi Export Processing Zone. In Korangi industrial area, 2,500 industrial units including tanneries dispose untreated waste into the sea. A continuous flow of water with animal dung from Landhi Cattle Colony is another source of pollution. Added to this are the oil spills from ships and fishing trawlers transiting the port.

Karachi is vulnerable to natural disasters like earthquake, floods, cyclones, and urban heat island phenomena. A geological tectonic line runs under Karachi through Khirthar Hills / Mountains to the north-west of Sindh which may potentially cause major earthquake in future<sup>67</sup>. The city is also vulnerable to tropical cyclones which originate in the Arabian Sea and strike it with brutality and heavy rainfall. Due to dense population and encroachments along the drainage, the city faces the risk of water accumulation in the city which potentially damages the city infrastructure during rainy seasons. Urban floods considerably damaged communication, transportation and public infrastructure networks. The city is also facing an urban heat island effect due to expansion of built-up space and increased densification. Approximately 1300 casualties were reported in 2015 due to severe heat wave with temperature rising up to 44. 8°C<sup>68</sup>. A list of natural disasters faced by selected cities is presented in Table 6.1.

### LAHORE

Inadequate environment protection measures in the ongoing urban development initiatives in Lahore are aggravating environmental problems. The vehicular and industrial emissions contribute enormously to pollution in the city. Coarse Suspended Particulate Matters in Air PM<sup>10</sup> is 895ug/m<sup>3</sup> (Fig. 6.2) greater than the WHO Standard of 120 ug/m<sup>3</sup>. In the last decade, more than 11 million cars appeared on the roads, representing a growth of almost 30%. On the other hand, natural barriers to air pollution have increasingly disappeared. For example, more than 2,200 trees were cut down in Lahore city, 2016. This resulted in reduction of natural carbon sink able to absorb some of the large quantities of carbon dioxide and fine particulate matter released into the air<sup>69</sup>. The cumulative effect of the deteriorating air quality is reflected by the appearance of thick fog blocking out the winter sunshine, which creates enormous pressure on transport and living conditions. A policy initiative has been taken to discuss the reasons behind the formation of dense smog in the Punjab, especially in Lahore and its environs<sup>70</sup>.

Citizens of Lahore face serious health issues due to contaminated water. A number of studies conducted in Lahore have shown that the population is exposed to unsafe drinking water. The contaminants found in water were iron, arsenic and bacteria Coliforms bacteria were absent in main reservoir (tube well) and pipelines while, they were present in the samples of consumer taps. It



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

means that the water supply at consumer sites is not potable<sup>71</sup>. The industries located along the Hudiara Drain, discharge waste into the River Ravi. Among these industries, some 30-35 industries are categorized as high-polluting; they include Textile Processing Units, Carpet Industries, Tanneries, Food Processing Units and Dairies.

Inadequate collection and disposal of solid waste continue to pose a serious threat to health of the dwellers and environment of the city. Uncollected waste remains on street, road, or open spaces. It is estimated that currently 27% of waste by weight is being recycled through the informal sector. Making use of the organic content of the waste, a composting facility is operative in the city, producing 47,230 tonnes year of organic compost. However, inclusivity of users and providers of the waste management system is low in the city, as not all stakeholders are consulted in the decision-making processes, resulting in deterioration of environment<sup>72</sup>.

Lahore is often hit by large heat waves and heavy rains. Severe heat waves gripped Lahore in 2007 when 48°C temperature was recorded in the city on 9<sup>th</sup> June 2007-a record repeated after 78 years. On the other hand, 438 mm rain was noted in the city in mere 72 hours in August 1996-the wettest month on record. In the same way, fluctuations in the flow of the river Ravi were observed from time to time. The designed capacity of river Ravi at Shahdara is 250,000 while the highest flow of 576,000 cusec was recorded in 1988<sup>73</sup>.

### FAISALABAD

Faisalabad is the oldest formally planned city of Pakistan, which produces a substantial share of the country's textile exports. The industrial installations include textile processing mills, ginning and sugar mills, power looms, foundries, steel units, paper manufacturing units, poultry feeds manufacturing units, chemical units, dyeing and bleaching units. The levels of air pollutants are many times higher than WHO standards (Fig. 6.2) due to increasing industrial activity as well as the number of vehicles.

The quality of drinking water supplied to the residents is not safe. 67% of collected samples of drinking water assessed by Japan International Co-operation Agency (JICA) along with Pakistan Environmental Protection Agency (Pak-EPA) were found to be "not fit for human consumption". This fact is further substantiated from the findings of the Pakistan Medical Research Council (PMRC) survey, which found that almost 74000 people in Faisalabad were affected from Hepatitis B annually and approximately 524,000 people were being affected from Hepatitis C due to contaminated water in the area<sup>74</sup>.

The textile and dyeing mills produce intense alkaline liquor having high levels of dissolved materials and suspended soil. In the absence of adequate treatment facilities and effective drainage system, the bulk of the effluent from these industrial units flows into open land and low-lying areas. This results in severe damage to ground water aquifer, contamination of agricultural land, flora and fauna. Faisalabad's industries produce large quantities of solid wastes and dispose off in low-lying



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

depressions at various points around the city. During the last five years, two dumping sites have been established but no measures have been taken to develop proper landfill sites. This improper waste disposal causes serious insect and odour problems during rains.

Faisalabad is vulnerable to urban floods and heat waves. Heavy rain submerges roads not only in low-lying areas but also in posh localities of the city. The city also witnesses some of the most extreme temperatures in the country. The highest heat wave with a record temperature of 48 °C (118.4 °F) was recorded on 26 May 2010<sup>75</sup>. It also experiences severe thunderstorms and high wind gusts which damage crops.

### RAWALPINDI

Rampant and unplanned urban growth in Rawalpindi has caused serious environmental challenges including air, water and land pollution. Rapid increase in the number of vehicles, inefficient automotive technology, use of unclean fuels, uncontrolled emissions of industrial units, emissions of brick kilns, and the burning of garbage have resulting in the deterioration of air quality. The use of low-grade coal and old tires in brick kilns of Rawalpindi generate dense black smoke and other kinds of noxious emissions<sup>76</sup>. The Coarse Suspended PM<sup>10</sup> in the air was recorded as being 709 ug/m<sup>3</sup> against a safe level of 120 ug/m<sup>3</sup>.

Lack of sanitation facilities contaminates the groundwater. Water sampling from ground and surface water sources shows that more than 70% of the tested tube wells and distribution networks contain contaminated water. The samples taken from the catchment of the surface water supply at Rawal Lake are highly contaminated with E-coli, faecal coliform, and other bacteria<sup>77</sup>.



Rawalpindi





## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

According to a recent study, only 35% of Rawalpindi's waste-water is collected and disposed of by the Rawalpindi Water and Sanitation Agency. The remaining 65% is disposed of into the Nullah Lai, which contaminates ground water and degrades soil quality. Two slaughterhouses currently exist in Rawalpindi. The goat slaughterhouse, located in the city center, is old and its sewerage and drainage facilities are inadequate. Waste from this slaughterhouse poses a health hazard and disturbs the adjoining areas<sup>78</sup>.

The uncollected waste, approximately 30 to 50%, remains on streets and in open spaces. Due to rapid growth in population, increments in solid waste generation rate, management deficiencies, lack of legislative implementation and funding, the solid waste management systems of Rawalpindi is not working effectively. An inefficient municipal solid waste management system create serious negative environmental impacts like infectious diseases, land and water pollution, obstruction of drains and loss of biodiversity<sup>79</sup>.

Urban flooding and earthquake are major concerns for disaster management in Rawalpindi. The city is vulnerable to flooding during monsoon season. Nullah Lai, which runs through the city and covers almost 40% of residential areas, is often prone to over-flowing. A total of 19 flood events occurred during the last 59 years, among which the flood of July 2001 was the largest. A rainfall 620 mm in 10 hours (0600 to 1600 hours) was recorded on the 23rd of July, 2001 which resulted in massive flooding of the city and destruction of infrastructure, public and private property worth USD 0.25 billion. The city is also susceptible to earthquakes due to its proximity to the fault-line that underlies Islamabad. The vulnerability of Rawalpindi to these earthquakes is further heightened by its densely concentrated population in older buildings.

### GUJRANWALA

The degradation of air quality is a major environmental concern in Gujranwala. Air pollution levels in the urban centres have either crossed safe limits as per National Environmental Quality Standards (NEQS) or have reached the threshold values. About 60% to 70% of the deterioration in the air quality is due to vehicular emissions. Higher concentration of oxides of nitrogen is a major threat to the environment<sup>80</sup>.

Groundwater is the main source of drinking water in Gujranwala. Due to massive rate of pumping, the groundwater table is decreasing each year approximately by 1.5 ft. The city's industrial sector is affecting the surface as well as groundwater quality by indiscriminately discharging their effluents into streams, watercourses, agricultural fields, rivers and lakes and that invariably results in human ailments apart from threatening the quality of water. Owing to out-dated infrastructure of the water supply system, majority of people receive unsafe drinking water.

Gujranwala is also facing acute solid waste management problem, which causes environmental pollution. The city has weak organizational setup of solid waste management (absence of technical, finance, engineering and administrative wings) and shortage of machinery. This



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

pollution degrades soil, affects water and air quality and ultimately affects the health of people in Gujranwala.

### PESHAWAR

Peshawar faces growing environmental issues due to rapid urbanization, population explosion and exploitation of natural resources. It also serves as one of the most important centres for Afghan refugee settlements. According to Environmental Protection Agency (EPA), the average level of PM<sup>10</sup> in the air in Peshawar was 79.1 ug/m<sup>3</sup> against the WHO standard of 120 ug/m<sup>3</sup>. The combustion of old rubber tyres and used oil in industrial units emit hydrocarbons, carbon monoxide, and sulphur dioxide which are major sources of pollution in the city. Moreover, Industrial emissions from chimneys also contribute to air pollution in these areas.

The quality of water is a major issue in the city. The untreated waste discharged from factories, industrial units, residential areas and municipal waste pollute surface water. Bara River receives untreated sewage and waste-water from the city and the sub-urban areas and discharges it into the Kabul River. The river is polluted by untreated industrial effluent from sugar mills, paper and board mills, tanneries and textile mills, ghee and chemical industries. Most of the drinking water in Peshawar is contaminated due to presence of coliform bacteria in drinking water exceeding the WHO limits. This poses serious health risks associated with faecal pollution<sup>81</sup>.

No proper waste management system exists in Khyber Pakhtunkhwa, and approximately 40% of the generated wastes remain at collection points or on the streets<sup>10</sup>. The solid waste includes Hospital waste, for which the management, collection and disposal system doesn't exist and there is no implementation and monitoring mechanism in place for enforcement of hospital waste management rules. This poses serious health and environmental risks.

Urban flooding is a recurring phenomenon in Peshawar. Budhni Nullah, which passes through the densely populated areas, usually overflows in the rainy seasons. Thousands of households were affected by floods in Peshawar in 2010; likewise, more than 300 people had to evacuate their houses due to the flooding of the drain in 2016. Peshawar is about 200 kilometres from Hindu Kush seismic region which makes it vulnerable to earthquakes and that is why frequent earthquake shocks have been observed in Peshawar.

### MULTAN

The inappropriate location of industries and their uncontrolled expansion in Multan has adversely affected the city's physical fabric and contributed to the degradation of environment. The discharge of gases from industrial fertilizer plants and liquid waste from municipal and industrial sources pollute air and water, spread critical diseases, and pose a great threat to the existence of the residents of Multan. Besides this, the brick kilns and vehicles are also permanent sources of pollution in the city. The Coarse Suspended Particulate Matters in Air PM<sup>10</sup> is 1,030 per cubic meter which is much higher than WHO standards of 120 microgram per cubic meter.



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

The water supply is polluted and contaminated due to leakages and mixing with waste-water in the central city area. Due to which, the water has high content of Arsenic & E-coli, and Faecal Coliforms therefore the water quality in the central city is much below WHO Guidelines. The city also faces 22% water losses due to<sup>82</sup> leakages, line losses, and illegal connections. A survey, conducted by the Environment Protection Department (EPD) in Multan, reveals that the quality of water is unfit for human consumption. Industrial waste is the main pollutant, which contaminates drinking water in the city. 33% of the total generated waste is disposed of in the city's landfill site and the rest is thrown away at dumping sites in low-lying areas, vacant plots, and open fields.

The water level in Chenab River rises at Panjnad during the monsoon season, which makes Multan vulnerable to floods. The city is also prone to heat waves and dust storms. A very high temperature, 47 °C (117 °F), was recorded in the city in 2006 which killed 33 people. Moreover, the highest temperature, 50 °C (122 °F), was recorded on 27 May 2010<sup>83</sup>.

### HYDERABAD

Environmental degradation in Hyderabad is rampant due to increase in high rate of rural-urban migration and inefficient basic urban services network. The conditions of air and water in the urban areas of Hyderabad are rapidly deteriorating. The PM<sup>2.5</sup> values at Tilk Chari and Shahbaz Buing are above permissible levels. The emission of gases from heavy traffic of automobiles and consumption of fossil fuels contribute heavily to the pollution in the area<sup>84</sup>.



Sehrish Nagar (Hyderabad)



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

The city witnesses one of the most extreme temperatures in the country. The highest temperature, 42 °C, was recorded on 20 June 2015 in which more than 15 people died in the city. On the other hand, urban flooding is also a major issue in the city. It received 105 millimetres rain in 12 hours in February 2003 that killed many people; likewise, heavy downpours resulted in the loss of hundreds of lives in 2006 and 2007. September 1962 is considered the wettest month in the history of the city during which, 250.7 millimetres rain was noted on 12 September 1962, the highest in a single-day while 286 millimetres rain was recorded in the entire month<sup>85</sup>. Similarly, devastating rains during which 249 mm fell during the four weeks period of Aug/Sep 2011, and brought unprecedented flooding in Sindh. The rains were many times higher than their normal value, which affected 681 villages/settlements of 24 union councils. Unsafe buildings and poor drainage and sewage system further aggravated these disasters. The floods and heavy rainfalls have damaged and weakened the protection Bund in the west of the district Hyderabad.

### ISLAMABAD

Islamabad is the planned city of Pakistan. It was built on virgin land but with the passage of time and the mushroom growth of informal settlements on the periphery and marginal areas of the city, led to severe environmental degradation. The unsustainable use of water and increased ground water extraction has been causing rapid and unsustainable depletion of groundwater in the city. Besides, industrial units with no effluent treatment facility also contribute to contamination of the water bodies. Due to lack of proper sewerage system, Katchi Abadis dispose household garbage into the nearby water channels. As per the Environment Protection Cell's (EPC) analysis of samples collected from these areas, water in these channels is unfit for human consumption due to contaminated water<sup>86</sup>. On the other hand, the treatment of waste-water is almost non-existent.

Moreover, the quality of air in Islamabad is below standard. The average annual concentrations of PM (2.5) and NO in the city are higher than Pakistan's National Environmental Quality Standards (NEQS)<sup>87</sup>. Vehicle emissions are another one of the key contributors to high particulate matter and nitrous oxide.

Furthermore, Islamabad has poor solid waste management system. Due to lack of proper landfill sites, solid waste is dumped at open sites. Such unattended and openly dumped waste especially under warm and moist conditions becomes an ideal breeding place for disease-causing organisms. There is no proper mechanism for collection and safe disposal of Hospital waste in the city.

Islamabad is prone to natural disasters, such as earthquakes and floods. Since it is located on the fault line of active earthquake zone, many earthquake shocks have been observed in the city. One such severe earthquake, which measured 7.6 Mw on the Richter scale, collapsed many buildings in 2005. Besides earthquakes, the city faces frequent floods during the monsoon season (July-September). One of the worst floods occurred in July 2001, which caused 74 deaths and destroyed 3,000 houses.





## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

### QUETTA

Quetta is located in a bowl shaped valley surrounded by mountains. Economic development is rapidly taking place in the city, but it lacks catering to the environmental considerations. Challenges such as the safe disposal of solid waste, sewage, and traffic congestion remain a big challenge. According to a study conducted on ambient air particulate matter by Pak-EPA in Quetta, the average level of suspended particulate matter (2.5 micron & below) in the air in Quetta was  $47.1\mu\text{g}/\text{m}^3$ , which was higher than the WHO guidelines. Imdad Chowk is the most polluted location in Quetta due to the high density of traffic at this point<sup>88</sup>.

The ever-growing scarcity and quality of drinking water in Quetta city is other very serious issue. The city is mainly dependent on ground water reservoirs except for about 3 MGD water supplied from Wali Tangi Dam and Spin Karez for the cantonment area<sup>89</sup>. Over-population causes the rapid depletion of groundwater and the rapid rate of urbanization in and around the city has radically reduced the restoration capacity of underground water reservoirs. Furthermore, there is no perennial river in the district. The local groundwater resources cannot sustain even the existing population, agriculture, and industry in the city for much longer.

Quetta lies in the active seismic region and as such earthquakes occur regularly. The 1935 earthquake (7.6 on the Richter scale) remains the most destructive to date, it killed about 30,000 people<sup>90</sup>. Similarly, an earthquake measuring 6.4 in magnitude on the Richter scale hit Quetta and the surrounding areas on 28 October 2008, which killed 160 people and injured 370. The epicentre of the quake lay 60 kilometres northeast of Quetta<sup>91</sup>.

### 6.2 Safety and security of citizens

Rapid urbanization has led to a host of problems from poverty, unemployment, infrastructure deficits and traffic congestion, to security issues related to terrorism, crime, natural and man-made disasters and diseases. In the major urban centers, particularly Karachi, crime and safety are major concerns. However, after the recent security operations carried out by the Government, the rate of crime and violence has significantly improved. In Lahore and in other selected cities the rate of urban crime is modest and security situation is fairly under control. The roots of urban crimes are more to do with dysfunctional urban development than any other factor. The social and economic division of the city into planned and unplanned areas, the competition over resources and public services and the interplay between political parties and interest groups have tainted the cities to a considerable degree.

#### 6.2.1 Role of citizens and community groups in safety and security

Pakistan has evolved a successful model for maintaining safety and security and ensuring law and order in the urban areas with the help of citizens and the law enforcing agencies. This model is called Citizens- Police Liaison Committee (CPLC), which is a non-political statutory institution, operationally independent and managed by dedicated and concerned citizens offering their



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

honorary services. Such committees have been established in major cities like Karachi, Lahore, Peshawar, Hyderabad and Faisalabad. There is a need to enhance the role of the local community in finding and implementing solutions. Through broad-based participation and enabling strategy there is a need to involve all stakeholder, directly affected by urban developments.

### 6.3 Effective Urban Environmental and Resilience Management

Cities need to consider effective urban environmental and resilience management for 'inclusive' growth and economic development models that address the needs of the vulnerable groups especially women and youth. As envisaged in the "Sustainable Development Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable" coordinated efforts between government, private sector and civil society are needed to address this challenge in Pakistan. The New urban agenda focuses on how to achieve sustainable urban development that helps to plan and manage the cities to meet the emerging urban development challenges.

The New Urban Agenda provides guidelines for countries to address their emerging urban challenges. Pakistan being the fastest urbanizing country in South Asia needs to realign urban development strategies by rationalization of future urban development and growth centers by optimally utilizing the resource potential for value addition and creation of secondary and tertiary employment opportunities. Initiating programs for development of smart cities, establishment of effective infrastructure and inter and intra city transport networks, and implementation of building bye-laws is needed. These measures will contribute towards ending poverty and hunger, reduce inequalities, promote sustained, inclusive, and sustainable economic growth and achieve gender equality.

Key measures required to have environment friendly, resilient and safe cities include the following:

- **Policy and Institutions:** The urban management institutions, which form part of the local governments need substantial structural and mandate changes. The emphasis needs to be placed on resolving the key environment and urban issues, by setting priorities, formulating appropriate mechanisms for integration of environmental, resilience and safety consideration into development process, and enhancing capacities of institution for implementation and enforcement of laws and regulations.
- **Setting Priorities:** In view of enormity of problems and shortage of resources it is important to prioritize issues. Prioritisation of issues could be based on some universal criteria such as: (a) health impacts; (b) productivity losses; (c) impact on the urban poor; (d) irreversibility; (e) unsustainable consumption of resources; (f) degree of local support/existence of constituencies and (g) level of public awareness. Whereas the first three criteria are used primarily to determine the immediate curative actions, the last four can be used to set a longer-term agenda for preventive action.
- **Integrating Environmental Considerations:** In urban development planning It may be



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

noted that successful integration of environmental considerations in metropolitan and urban planning requires three basic operating elements: (1) a simple yet relatively comprehensive information collection and analysis framework to relate key urban development activities to environmental concerns; (2) mechanisms for resolving divergent and sometimes conflicting interests and mandates among metropolitan agencies and jurisdictions to allow coordination between environmental programmes and urban development plans; and (3) a continuous process of policy analysis and refinement that reviews past policy decisions, evaluates policy implementation measures, and prevents a piecemeal approach in policy design and implementation (4) adoption of polluters pay principle by using economic instruments.

- **Strengthening Capacity:** Enforcement is crucial to the success of an integrated urban environmental management strategy whether the government adopts a command and control strategy, economic incentives, or a mix of the two. Since a majority of our environmental problems are essentially local in character and call for local level action including regulation/control as well as active involvement and cooperation of all stakeholder. Therefore, local authorities capacities needs to be strengthened accordingly to play an effective role in the management of environment.
- **Incorporation of disaster component** in sectoral policies, strategies, plans and budgetary processes.
- **Regular review** and updating of plans. The command, coordination and organization structure along with efficient trained personnel.



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

Table 6.1

## List of Major Natural Disasters in selected ten cities

Natural Disaster Type	Year	City	Population Affected
Urban Heat Wave	2016	Karachi	3 Died
	2015	Karachi	950 Died, 65,000 heat stroke patients
	2012	Quetta	8 Died, 30 Injured
Earthquakes	2013	Quetta	34 Died, 80 Injured
	2008	Quetta and other cities of Province	30,000 Died (160 in Quetta)
	2005	Pakistan as a whole especially AJK and twin cities	86,000 Died
	2001	Karachi	15 Died, 208 Injured
	1992	Quetta	4 Died
	1992	Peshawar	115 Died
	1983	Peshawar	14 Died
	1981	Quetta	6 Died, 12 Injured
	1981	Peshawar	220 Died
	1966	Quetta	2 Died, 15 Injured
Cyclones	1935	Quetta	60,000 Died, 4000 Injured
	2010	Karachi	14 Died
	2007	Karachi	200 Died
	2007	Karachi	213 Died
	1998	Karachi	12 Died
	1965	Karachi	5000 Died
Floods	1965	Karachi	10,000 Died
	2015	Rawalpindi	8 Died
	2015	Quetta	10 Died
	2014	Multan	38,286 houses destroyed, 26,8002 people affected
	2013	Multan	111 Villages affected





## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

<b>Floods</b>	2013	Hyderabad	6 Died
	2013	Gujranwala	21 Died, 2 Injured
	2013	Karachi	16 Died
	2013	Islamabad, Rawalpindi, Peshawar, Dera Ismail Khan, Chitral, Gujranwala, Chakwal, Jhelum, Muzaffarabad, Abbotabad, Bannu, Kohat, Mardan, Nowshera, Gujrat and Sargodha.	234 Died, 5 Injured
	2013	Quetta	3 Died, 7 Injured
	2012	Peshawar	50 Died
	2011	Hyderabad	17 Died
	2011	Karachi	3 Died
	2010	Major cities of Punjab, AJK, KP including selected cities for study	1781 Died
	2010	Multan	61 villages affected
	2009	Karachi	52 Died, 70 Affected
	2008	Peshawar	30 Died
	2007	Karachi	228 Died
	2007	Karachi	42 Died
	2006	Karachi	74 Died
	2005	Karachi	11 Died
	2005	Peshawar	9 Died
	2004	Rawalpindi	10 Died
	2002	Peshawar	14 Died
1996	Lahore, Gujranwala	80 Died	
1994	Rawalpindi	316 Died	



## CHAPTER 6 - ENVIRONMENT AND SAFETY IN PAKISTANI CITIES

	Lahore, Kasur, Gujranwala, Salkot, Narowal, Faisalabad, Multan, Khanewal, Lodhran, Muzaffargarh, Rajanpur, Sheikhupura, Rahimyarkhan, Jhang and Bhawalnagar	15 Died
	1992 Peshawar	1,334 Died
	1984 Karachi	42 Died
	1977 Karachi	848 Died
<b>Floods</b>	1967 Karachi	32 Died, 150,000 affected
	2004 Karachi	9 Died, 300 Missing
	2003 Rawalpindi, Islamabad, Karachi	127 Died, 30 Injured
<b>Wind Storm</b>	2003 Quetta	51 Died
	1993 Hyderabad	609 Died in keti bandar, Hyderabad
	2015 Major Cities of Sindh	4 Died
<b>Dust Storm</b>	2012 Lahore, Faisalabad, Quetta, Peshawar	8 Died, 60 Injured



# Chapter 7

## HERITAGE

Pakistan is where some of the earliest civilisations developed and where some of the earliest cities were formed. Yet the treatment of these treasures does not correspond to their value, nor does it reflect well on our role as its custodians and protectors. This is despite the existence of a large number of bodies and a plethora of legislation that exists solely to protect, preserve and promote our heritage. More than any scarcity of resources, it is the lack of recognition and acknowledgement of our heritage that is responsible for its neglect and destruction. Virtually every city has a rich and often unique collection of artefacts and structures that it should be proud of - but other than those that relate specifically to a particular view of culture and history, the rest are at the mercy of pot-shots by bigots and hostage to "development" and the bulldozers of speculators.

## URBAN HERITAGE AND TOURISM







## CHAPTER 7 - URBAN HERITAGE AND TOURISM

### 7.1 Introduction

Pakistan Vision 2025 (2014), a document by the Ministry of Planning and Development, recognizes culture and heritage as vibrant potential sectors of national integration and development. It states:

“It is important to ensure adequate protection and maintenance of heritage sites and buildings in urban centres. Community based participation will be promoted to transform our cities into 'creative' cities where local and innovative solutions are found to local problems through community organization in collaboration with city governments.”

Cities are the largest repositories of the built heritage and a large number of towns and cities developed around historic precincts and still maintain their original urban morphology. Most of the cities in Pakistan have evolved from small towns to sprawling cities with populations over a million and growing. A number of these ancient towns were extended by the British Raj as cantonments, garrison towns and canal colonies connected with the railways that were then being developed. With growth in population and changing patterns of land use, historical and cultural heritage buildings are pulled down for alternative uses, which offers better economic returns. As a result, the heritage is increasingly neglected due to lack of protection, listing, or proper documentation and a lack of land ownership records.

UNESCO has listed seven World Heritage Sites in Pakistan (Figure 7.1) and 26 sites are on its tentative list for inscription on the World Heritage List. Moreover, the Federal Department of Archaeology, Pakistan has protected 400 sites. The Punjab Special Premises (Preservation) Ordinance 1985 has listed 272 sites in Punjab; the Sindh Cultural Heritage (Preservation Act) 1994, has listed 1600 sites; KP has 85 cultural heritage sites; and Baluchistan has 28 protected and 57 unprotected sites. Apart from these, there are hundreds of other sites, which have not been listed or protected despite their historic and architectural merit. The cities of Pakistan are well-endowed with unrecognized built heritage. Table 7.1 provides a brief summary of the built heritage assets of each city.





CHAPTER 7 - URBAN HARITAGE AND TOURISM

Figure 7.1

Location of world heritage sites in Pakistan.

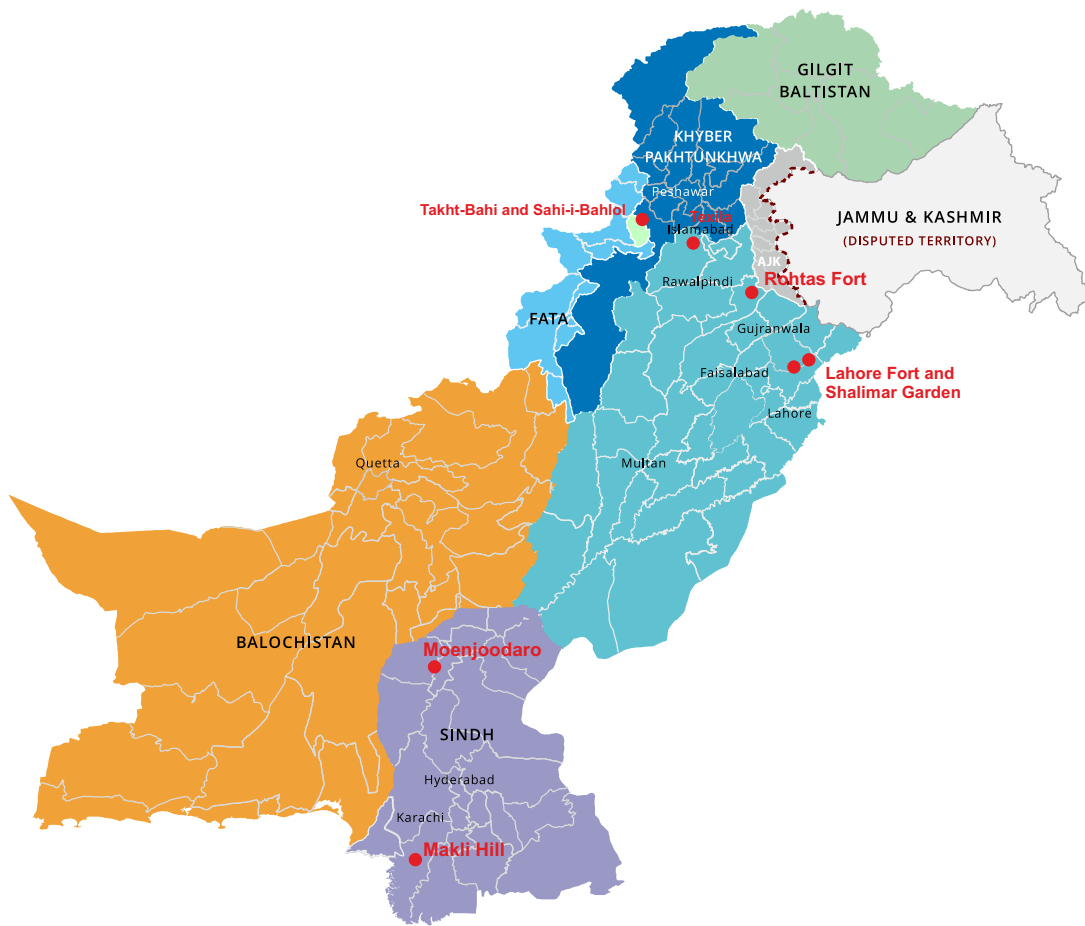


Table 7.1

## Built heritage assets of cities

City	World Heritage Sites	Tentative List	Protected Sites	Unprotected Sites	Listed Monuments	Walled Cities
Karachi	-	1	350	18	426	Y
Lahore	2	3	68	25	97	Y
Faisalabad	-		1	7		N
Hyderabad	-	15	19	2	21	Y
Rawalpindi/Islamabad	1	14	23	11	130	N
Gujranwala	-		3	4		Y
Multan	-	2	10	3	36	Y
Peshawar	1	-	19	-	19	Y
Quetta	-	1	10	8	18	N

Source: Author Fauzia Husain Qureshi



Gumti (Faisalabad)

**Table 7.2** UNESCO's tentative list of the world heritage sites in Pakistan

SITES	LOCATION
<b>Badshahi Mosque</b>	Lahore
<b>Wazir Khan Mosque</b>	Lahore
<b>Tombs of Jehangir Asif Khan and Akbari Sarai</b>	Lahore
<b>HiranMinar</b>	Sheikhupura
<b>Tomb of Hazrat Rukn-e-Alam</b>	Multan
<b>Rani Kot Fort</b>	Dadu
<b>Shah Jahan Mosque</b>	Thatta
<b>Chaukhandi Tombs</b>	Karachi
<b>Archaeological site of Mehrgarh</b>	Balochistan Kachi District Bolan Pass
<b>Archaeological site of Rehman Dheri</b>	KP, D.I.Khan
<b>Archaeological site of Harappa</b>	Sahiwal
<b>Archaeological site of Ranigat</b>	KP District Buner
<b>Shahbazgarhi Rock Edicts</b>	Mansehra
<b>Baltit Fort</b>	Gilgit-Baltistan*
<b>Tomb of BibiJawindi, Bāha-al-halim and Ustad</b>	Uch Shariff
<b>Port of Banbhore</b>	East of Karachi
<b>Derawar and the Desert Forts of Cholistan</b>	Cholistan Desert
<b>Hingol Cultural Landscape</b>	Balochistan*
<b>Karez System Cultural Landscape</b>	Balochistan*
<b>Nagarparker Cultural Landscape</b>	Thar Desert
<b>Central Karakorum National Park</b>	Gilgit -Baltistan, Karimabad
<b>Deosai National Park</b>	Skardu
<b>Ziarat Juniper Forest</b>	Quetta
<b>Salt Range and Khewra Salt Mine</b>	Khewra

\* A number of these sites in the table are not in cities but in areas spread over a number of districts  
<http://whc.unesco.org/en/statesparties/pk>



## CHAPTER 7 - URBAN HERITAGE AND TOURISM

The Department of Archaeology is the custodian of these sites; however, the department is understaffed and faces numerous other challenges in protecting the national heritage. In addition to these problems, encroachment also spoils this heritage. The land around most of the protected buildings, such as Jahangir's tomb in Lahore and the World Heritage Site of Makli Tombs in Karachi, have been encroached upon for housing. Moreover, public sector development works, such as widening of roads and laying new utility lines, often damage the heritage sites, particularly within the inner-city centres.

Currently there are numerous legislative mechanisms, including Acts and Ordinances, which provide protection to the built heritage of Pakistan at the national, provincial, divisional and district level. A Ministry of Culture, National Heritage and Integration has been established with a responsibility to promote cultural activities such as architecture, theatre, cinema, dance, folklore, literature, music, philosophy, textiles. The following legislations protect the built heritage:

- Antiquities Act 1975 (federal level and Islamabad)
- The Antiquities (Amendment) Act 2012 (Punjab)
- Punjab Special (Preservation) Ordinance 1985
- Punjab Heritage Foundation Act 2005
- Sindh Antiquities (Amendment) Act 2012
- Sindh Building Control Ordinance 1979
- Karachi Building and Town Planning Regulations 2005
- Sindh Waqf Properties Ordinance 1979
- Sindh Cultural Heritage (Preservation) Act 1994
- North-West Frontier Province Antiquities Ordinance 1997
- Evacuee Trust Property Board (ETPB), a statutory board of the Government of Pakistan, which administers evacuee properties attached to educational, charitable or religious trusts left behind by Hindus & Sikhs & maintain/upkeep places of worship belonging to Hindus and Sikhs.

Added to the above, all legislation related to the environment, building regulations and byelaws at the national, provincial, or city level and development authorities incorporate regulations, which provide clauses related to the protection of the built and cultural heritage. Despite these laws and legal protection, the built heritage is constantly under threat and is being pulled down to create space for new and alternative higher-density uses. The reasons for the poor state of the conservation, preservation and presentation of the built heritage range from the lack of implementation of the rules and regulations, shortage of trained professionals, low resource allocation and the lack of coordination within the public sector agencies..





## CHAPTER 7 - URBAN HERITAGE AND TOURISM

### 7.2 Tourism

The World Economic Forum Travel and Tourism competitiveness in 2017 ranked Pakistan at 124 out of 136 countries despite the fact that it ranked Pakistan among the top 25% tourist destinations for its World Heritage Sites. Similarly, in comparison to its neighbouring countries, according to The Travel and Tourism Competitiveness Report 2017, Pakistan is ranked in the red zone under two categories: Safety and Security, and Human resource and labour market -133 Out 136 in the former and 134 out of 136 in the latter.

Pakistan's tourism has suffered due to complex socio-political conditions terrorism, lack of proper infrastructure and lack of visa openness. The majority of the foreign tourists are overseas Pakistanis who visit their family and friends in the Pakistan and only a very small percentage of the tourists come for tourism or recreational purposes. Sikh tourism is a significant exception, as some of their most sacred sites are located in Pakistan. However Pakistan's relationship with India inadvertently creates visa problems and limits the numbers of Sikh that come to Pakistan as tourists.

Pakistan Vision 2025 provides an action plan for promoting tourism. Some of the points include:-

Pakistan Vision 2025 provides an action plan for promoting tourism. Some of the key points Preservation, development, and effective advertising of heritage sites will be undertaken to attract tourists.

- High quality tourism education and training centres will be set up to provide specialized personnel to the tourism industry.
- The capacity of foreign missions to promote tourism will be strengthened by equipping them adequately with trainings, materials, and information.
- National Tourism Board will be established with 50% representation from the private sector.
- Sports and cultural shows in different parts of the country will promote domestic tourism.
- Efforts will be taken to improve Pakistan's international image. In this regard, Pakistani consulates can serve in promoting Pakistan as a tourist destination abroad.
- In addition, the entertainment industry and Pakistani cuisine will be promoted to generate further employment opportunities for youth and promote the country's soft image abroad.

The major sources of domestic tourism are business, health or religious reasons, visiting friends and family. Within the category of domestic tourism, religious tourism especially visiting shrines and tombs of Sufi Saints on the occasions of "urs" (date of death of the saint) is of significant size.

Although the Federal Ministry of Tourism prepared the National Tourism Policy in 2010 but due to 18<sup>th</sup> Amendment in the Constitution of Islamic Republic of Pakistan, many ministries including Tourism were devolved to the provinces and every province runs their ministries their own way. The basic services for tourism such as hotels, travel and tour services, and entertainment /recreational facilities are limited. Among the provinces, except for KP the others have not yet announced tourism policies.



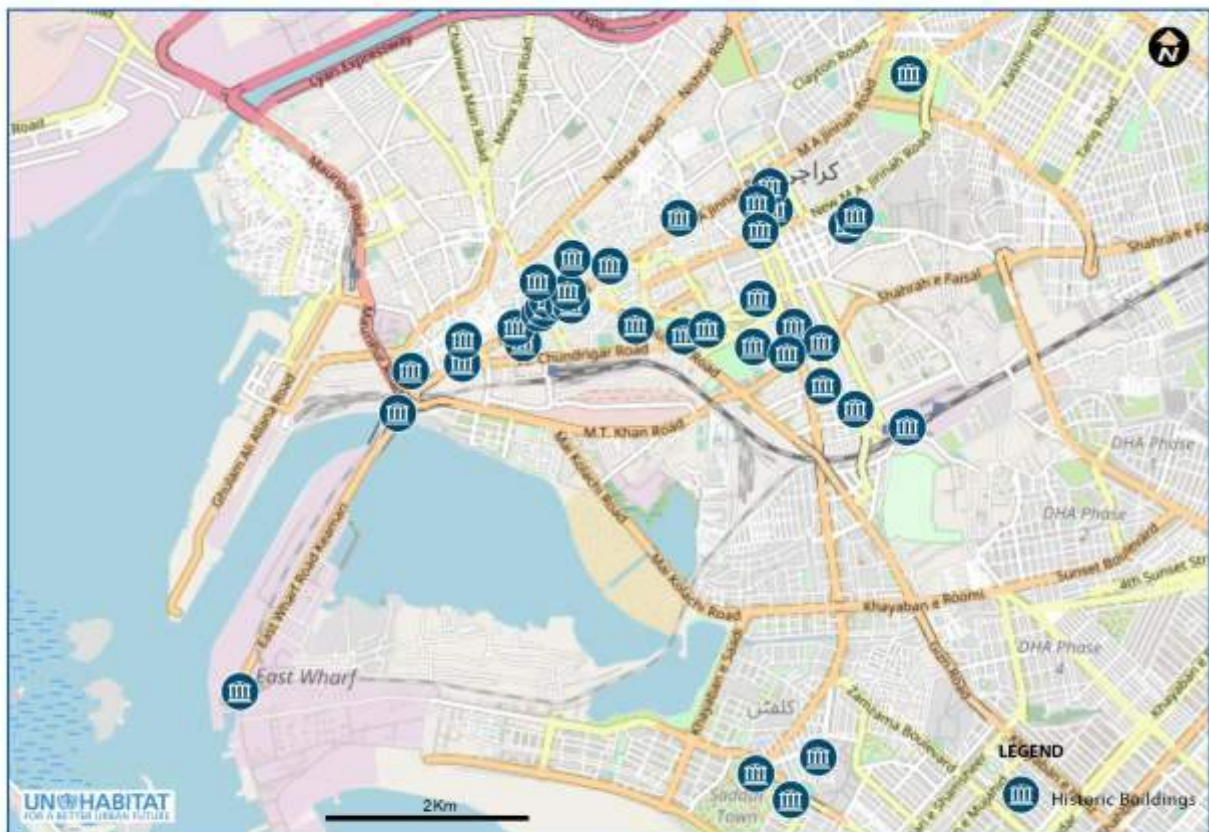
## CHAPTER 7 - URBAN HERITAGE AND TOURISM

The China-Pakistan Economic Corridor (CPEC) with its investment of \$54 billion dollars is believed to be the game changer for Pakistan, especially in the economic sphere and this might help strengthen the tourism industry. CPEC is expected to modernize Pakistani infrastructure and strengthen its economy through the construction of modern transportation networks, numerous energy projects, and special economic zones. With this development, tourism within the country is expected to increase.

### 7.3 Pakistan's Urban Heritage

The city-wise details of tourism and cultural heritage are presented below:

#### KARACHI



“Karachi's cultural heritage is tangibly manifested in its historic architecture, the heritage buildings which link the city to its historic past. The Sindh Cultural Heritage Act 1994 protects about 600 heritage buildings, which are mainly concentrated in the inner city. Many of these buildings have deteriorated over the years and are in urgent need of repair. In addition to regular renovation and preservation of the heritage buildings, development in areas adjacent to these sites has to be consistent with conservation and in accordance with the criteria and zoning bylaws. It is also



## CHAPTER 7 - URBAN HERITAGE AND TOURISM

essential to create public awareness of these buildings as historic assets. In case of buildings under private ownership, offers of various incentives should encourage owners to protect their historic properties.”

The city is endowed with the colonial architecture, having Roman arched openings and articulation of wall-ends with pilasters whose capitals and bases are borrowed from the classical orders. The 70's and 80's saw the demolition of many fine buildings and colonial landmarks, which largely eradicated the history and memories of the city. The 1994 Sindh Cultural Heritage Act preserves and protects the historic sites and buildings of national interest. Moreover, Karachi's Strategic Development Plan 2020, clause 2.18, recognizes a number of buildings as 'heritage sites'.

With the help of Private-Public partnerships and youth initiatives such “I Am Karachi” many buildings such as Cantonment Railway station, KPT House Walkway and Port Grand Food Entertainment Complex have been restored.

The Sindh government took over the ownership of Mohatta Palace and appointed an independent board of trustees, headed by the Governor to manage the property. In addition to this, the trustees raise funds through private and public grants, donations and other fund raising activities for acquisition of collections for the museum and the construction of an extension.







## CHAPTER 7 - URBAN HERITAGE AND TOURISM

### LAHORE

Lahore, as a city, is considered the cultural capital of Pakistan and is probably the most endowed with historic buildings. History and culture, dating back to the Mughals, is visible within the Walled city, while the Civil Lines and Cantonment areas are a reflection of the colonial period. Lahore is the perfect cultural amalgamation of the pre-colonial, colonial and post-colonial architecture and heritage. The interminable Mall Road, with buildings built during the British Raj, lead to the deeper inner city of the Mughal era, punctuated with large gates that once stood as entrances into the Walled City.

Lahore is probably the only city where the government has provided many facilities for tourists, including:

- Double decker tour buses
- Tours of the Heritage Trail in the Walled City
- Food streets developed on Fort road, and
- Conservation of Walled City Heritage Trail, Wazir Khan Mosque, Delhi Gate, and ShahiHamam.



Badshahi Masque (Lahore)





CHAPTER 7 - URBAN HARITAGE AND TOURISM

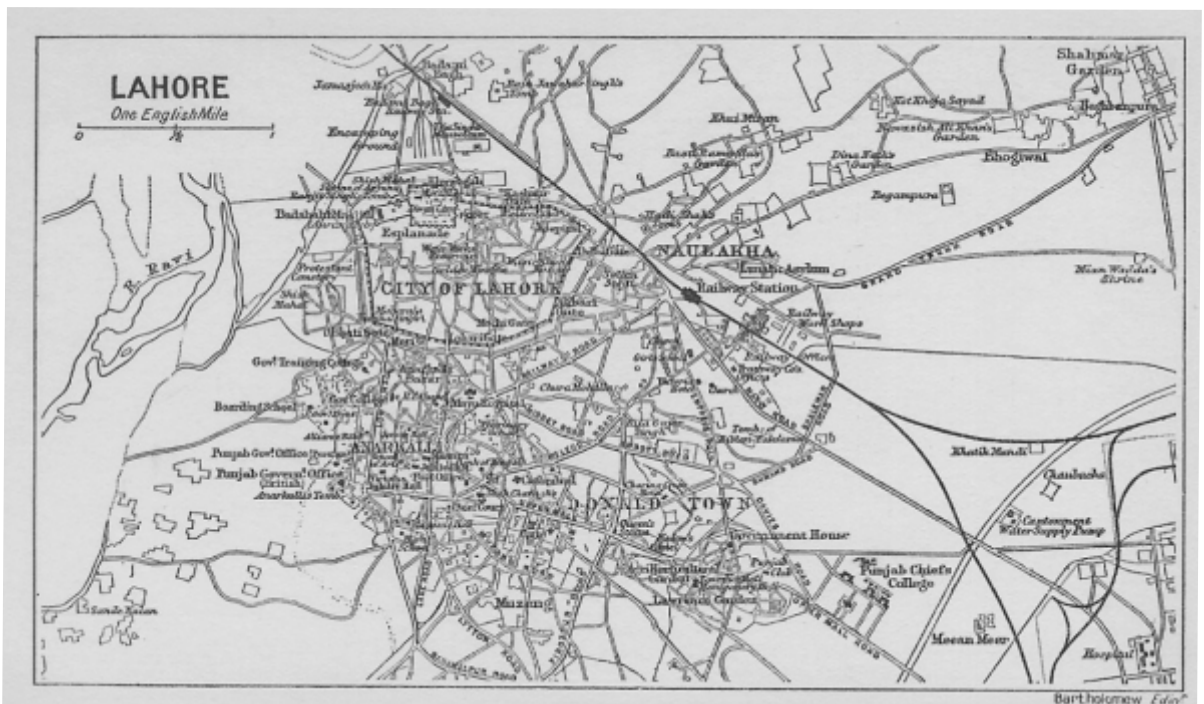
Figure 7.2

Walled city of Lahore



Figure 7.3

Map of Lahore in 1912





## CHAPTER 7 - URBAN HERITAGE AND TOURISM

The city, as expanded, has taken its suburban historical monuments such as Chaurburji, Shalimar Gardens and Jahangir's Tomb within its fold, which were initially developed in the open fields and orchards. Due to massive development of roads and infrastructure, the issue of heritage protection has not been addressed satisfactorily and has often damaged historical sites. The World Heritage Site of Lahore Fort (the Shahi Qila) and other equally spectacular monuments from the Mughal period, such as Badshahi Mosque (1683), Wazir Khan Mosque (1634) and the Wazir Khan Hammam, lend their splendour to the city. Additionally, several structures from the Sikh period and British colonial sites add to the city's charm. Presently, the city possesses nearly two thousand buildings of significant architectural merit. Despite the lack of appropriate regulatory mechanisms pertaining to building demolition and construction, the Walled City remains physically distinct, marked off from the surrounding colonial period city by the Circular Garden and the Circular Road

### Rawalpindi and Islamabad

Islamabad is a planned city, placed in a picturesque setting at the base of the Margalla Hills, while Rawalpindi is an old historic town that was part of the Gandhara period, Mughal era, Sikh Period until finally the British, who annexed it from Ranjit Singh, developed it into a major cantonment in 1883.



Faisal Masque (Islamabad)

Islamabad was developed after the creation of Pakistan. The Master Plan, prepared in 1960, integrates Islamabad with Rawalpindi and through the twin cities creates a large metropolitan area. Rawalpindi has numerous heritage buildings, however, not a single building of historical





## CHAPTER 7 - URBAN HERITAGE AND TOURISM

significance is on the protected list of the heritage sites. A number of its heritage sites are in poor condition and under illegal occupation by the local communities. There are a number of other sites of historical importance, which include temples, bazaars, and schools such as the Government Mission High School, Shimla Islamia High School and Kalyan Ghat School. Speculative land developers have grabbed a majority of the heritage sites, especially temples.

Most Importantly, a World Heritage Site, Taxila, is located in district Rawalpindi approximately 30 Km from the city centre. The site contains the archaeological remains of four early settlement sites, Buddhist monasteries, a Muslim mosque, and a madrassa. Unfortunately, the stone crushing plants, located in the vicinity of the site, are causing immense damage to the archaeological mounds. The government continues to lease out the rock quarries to private sector for excavation and crushing of stone. Rohtas Fort, another World Heritage site, is approximately at a 2-hour drive from Rawalpindi

A success story, so far, is the conservation of Haveli Sujan Singh, a 125-year-old building which, under an agreement between National College of Arts (NCA) Rawalpindi and the Fatima Jinnah Women University (FJWU), has been renovated and is being used as a field school for students of the National College of Arts to learn conservation techniques.

### Major Heritage sites near Islamabad and Rawalpindi





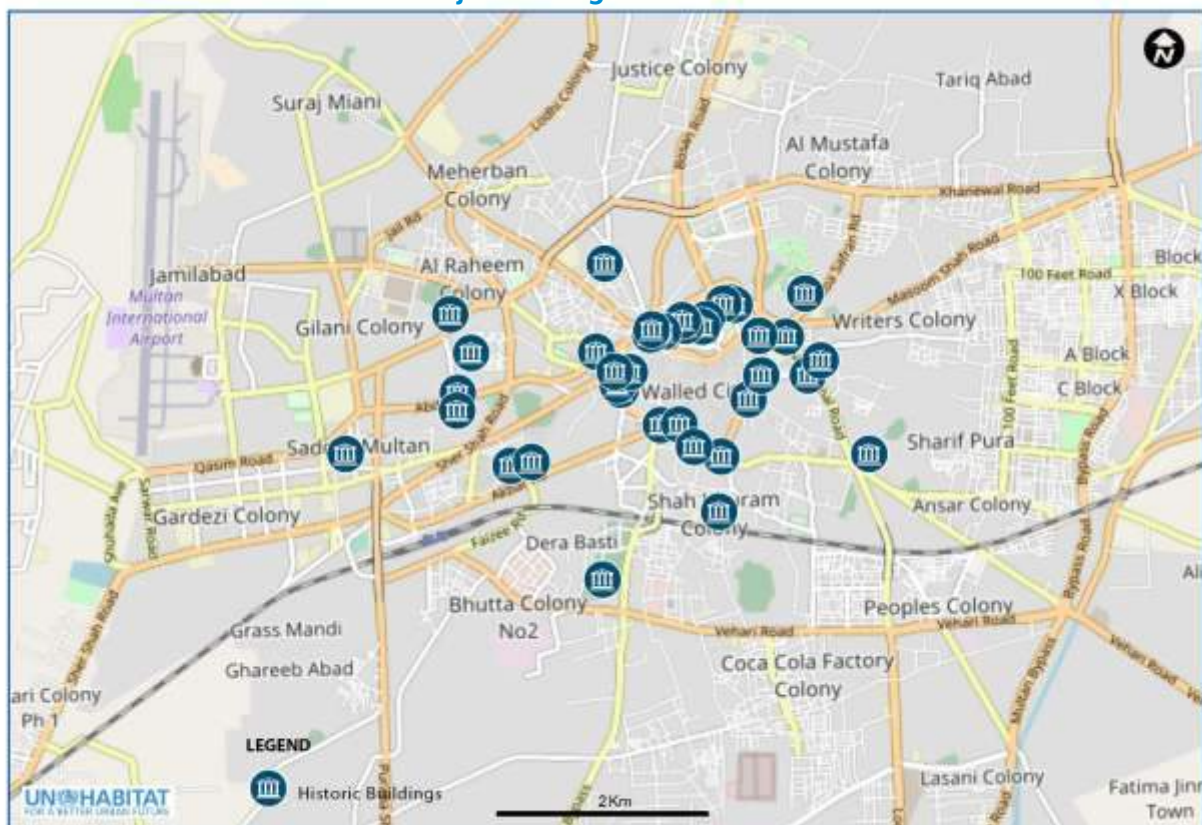
## CHAPTER 7 - URBAN HERITAGE AND TOURISM

Multan, known as the city of saints, has over 114 monuments within the city itself. A majority of them are shrines, tombs, and mosques. Most of the structures within Multan fort itself were destroyed during the Sikh–British war and the only ones that withstood a magazine explosion were the shrines of Bahuddin Zakirya, Shah Rukn-e Alam and Praladapuri Temple. Praladapuri temple, located within the Multan fort, is one of the most revered sites for Hindus; however, it was damaged by mob in 1992 as a protest against the demolition of the Babri Masjid in India. Despite their survival in wars, these monuments are vulnerable and may be destroyed or replaced with modern construction: the Damdama, for example, was destroyed and replaced with a 3-storey structure.

The historical and architectural heritage of Multan has decayed and encroachers continue to damage and destroy the heritage sites. The buildings have not been maintained or repaired properly because of a lack of funds and inadequate development control by the concerned authorities.

The Multan Development Authority has taken some measures for the conservation of cultural heritage of Multan. It has demolished Gol Market and a number of other illegal structures and encroachments located between Ghanta Ghar (Town Hall) and the Qila Qasim Bagh (Fort). Similarly, Katchi Abadis from Qila Qasim Bagh have been shifted and the Town Hall was renovated to bring back the original ambience of the area.

### Major Heritage sites Multan







## CHAPTER 7 - URBAN HERITAGE AND TOURISM

## HYDERABAD

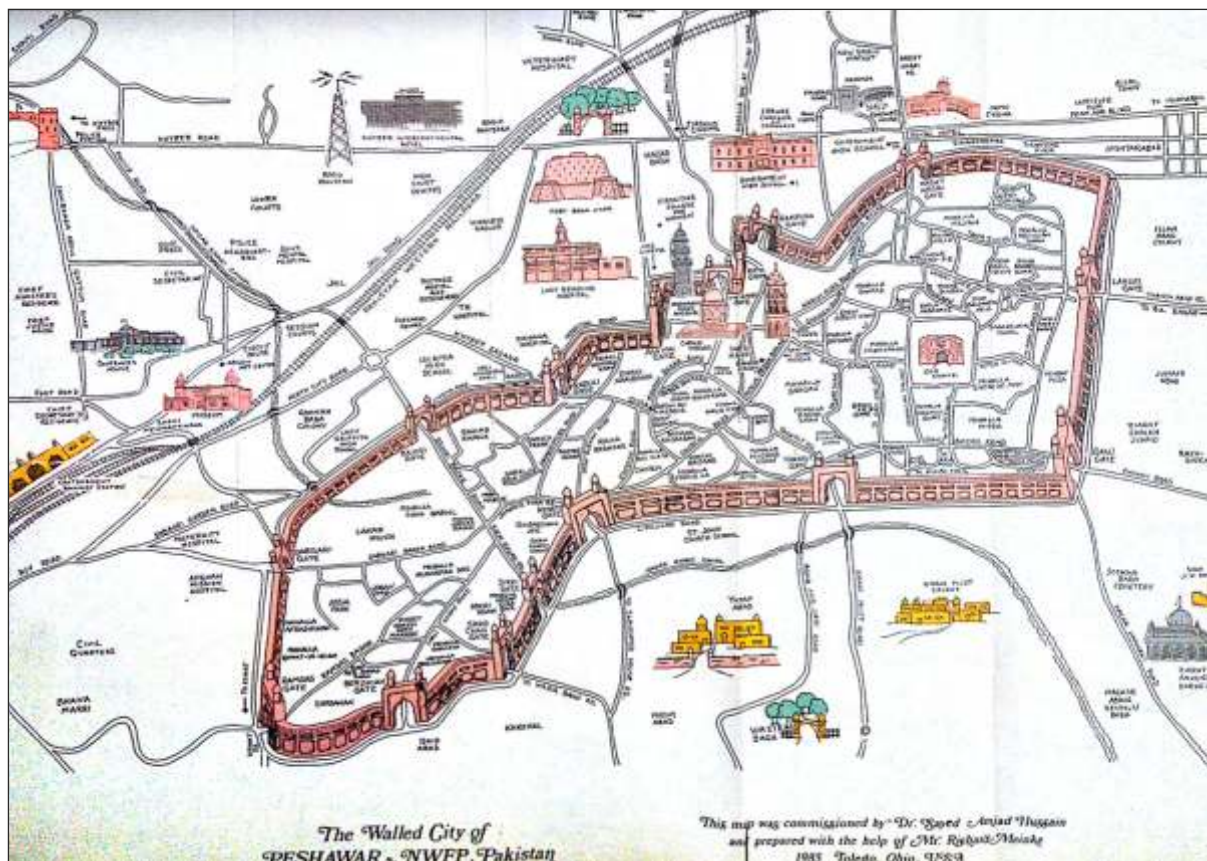
Hyderabad was developed during the Kalhora Dynasty in the late 16th century. The Pukka Qilla (Strong Fort) built of fire-baked bricks remains in a desolate state and dire need of repair. The British developed Hyderabad as a cantonment and a major railway Junction when the North Western Railway was laid. The Sindh Department of Archaeology has recently taken on the task of restoring the tombs of the Talpurs Mirs. However, the lack of resources and experienced staff hampers these works. The Rani Kot Fort, approximately 90 kilometres from Hyderabad, is believed to be among the largest forts in the world with a circumference of approximately 26 kilometres. This fort is also on the tentative list of World Heritage sites.

## PESHAWAR

Peshawar has evolved over the years and its culture has been principally influenced by the Gandhara civilization, Pakhtuns' and Hindko culture. Peshawar has many historical sites such as Islamia College, Qilla Balla Hisar, Masjid Mahabat Khan, Sethi's Haveli, Ghanta Ghar. The historic Khyber pass is situated a few kilometres away from the city. Peshawar city can be divided into three main sectors, each representing a historical extension and development of the city.

Figure 7.4

The Peshawar walled city





## CHAPTER 7 - URBAN HERITAGE AND TOURISM

The Walled City is the "core" and oldest part of the historical Peshawar but the city expanded beyond its walls in the surrounding areas. It has 16 gates and spreads over 500 acres of area. The north-western extremity is marked by the historic Bala Hisar Fort while the mound of the Gor Gatri, an ancient citadel is at its heart. The Walled City is the bastion of the city's aboriginal ancient Hindko urban culture. The Walled City of Peshawar is extremely rich in tangible and intangible heritage representing a long time span and many cultural dynamics. However, environmental and infrastructure conditions in the Walled City are so serious that they compromise the basic liveability of the city, seriously limit tourism potential and threaten the physical degradation and loss of the culture of the area. The Government, however, has recently become increasingly sensitive to conservation issues. Several gates around the walled city have been rebuilt and conservation measures were taken up at the Gor Ghatri. In addition, steps for the protection of Peshawar's historic urban core and rehabilitation of some of the streets such as Sarrafa Bazaar, is underway and approximately sixty historic structures have been documented.

The British took control of the area in 1849 and planned a cantonment across the railway line with all the necessary civic amenities including administrative offices, military barracks, residences, parks and shops.

Peshawar expanded westwards in the post 1947 period as a result of the establishment of Peshawar University and its residential campus areas on the road to the Khyber Pass. In 1973 a new satellite town Hayatabad was proposed, further west followed by scores of other residential colonies and towns.

### FAISALABAD

The British designed Faisalabad (originally named Lyallpur) as a canal city with eight roads radiating from a central clock tower to imitate the Union Jack. Since it's a relatively newer city, most of the places of interest belong to the colonial and post-colonial period. The Punjab College of Agriculture (1906) was upgraded to a University of Agriculture in 1961 is the city's most famous historical and architectural site. Its original historic buildings are currently being conserved by the University administration. None of the city's master plans or structure plans contains promotion of culture or tourism except a proposal to create a cultural and sports zone near the Motorway M-4.



Ghanta Ghar (Faisalabad)



# Chapter 8

## FUTURE PROOFING

Pakistani cities need to better plan and manage their development if they are to meet the needs and demands of their citizens and indeed of the country better than they currently do. Indeed, a continuation of unregulated market-based activities is likely to prove disastrous for all, not just the cities. To prosper, cities need to be more responsive to the needs of the environment and respective of available resources and to adapt and adopt technologies and economies that are less wasteful and destructive. This means taking a more realistic look at what needs and can be done without compromising our local as well as our global future.

## THE WAY FORWARD FOR PAKISTANI CITIES





## CHAPTER 8 - THE WAY FORWARD FOR PAKISTANI CITIES

### 8.1 Introduction

The government envisions Pakistani cities as the “engines of economic growth”, and the prime movers and beneficiaries of “all productive activity”. The cities are hubs of the services sector, which contributes more than 50% to the country's GDP. The recent surge in services has made the cities and the urban areas 'actual' engines of economic growth. With more than one-third of the total population living in urban areas, the majority of Pakistan will be urban within the next two decades. The government is required to work towards better cities in order to meet the growing demand of urbanization and the urban population.

An important condition for implementing the 2030 Agenda will be to incorporate the Sustainable Development Goals (SDGs) into national and sub-national plans. Government of Pakistan has established a designated SDG Unit in the Planning Commission. The primary task is to develop and strengthen coordination with the provincial governments, facilitate in implementing SDGs and particularly to improve the monitoring and reporting mechanisms of SDGs. UNDP led Country level consultation on Post 2015 Development Agenda lead to the national launch of SDGs as “Pakistan Development Goals” and incorporate SDGs into Vision 2025. SDGs provide a roadmap for more balanced and equitable urban development and cities can plan and work towards aim to increase prosperity, promote social inclusion, and enhance resilience and environmental sustainability if adequate policies are in place and resources are secured.

The New Urban Agenda (NUA) was adopted in 2016 at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador and endorsed by UN General Assembly. It focuses on what needs to be done to ensure that cities and human settlements, as vehicles of development, are themselves planned, developed and managed in sustainable way. NUA deepens the scope of some of the targets of SDG 11 and linked to related SDGs and provides the critical framework for managing cities that could serve as a vision for Pakistani cities in the future. The NUA envisions cities that are safe, environment friendly, inclusive and which can provide economic opportunities and shelter to all its citizens. However, achieving such goals has been challenging for Pakistani cities in the past.

Pakistani cities need to come up with a realistic assessment of their present realities and formulate a clear direction to play a positive and effective role in meeting the needs of citizens and society. Pakistan adopted the New Urban Agenda in 2016, which requires Member States to develop and implement national urban policies (NUPs), building integrated national systems of cities and human settlements toward the achievement of national development targets. It reiterates that Legal frameworks are required to implement urban plans, policies and strategies to guide urbanization including regulating land use and development. Moreover, careful planning and design processes contribute to a compact urban footprint; prevent unwanted urban sprawl; and identify zones to be exempted from urbanization. These processes also allow the development or reshaping of formal





## CHAPTER 8 - THE WAY FORWARD FOR PAKISTANI CITIES

and informal urban spaces to create socially just, sustainable, inclusive, well-connected, and appropriately dense, disaster resilient and environment friendly spaces. The New Urban Agenda calls for an integrated approach to urban development, from the national to the local level. It recognizes that the realization of its transformative commitments requires multilevel means of implementation.

### 8.2 Key Urban Issues and Proposed Responses:

To bring about a more sustainable and equitable development, the Agenda for Pakistan's national development should address and implement the following:

#### 8.2.1 Urbanization, Land and Governance:

There is currently no easily accessible document that defines the roles and responsibilities of the different urban sector players in Pakistan. There are no updated or mandatory urban projections or any meaningful criteria and methodology to formulate a National Urban Policy; however, Vision 2025 recognizes the crucial role of cities in national development. Moreover, there are no explicit or transparent sets of land policies and rules or regulations to promote sustainable land use in urban development.

#### Proposed Actions:

- Defining roles and jurisdictional responsibilities of all levels of government and local authorities regarding urbanization and urban planning and management
- Defining urban land vis-à-vis non-urban land as well as the rights and responsibilities inherent to urban land. There is a need to move away from the administrative declaration of urban areas to the identification and regulating of land for urban purposes
- Persuasion of each Province to establish an urban policy unit (UPU) to take the lead role in implementing Provincial Urban policy in line with the New Urban Agenda
- Agreement of the Provincial Units to establish a National Urban Coordination Unit (NUCU) to provide a platform for the exchange and consensus on ideas and operations
- Alignment of national urban policies with national and sectoral development plans and policies at all territorial levels to harness the transformative power of urbanization
- Adopting an effective legal framework that supports strengthening the capacity of national, subnational and local governments and ensures appropriate fiscal, political and administrative decentralization based on the principle of subsidiarity
- Adopt integrated approach to urban development from the national to the local level.

#### 8.2.2. Urban Planning:

There is no accepted or applied urban planning system in Pakistan. Planning is seen as an obstacle rather than a tool for more effective utilisation of resources and creation of equity and urban



## CHAPTER 8 - THE WAY FORWARD FOR PAKISTANI CITIES

planning and urban designs are used as speculative and income-generating instruments rather than as a way of promoting efficiency and equity.

### Proposed Actions:

- Setting up an evidence-based, integrated and participatory urban and territorial planning to serve for decision makers and urban professionals to plan socially inclusive, better integrated and connected cities and territories that foster sustainable urban development and are resilient to climate change.
- Integration of land uses for housing, employment, and social infrastructure
- Planning and defining urban areas, agricultural land, and natural protection areas.
- Emphasis on collaboration across departments and jurisdictions.
- Defining connectivity and the quantity and quality of urban spaces including the structuring layout of streets, blocks and plots
- Introducing urban design as an integral component of the urban planning and development process.

### 8.2.3. Urban Economy, Housing and Basic Services:

The sub-national bodies rely on the provincial or national bodies for funds. The long held practice of subventions from central authority has largely obviated the search for local self-reliance and sustainability. The provincial authorities collect revenues therefore no efforts are put into strengthening the local bodies. Moreover, housing is not seen as an integrative element and indeed the insistence on segregated housing development is actively pursued. Housing as a social policy measure is not generally acknowledged and Local Authorities have little control on its provision.

### Proposed Actions:

- Alignment and Integration of urban economy with national economic objectives, plans and policies.
- Fostering Economic zones with provision of consistent power and increased access and linkages to national and international markets.
- Provision of tertiary services: markets, trading and services at village, town and city levels
- Establishing principles for enhancing the role of local government in fostering inclusive, equitable and sustainable urban development for inclusive municipal finance
- Local Authorities need to take more of an effort to generate their own local resources and become less reliant on central and Provincial governments -at the risk of requiring greater and more intense efforts in the short run
- Increasing awareness on housing finance and affordability



## CHAPTER 8 - THE WAY FORWARD FOR PAKISTANI CITIES

- Developing policies, mechanisms and financing models to help promote access to a wide range of affordable housing options including rental
- Promoting housing as an integrating element of urban planning
- Giving Municipalities greater control over the supply and delivery of urban basic services
- Establishing minimum national standards for universal access to basic services
- Allowing for subnational variation according to need and situation

### 8.2.4. Environment and Heritage:

Public space in Pakistani cities has been continuously shrinking due to the high commercial value of urban space and urban land. Public space, such as green space, roads, streets, intersections, transport rights-of-way and other corridors are central to liveability, efficiency and equity in the urban areas. It must be adequately provided for but not exclusively expropriated.

#### Proposed Actions:

- Establishment of clearly defined and protected public spaces
- Establishment of a legal basis for the urban plan and distinguishing public space from buildable urban land
- Enactment of effective laws for the definition, acquisition and protection of public space
- Protection and preservation of natural resources and cultural heritage
- Awareness about environmental and cultural impact of urban plans and interventions and ensuring preservation and protection of heritage and the environment
- Planning to safeguard natural resources and land features, control pollution, minimize vulnerability, prioritize the use of renewable energy resources
- Promoting adequate amounts of urban space for a variety of economic activities
- Protection of cultural heritage by integrating urban and development plans yet preserving the heritage sites
- Developing a national database of the local cultural heritage sites and preparing a policy for the protection of these sites.

## 8.3 Action Framework for Implementation of the New Urban Agenda and SDGs

Now that the **New Urban Agenda** (NUA) has been adopted, there remains the fundamental question of how it will be implemented. The NUA already resonates with the 2030 Agenda, whose SDGs (particularly SDG-11) contain indicators against which the NUA can be measured. Conversely, the NUA itself broadly outlines more of the means of implementation for cities, critical for the achievement of SDG-11 and beyond. There is a fairly clear picture of what cities should aim for,



## CHAPTER 8 - THE WAY FORWARD FOR PAKISTANI CITIES

generally, and what they need to get there. Process is important, but it cannot replace outcome. Indeed, the NUA is quite specific in enumerating desired urban outcomes.

The Member States adopted NUA including Pakistan, committed to developing and implementing **national urban policies** (NUPs) and building integrated national systems of cities and human settlements, toward the achievement of national development targets. In fact, the NUA states that its effective implementation will be anchored in inclusive, implementable and participatory urban policies, to be developed and implemented at the appropriate level. It is crucial that governments ensure the development-and adaptation, where required-of national urban policies so that they form the basis for the implementation of the NUA. Without adequate NUP, cities face multiple risks: inadequate, overloaded infrastructure, which can result in overcrowding and delays; vacancy, which can lead to vandalism and exacerbate maintenance costs; and competition between metropolitan areas, which can aggravate inequalities.

**Legal frameworks** are required to implement urban plans, policies and strategies and to guide urbanization, including regulating land use and development. It is necessary to develop such frameworks where they do not exist or to adapt them where they do to align with the principles of the NUA. Without adequate legal urban frameworks, cities face multiple risks: poorly planned and unplanned and uncontrolled urban sprawl, the loss of valuable natural protected areas, deepening social inequalities, inappropriate and/or unaccountable land management, conflicting land uses and inadequate public space.

An **effective and equitable legal system** to promote participation at all stages of the urban and territorial policy and planning processes and at all levels of governance can ensure that 'the right to the city' becomes a reality for all. It can also support the implementation of urban plans, policies and strategies at all levels by making them enforceable and by identifying accountable stakeholders. It can help to shape urban development and to retrofit existing informal and formal urban spaces in line with the NUA requirements to create just, safe, healthy, accessible, affordable, resilient and sustainable cities. And it can help to address persistence of poverty, growing inequalities, social and economic exclusion, spatial segregation and environmental degradation in many Pakistan cities.

The NUA states that **long-term and integrated urban and territorial planning and design** is required to optimize the spatial dimension of the urban form and to deliver the positive outcomes of urbanization. It is therefore important to provide guidance to local governments so they can develop or revise their planning and design processes in line with the NUA requirements. Without the above, cities face multiple risks, including lack of livability and walkability, poorly articulated interfaces, disconnect between plans and activities, low densities, unbalanced private and public spaces, exacerbated socio-economic segregation and long and expensive commuting patterns.

**Appropriate planning and design processes** will contribute to the definition of compact urban





## CHAPTER 8 - THE WAY FORWARD FOR PAKISTANI CITIES

footprint, preventing unwanted urban sprawl and identifying zones to be exempt from urbanization (by being designated for specific purposes such as environment sensitive conservation zones). These processes will also allow the development or reshaping of formal and informal urban spaces to create socially just, sustainable, inclusive, well-connected, appropriately dense, disaster resilient and adapted to climate change spaces. Adequate planning and design processes will shape high quality urban spaces with a sense of place, that will provide equal opportunities for all, protect local cultural heritage and environment, foster social interaction whilst including safe and affordable housing, an appropriate mix of uses, quality green public space (including those with access restricted to families), adequate services and sufficient public transport infrastructure.

**Building capacities of governments to finance urbanization** will contribute to make cities sustainable, inclusive, and socially just and economically successful. Implementing the actions listed under theme 4 will allow governments to shift from existing practices reinforcing inequalities to new practices that address social exclusion and inequalities whilst stimulating economic development. Develop local governments' capacities and knowledge of municipal finance can promote the creation, sustainment and sharing of the value generated by urban development. Innovative practices, such as land value sharing or land readjustment, need to be encouraged. It will also be necessary to leverage more investments from the private sector to compensate the decreasing investment capacities of the public sector in many countries and cities.

The NUA calls for an **integrated approach to urban development** based on actions at all levels, from national to local. It recognizes that the realization of its transformative commitments will require a similarly multilevel means of implementation. Local implementation comprises actions to be undertaken at a finer, more granular spatial scale, based on decisions made predominantly at the local level. It has been conceived to guide local stakeholders so they can approach targeted, place-based, project-oriented urban development in a sustainable, people-centered, responsive and integrated way. If the actions listed under this theme are not taken, Pakistani cities will be facing most of the risks listed under the other themes of the Action Framework for Implementation of the New Urban Agenda (AFINUA,) since not taking these very local steps will prevent the benefits associated with the other themes from being delivered. Other risks of badly-managed local implementation include poorly- located communities (including Kachi Abadis) that are isolated from places of employment and services, displacement of residents through unmitigated gentrification, skewed consumption of resources (particularly between planned low-density areas and unplanned high-density ones) and an inequitable distribution of urban services, particularly in unplanned informal neighbourhoods.

Pakistan adapted SDGs as the national development agenda. Achieving SDG targets largely relies on how best SDGs can be localized and mainstreamed into policies, plan and implementation frameworks. Urban dimension in SDGs go far beyond SDG 11. NUA is a roadmap for building cities that can serve as engines of prosperity and centres of cultural and social well-being while protecting



## CHAPTER 8 - THE WAY FORWARD FOR PAKISTANI CITIES

the environment. Therefore NUA provides guidance to national governments and local authorities in achieving the Sustainable Development Goals.

The Table below is based on the Framework for Implementation of the New Urban Agenda (AFINUA) and links the aims, objectives and recommendations of the NUA Framework to the conditions and attitudes prevailing in Pakistani Cities. For the most part, as has been shown in the preceding Sections of the SPC report, there is a big gap between the State of Pakistani Cities and where they need to be in order to meet the NUA. The Table links the NUA to the State of Pakistani Cities and suggests what needs to be done based upon the current situation. Much more than any financial or even technological resources, there is a need to change the approach and mindset of both National and Provincial as well as Local Authorities.

The first two columns are taken from the AFINUA Framework that has been accepted and signed up to by Pakistan.

Since one of the major constraints to urban development is the lack of leadership or advocacy for “urban” at the National and Provincial levels or indeed even at the city level, it will be particularly difficult to initiate change. Furthermore, each and every one of the actions suggested requires the agreement and participation of a number of bodies and authorities to develop and implement them. Therefore, the Table only indicates those “Lead Actors” who may be the most likely to take the lead in calling for change and suggesting directions for it. In practice, while these Lead Actors may have the responsibility and the mandate to undertake the tasks being suggested, whether they have the ability or the will to act is not assured.

## Action Framework for Implementation of the NEW URBAN AGENDA

### Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)

Key items	Description	Current situation	Proposed action	Lead actors
<b>National Urban Policies</b>				
Formulate medium and long term urban demographic projections and trends, with geographic disaggregation, taking into consideration the interplay of economic, social and environmental forces	A national urban policy takes into account current and future trends related to population composition and distribution, demographic projections, economic assessment and environmental conditions taking into account gender, age, income, educational level, employment and economic sectors.	There are no updated or mandatory urban projections or any stated or even implied intention to have any, or any agreed or even proposed criteria, methodology for such a formulation. However, some work has been done exploring the crucial role of cities in national development and is recognised in the Vision 2025	Persuade each Province of the need to establish an urban policy unit (UPU) to take the lead role in implementing Provincial Urban Agenda. The Urban Units of Punjab and KP could perform this function in Punjab and KP. Get agreement of the Provincial Units to establish a National Urban Coordination Unit (NUCU) to provide a platform for the exchange and consensus on ideas and operations	Provincial Governments Facilitated by Ministry of Climate Change
To establish national rules to determine land suitability for urbanization and for environmental and cultural heritage protection and disaster risk reduction and sustainable and resilient development while taking into account its equitable distribution and accessibility	The supply of urbanized land must be sufficient to accommodate urban growth while protecting environmentally sensitive areas and avoiding uncontrolled sprawl. NUPs must balance the need for equitable access to land and respect for property rights against sustainability concerns and the use of land as a productive resource, while avoiding regulatory constraints on land supply that limit urban productivity and affordable housing supply.	There are no explicit or transparent sets of rules or regulations for determining land suitability in terms of disaster risks, climate change, environmental sustainability, cultural heritage etc.	While getting agreement or consensus for "land suitability" might be difficult and its efficacy and application questionable, it should be possible and probably more useful to agree on "land unsuited" and which should not be converted to urban land in order to conserve, protect and promote the environment, reduce poverty and generally increase access and equity.	UPUs.

Define the roles and jurisdictional responsibilities of all levels of government and local authorities regarding urbanization and urban planning and management

A national urban policy sets out the roles and responsibilities for all spheres of government based on the principle of subsidiarity and for public participation as applied to urban planning and management (though their legal basis needs to be accounted for).

This has been done, but there is no easily accessible document that defines roles and responsibilities. Much of the overlap and gaps come from the piecemeal and ad hoc allocation or assumption of roles and responsibilities, usually without ensuring that previous agencies cease or relinquish their roles.

Compiling such a document is not a difficult task and has been done on a case-by-case basis as part of the preparation of urban plans. However, despite attempts, it has not been possible to clarify and remove duplication, overlapping or gaps in roles and responsibilities. Since such clarification is likely to affect the perceived status of agencies, it will need to be enforced.

Provincial Governments UPUs

## Action Framework for Implementation of the NEW URBAN AGENDA

## Action Plan for PAKISTANI CITIES (Including Provincial Urban Policies)

Key items	Description	Current situation	Proposed action	Lead actors
<b>National Urban Policies</b>				
Align national urban policies with national and sectoral development plans and policies at all territorial levels to harness the transformative power of urbanisation with urban plans (e.g. energy, water, transportation and other infrastructural corridors)	A national urban policy brings the spatial dimension to development and contributes to the alignment and integration of national and sectoral development plans and policies at different territorial levels	There is very little coordination amongst national or Provincial sectoral policies (eg energy, water, transportation), and no national or Provincial urban policy exists	Punjab and KP are in the process of developing Provincial Urban strategies and these should be supported. Other Provinces should be encouraged to formulate their urban strategies.	Provincial Governments UPUs
Adopt a framework to reduce urban and territorial disparities	A national urban policy contributes to reducing territorial disparities and inequalities, promoting an inclusive and productive system of cities and human settlements, and strengthening urban-rural linkages. A NUP should also ensure the equitable provision and access to infrastructure, public goods and services, national and regional economic development, resilience and environmental protection, and adequate housing.	There is considerable urban and territorial disparities between and within the Provinces partly because of their natural attributes and partly because of their demographic and historical development	What is more desirable is to ensure that there are no areas or provinces with large numbers of populations or areas that do not meet minimum levels of access to goods and services such as housing, employment, physical infrastructure and social services.	UPUs Provincial Governments

Promote jurisdictional coordination and coherence	A national urban policy promotes the horizontal coordination of policies and plans across jurisdictions for the efficient, equitable and affordable delivery of basic services and infrastructure, according to an agreed set of standards.	The lack of a National Urban Policy has meant that policies, interventions and actions are not coordinated nor uniform in their legal status to address emerging urban issues	As Provincial policies emerge and are developed, they should be discussed by the NUPU in order to create vertical policy linkages to eliminate unintended anomalies, lacunae and variations between the policies and their legal and jurisdictional implications	NUPU
---	---	---	--	------



**Action Framework for Implementation of the NEW URBAN AGENDA**

**Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)**

Urban Legislation, Rules and Regulations				
Key items	Description	Current situation	Proposed action	Lead actors
<p>Define urban land vis-à-vis non-urban land as well as the rights and responsibilities inherent to urban land</p>	<p>Establishing an effective and equitable legal basis for integrated urban and territorial planning and development and land management, including cataloguing urban vis-à-vis non-urban (i.e. agrarian, forested, environmentally-protected, etc) land</p>	<p>Urban Land is not defined as such, but land regulations apply equally to all land within urban areas. There is no integration between urban and territorial planning and development</p>	<p>There is a need to move away from the administrative declaration of urban areas to the identification and regulating of land for urban purposes</p>	<p>Provincial Governments</p>
<p>Establish a legal basis for the urban plan and distinguish public space from buildable urban land</p>	<p>Ensuring that urbanization is guided by the rule of law requires that the urban plan is a formal legal instrument enforceable against all within the jurisdiction and accountable to citizens (particularly in terms of modification and conflict resolution). At the national and provincial level, linking land use, administrative bodies and planning to define urban areas according to reasonable growth projections. At the local level, linking planning, land use and development control to delineate buildable/non-buildable land, such as environmental management areas.</p>	<p>While there is a legal basis for urban plans, rarely if ever has an urban plan been legally adopted. Perhaps because of the misplaced perception that having a legal plan would the and limit the decision-making powers of government in land-use and land allocation. There is no distinction made between public space and urban land</p>	<p>legal framework to ensure all urban areas to have a legally adopted urban plan.</p>	<p>Provincial Governments</p>
<p>Enact effective law for the definition, acquisition and protection of public space</p>	<p>Public space, including green space, roads, streets and intersections, transport rights-of-way and other corridors, is central to live ability, efficiency and equity in urban areas. It must be adequately provided for but not rely exclusively on expropriation for its acquisition rather also on tools such as land readjustment. Clear public space protection responsibilities must also be established.</p>	<p>Such legislation does exist, but is rarely used effectively. While urban authorities find it impossible to acquire land, private developers seem able to do so with ease and are able to make a profit. Similarly, while urban authorities are aware of and indeed use land readjustment, the process is blunt and poorly applied.</p>	<p>Fine-tuning and selective applications are often construed as favouring (or discriminatory) because of the lack of trust of public authorities. There is a need to develop such trust through greater open-ness and transparency</p>	<p>Provincial Governments</p>

**Action Framework for Implementation of the NEW URBAN AGENDA**

**Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)**

Key items	Description	Current situation	Proposed action	Lead actors
<b>Urban Legislation, Rules and Regulations</b>				
Recognize and regulate urban development, i.e. buildability rights	The area and proportion of a plot that may be built upon and the permitted building height and floor space are fundamental to value and have a significant impact on street dynamics and service demands, and environmental concerns. These elements should be effectively regulated and actively managed to fairly balance burdens and benefits.	Such regulations and rights are recognised but are not always uniformly applied, leading to claims of unfairness and discrimination because of the lack of transparency	More transparent and open application of rules and regulations is needed through raising public awareness, building systems in city administration.	Provincial Governments
Adopt an effective legal framework that supports strengthening the capacity of national, subnational and local governments and ensures appropriate fiscal, political and administrative decentralization based on the principle of subsidiarity	Supporting local governments in determining their own administrative and management structures. Legal and accountable basis for functional and fiscal devolution to sub-national and local governments according to national policy. This must link powers and responsibilities to policy objectives and adequate resources.	There is a strong tendency to hold on to and acquire greater power and authority rather than any tendency to delegate of subsidiarity. However, the 18th Amendment provides the basis for precisely such action.	Greater transparency and trust-building should be encouraged to devolve and delegate responsibility to the levels of those most effected	Provincial Governments
Develop equitable and legal instruments to capture and share the increase in land and property value generated as a result of urban development processes, infrastructure projects and public investments, ensuring that these do not result in unsustainable land use and consumption.	Capturing and sharing the increase in land and property value generated as a result of urban development processes, infrastructure projects and public investments. Gains-related fiscal policies can be adopted to prevent solely private capture, land and real estate speculation. Ultimately the generation of land-based finance must not result in unsustainable land use and consumption patterns.	While such instruments do exist, their application is rarely transparent or open-giving rise to suspicions of partiality	Greater transparency and open-ness is required. Given the reluctance of local authorities to enforce and implement transparency, legal pressure will have to be applied	Provincial Governments

## Action Framework for Implementation of the NEW URBAN AGENDA

## Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)

Key items	Description	Current situation	Proposed action	Lead actors
<b>Urban Legislation, Rules and Regulations</b>				
Develop inclusive, adequate and enforceable regulations in the housing and economic sectors, including resilient building codes, standards, development permits, land use by-laws and ordinances, and planning regulations, combating and preventing speculation, displacement, poor quality building constructions homelessness and arbitrary forced evictions	Housing and building codes can have fundamental impacts on street dynamics and urban equity, as well as their more traditional role in risk management. Inappropriate codes may be exclusionary, encourage informality and undermine the rule of law. Codes must balance their various impacts to maximize their effectiveness and, where necessary, they should recognize the varying contexts that may exist within a jurisdiction. The overall aim is to ensure sustainability, quality, affordability, health, safety, accessibility, energy and resource efficiency and resilience.	Selective and secretive application of rules and regulations have created an atmosphere of mistrust	Greater transparency and openness is called for. Developing user friendly, cost effective, regulatable building codes as a part of urban legislation . Greater public awareness is needed	Provincial Governments
Establish national minimum standards for universal access to basic services reflecting the right to an adequate livelihood and above and beyond these minimum standards allowing for sub national variation according to need and situation	Law must clearly support basic services policy and be regularly scrutinized. Benchmarks should be based on equitable access to water, public transport, energy, waste management, digital infrastructure and ICT.	There is little political support for greater openness in such dealings, and allowing variations is seen as discriminatory rather than creating a fairer and more equitable outcome	Greater transparency and openness is required Establishing robust data sets, information updating systems to capture level of access to basic services in terms of special, income and vulnerability.	Provincial Governments City authorities Private sector
Establish impact assessment, monitoring, inspection, correction and enforcement tools	Design of systems is paramount systems should be designed to be enforceable from the outset, rather than after the fact. But correction and enforcement are not solely coercive. Police powers, to the extent that they should be used at all, should play a secondary role in enforcement.	Assessments seem to be done more for the sake of form rather than as a means of monitoring and improving performance	Establishing participatory, real time monitoring systems with the participation of key stakeholders. Testing of ICT based application on city governance reporting is worth attempting	CPUs ICT organizations including mobile service providers

**Action Framework for Implementation of the NEW URBAN AGENDA**

**Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)**

Key items	Description	Current situation	Proposed action	Lead actors
<b>Urban Planning and Design</b>				
Set up a planning and design process that is evidence based, integrated and participatory	Define the scope of the plan and the process. Consider the participation of all the stakeholders, the vertical and horizontal integration across territories, systems and sectors. Promote collaboration across jurisdictions and actors. Establish clear collaboration across disciplines (planning, finance and legislation) to orient the process towards implementation.	There is no universally accepted or applied urban planning system or approach, and participation is kept to the minimum required	The shortage of data needs to be overcome and transparency and openness introduced. Planning capacities of CPUs to be developed with adequate resources and mandate	UPUs Provincial and city governments
Plan and define the urban area as well as agricultural and natural protection areas	Translate locally the national urban policy that may be in place. Project population needs and demographic changes, economic and job opportunities and natural constraints. Define land that could be urbanised, agricultural land and areas for natural protection, including the green and blue systems, taking into account disaster risk management. Ensure green corridors and environmental protection of fragile areas, as well as adequate urban expansion areas. Define within the urban area, the areas for expansion, regulation, transformation. Link the local plan to regional and national plans. Locate key strategic functions and define large scale connectivity	Planning is seen as an obstacle rather than a tool for more effective utilisation of resources and creation of equity	There needs to be a greater emphasis on collaboration across departments and jurisdictions	UPU



**Action Framework for Implementation of the NEW URBAN AGENDA**

**Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)**

Key items	Description	Current situation	Proposed action	Lead actors
<b>Urban Planning and Design</b>				
Define connectivity and the quantity and quality of urban space including the structuring layout of streets, blocks and plots	Reserve public space in adequate quantity and ensure equitable distribution in its layout. Design and define streets, blocks and plots, creating blocks and plots in sufficient quantity and that support denser fabrics.	The urban planning process does not combine the macro with the micro and urban design is largely missing	Introduce urban design as an integral component of the urban planning and development process	UPU
Promote sustainable density and mixed use to attain the economies of agglomeration	Encourage co-located home, work and services and multimodal transport viz. public transport integrated with walking and cycling options that lowers the time cost and environmental impact of travel and promotes liveability, compactness, mobility and accessibility, social cohesion and economic productivity and can help balance public and private domains. Consider multiple uses of buildings as well as transport-oriented development.	Urban planning and urban design are used as speculative and income-generating instruments rather than as a way of promoting efficiency and equity	Greater transparency and openness is required as well as a better understanding of the scope and purposes of urban planning and urban design	UPU
Make effective use of urban design to provide liveable spaces, walkability and a sense of place	Pay attention to plot-building interface and quality of public space (e.g. accessibility, safety, inclusivity and distribution). Provide good neighbourhood design to promote liveability, sense of place, safety, walkability and access for all.	These are not the objective of urban planning and therefore not practiced	Urban Planners and urban authorities need to be made aware of the possibilities and encouraged to look beyond the immediate needs of the better-off	UPU

**Action Framework for Implementation of the NEW URBAN AGENDA**

**Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)**

Key items	Description	Current situation	Proposed action	Lead actors
<b>Urban Planning and Design</b>				
Protect and preserve natural resources and cultural heritage	Planning and design at all scales should protect natural resources and land features, control pollution, minimize vulnerability, prioritize the use of renewable energy resources, adopt energy and resource efficiency measures, provide adequate space for parks, wildlife habitat and biodiversity hotspots. It should also preserve cultural heritage and local identity reflected in material culture and other formal elements of the urban landscape.	There is little concern for the longer term interests when establishing criteria for projects or plans.	There needs to be a greater awareness of the environmental and cultural impact of urban plans and interventions to ensure the preservation and protection of heritage and the environment	UPU Provincial governments
Promote housing as an integrating element of urban planning	Implementing the principles of Housing at the Centre of the New Urban Agenda can help relate adequate and affordable housing strategies and interventions with diverse land/ tenure options, achieve inclusive land use that supports integrated socioeconomic groups, promote investments in infrastructure, and provide proximity and equitable access to employment, services, facilities and transport.	Housing is not seen as an integrative element and indeed the insistence on segregated housing development is actively pursued	Promote national and provincial housing policies that are inclusive. Need to increase awareness of both the needs and the opportunities offered by housing to create better socio-economic conditions	UPU Provincial governments
Promote adequate amounts of urban space for a variety of economic activities	Cities should provide sufficient, well-located land and space for a full range of economic activities, from formal to informal, large to small scale and global to local draw. Land should be available and located in parcel sizes that facilitate larger-scale industry as well as small-scale, start-up and home-based enterprises (including the informal sector).	Urban space and urban land is seen primarily as a saleable resource and therefore public space is kept to a minimum	There needs to be a greater awareness of the possibilities that public open space can offer cities and for urban development	UPU

**Action Framework for Implementation of the NEW URBAN AGENDA**

**Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)**

Key items	Description	Current situation	Proposed action	Lead actors
<b>Urban Economy and Municipal Finance</b>				
Establish principles for enhancing the role of local government in fostering inclusive, equitable and sustainable urban development and strengthen local leadership capacity for inclusive municipal finance	Principles for municipal finance, may include a cadastral register as basis for urban assets, property taxes, expenditures and local infrastructure, and transfers; etc, and must create an enabling environment and support mechanisms for local revenue generation. They must create enabling conditions for access to credit by local authorities. And they must be based on a human rights approach.	The long reliance on subventions from central authority have largely obviated the search for local self-reliance and sustainability	City authorities are empowered to formulate business plans which links not only for revenue generation but monitoring the urban economic trends	City governments
Help local authorities design and implement a more inclusive, sustainable, equitable local financial and economic framework to operationalize municipal finance principles	Such a framework should consider the entire budgetary cycle including income, expenditures, current capital, capital investment plans, etc, link to the local financial management system and be anchored in local economic development potential including the role of local government to provide and distribute public goods and services and enhance local economic productivity.	Local Authorities are seen as competitors to Provincial Governments and there is little appetite to enable them to be self-sustaining or less reliant on centralised controls	Local Authorities need to take more of an effort to generate their own local resources and become less reliant on central and Provincial governments – at the risk of requiring greater and more intense efforts in the short run	UPU
Improve the equitable and progressive tax policy and revenue generation along with the requisite mechanisms and legal underpinnings	Increasing local revenue by improving the efficiency, transparency and accountability of revenue-generating tools, mechanisms and legal and regulatory frameworks. This can include innovative, endogenous financing instruments (such as congestions finance that can cross subsidize), land value sharing and borrowing and own-source revenue generation strategies from taxes and charges/fees.	Since the collection of local revenues is in the hands of the provincial rather than the Local authorities, it is unlikely that there will be any attempt to increase the room for manoeuvre of local bodies	Local Authorities have to improve innovative user friendly tax systems	UPU Revenue departments of cities and provincial governments

Action Framework for Implementation of the NEW URBAN AGENDA		Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)		
Key items	Description	Current situation	Proposed action	Lead actors
<b>Urban Economy and Municipal Finance</b>				
Design and implement tools for fostering inclusive local economic development (e.g. job creation, entrepreneurship, microfinance, etc)	Helping local authorities design and implement programmes and tools that improve, inter alia, value chains/supply chains, and their links with physical landscape and layout, with a particular focus on SMEs, gender and age sensitive employment opportunities, etc.	Employment and indeed income-generation are not seen as being in the purview of local authorities and therefore little attention is paid to any joined-up thinking	Increase the awareness of Local Authorities of the linkages between employment and urban planning	UPU
Help local authorities design and implement systems that ensure social, economic and safe physical access to quality basic services by all, and local economic development platforms that support community-led initiatives in service delivery	Investments are important for municipal own-source revenue. Multi-year capital planning including comprehensive infrastructure assessments can help ensure productive and efficient basic services (including ICT) and networks and their maintenance and meet backlogs and anticipated demands. Such investments must be structured to encompass total economic value, including land value appreciation and all other economic, social and environmental impacts and benefits.	Municipal bodies do not have as their mandate the satisfaction of needs for basic urban services and have little power to control the semi-independent bodies responsible for water, sanitation, electricity and other urban services	Give Municipalities greater control over the supply and delivery of urban basic services	Province UPU



**Action Framework for Implementation of the NEW URBAN AGENDA**

**Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)**

Key items	Description	Current situation	Proposed action	Lead actors
<b>Urban Economy and Municipal Finance</b>				
<p>Help local authorities understand and adapt their respective economic development policies, mechanisms and financing models to help promote access to a wide range of affordable housing options including rental and cooperative and forms of tenure as well as incremental building and upgrading</p>	<p>Using innovative means to make housing more affordable including dynamic affordability (e.g. housing as a source of rental income) and home-based income-generating activities and reduced operating costs including energy efficiency. Housing finance options for all levels of income. Where possible, also providing sustainable finance for cross-subsidies, mortgages and financing for social and rental housing, non-collateral credit mechanisms for owner-builders and credit for developers, contractors and building materials producers. Developing a licensing environment and rental policies that support community cooperative configurations and residency status.</p>	<p>Housing as a social policy measure is not generally acknowledged and Local Authorities have little control on its provision</p>	<p>Increase the awareness of the role of housing and affordability and encourage their engagement with affordable housing provision</p>	<p>UPU</p>

**Action Framework for Implementation of the NEW URBAN AGENDA**

**Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)**

Key items	Description	Current situation	Proposed action	Lead actors
<b>Local Implementation</b>				
Use tools that proactively address as-yet-unbuilt urban growth at the local scale (e.g. planned city extensions)	Preparedness to make room for growth where needed at multiple scales, including through planned city extensions, can ensure a sufficient supply of buildable plots and integration and connection to existing urban fabric and access to jobs and services, avoiding the development of isolated 'bedroom' communities and fragmentation of the landscape, particularly in the peri-urban continuum.	Planning, in the sense of preparation for the future is not particularly well understood and rarely practiced	Linking the ability to generate a better more liveable city with the management of cities might help to give Municipalities a greater interest in urban planning	UPU
Use tools for urban regeneration of derelict and/or obsolete areas (e.g. brownfield redevelopment)	Regeneration and upgrading of existing urban fabric including vacant urban lots, derelict land and brownfield sites, adoption of gentrification prevention measures and provision of fair compensation for relocation.	The disconnect between urban quality and well-being is vast and does not provide the right environment for Municipalities to be proactive	Increasing the awareness of and improving the capacity of Municipalities to act more proactively might help a move in that direction	UPU
Plan for urban infill of planned, built areas and regulate of urban land price speculation	Retrofitting existing urban fabric, including by infilling, particularly of planned, low-density, sprawling areas with high per-capita rates of energy use and emissions, bringing into convergence and improving the equity of rates of consumption across the urban spatial continuum.	The price and availability of urban land is not seen as a subject that concerns local authorities – but is seen as something for land owners and speculators to use as an income generating vehicle	Greater awareness of the opportunities available to Municipalities might help move them towards taking a greater role in such matters as land use and density	UPU

Action Framework for Implementation of the NEW URBAN AGENDA		Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)		
Key items	Description	Current situation	Proposed action	Lead actors
<b>Local Implementation</b>				
Provide integrated, efficient and equitable urban service frameworks, particularly in unplanned, built urban areas	Provide integrated, efficient and equitable urban service frameworks, particularly in unplanned, built urban areas. Redistributive policies and in-situ improvements including incremental implementation that ensure that urban services (e.g. water, sanitation, electricity as well as food, ICT and education and health facilities) are delivered as an integrated, inter sectional package go to under serviced and marginalized groups. Provision of common space for rights- of-way and improved access to open and green space.	Unplanned urban areas that have been built upon are seen as the outcome of criminal or antisocial behaviour and is not seen as deserving of municipal funds or assistance for their upgrading and development	Creating a more inclusive view of cities and citizens might help lead Municipalities to taking a greater interest in servicing unplanned areas	UPU
Employ instruments for public benefit from public investment, particularly land value capture and sharing, ecosystem services assessment and valuation, etc	Creating and sharing urban value by establishing and using planning, legal and fiscal mechanisms that incentivize the use value of land and the extended socioeconomic and cultural function of ecosystems (e.g. capturing and sharing increased value of land resulting from public and private investment, factoring the value of ecosystem services into the municipal bottom line, etc). Concretization of the principles of circular economy, the commons, closed-loop metabolism and urban mining.	Land value capture is not seen or even permitted as an appropriate or authorised activity for municipalities	Changing the governance structure of urban areas might help modify the approach of Municipalities to such issues	UPU

Action Framework for Implementation of the NEW URBAN AGENDA		Action Plan for PAKISTANI CITIES (including Provincial Urban Policies)		
Key items	Description	Current situation	Proposed action	Lead actors
<b>Local Implementation</b>				
Establish and support community-led groups that liaise between citizens and government	Community-led groups play an indispensable role in ensuring liveable neighbourhoods by providing a vital connection between residents and the local and higher levels of government. Particularly in urban planning and management processes, such groups operate through both formal and informal means.	Community-led groups and NGOs generally are not seen as particularly desirable actors that should be involved and engaged in the urban development process	Community and citizen groups need to take a wider interest in what they do and how they interact with Municipalities in an attempt to change the current political climate	Civil Society





## Annex I

## Extract From VISION 2025

**This Section is from Pakistan's VISION 2025-and shows the intent of the Government to develop more effective and efficient cities. It provides a useful basis for implementing the recommendations presented in the Framework for the Implementation of the New Urban Agenda and SDGs (see Chapter 8).**

**Urban Development and Smart Cities** The urban population was only 32% in the 1998 census and is expected to be over 50% by 2025 under the administrative definition. Today, Pakistan's cities contribute 78% to the country's GDP. In developing countries, including Pakistan, a 1% increase in urbanization leads to a 1.1% increase in the economic growth rate.

There is excess demand for office, apartment, retail, warehouse, education as well as community space in all major cities of Pakistan. This problem has been exacerbated by out-dated zoning laws, which fail to accommodate the growing demand for commercial space. For example, 55% of Islamabad's land was designated for residential purposes, whereas only 5% was designated for commercial activity. This has led to unplanned and haphazard urbanization. Businesses are forced to move to residential areas as they are faced with high commercialization fees and cumbersome procedures. In addition, large cities have witnessed an increase in slums or katchi abadis where sometimes even basic sewerage facilities are not available. Because of such urban sprawl, respective city administrations struggle in providing adequate public services to their citizens. Such a scenario is not sustainable and will hamper growth. Pakistan Vision 2025 aims at transforming our urban areas into creative, eco-friendly sustainable cities through improved city governance, effective urban planning, efficient local mobility infrastructure (mass transit systems) and better security to make urbanization an important driver of growth. Zoning laws will be revised to cater to the growing demand for commercial and parking space in large urban centers. This will involve the use of 'mixed use' areas - residential and commercial.

Pakistan's cities have witnessed horizontal expansion, with the consequence that Pakistan only accommodates 6000 people in one square kilometer of area whereas Dubai, with its vertical expansion of residential buildings accommodates 200,000 people in the same area. Development of vertical expansion, high-rise buildings for residential and commercial purposes, will convert urban centers into commerce friendly cities while maximizing usage of space<sup>97</sup>.

While catering to commercial demands, the housing sector will also be developed keeping in mind increasing urbanization and growth in population. A 'Housing information system' to provide data on housing demand and supply will be established. The private sector will be encouraged to provide housing facilities. 'Katchi abadis' will be replaced by low-income residential buildings with adequate provision of sewerage, clean water, and basic utilities such as gas and electricity. A move



## ANNEX - EXTRACT FROM VISION 2025

towards vertical expansion in city centres will provide residential facilities in addition to commercial space to city inhabitants.

With increased urban expansion, there is an additional demand created for public services such as fire and rescue services, emergency medical services including ambulances as well as law enforcement. For there to be effective urban development, it is imperative that urban expansion is coupled with increased coverage of such services.

To cut down usage of private transport in urban centers, public transport including mass transit systems will be carefully devised and implemented. In addition, cities will be made pedestrian friendly. These measures will not only reduce demand for oil and fuels, but will also lead to cleaner more eco-friendly cities.

Other policy interventions to address urban development include: expansion of inner markets; city cluster development; digitization of the land registration system and establishing a regulatory body to register all property dealers. It is also important to not lose one's past while moving forwards towards progress. Therefore it is important to ensure adequate protection and maintenance of heritage sites and buildings in urban centers.

Community based participation will be promoted to transform our cities into 'creative' cities where local and innovative solutions are found to local problems through community organization in collaboration with city governments. The aim is to allow for the free exchange of ideas and organize citizens and city officials so that they can 50 PAKISTAN VISION 2025 One Nation - One Vision work together in formulating and implementing strategies to combat local issues and problems.

An Urban Planning Unit is already in the works at the Ministry of Planning, Development & Reform. It is envisaged that this unit will initiate reform and innovation in urban development in partnership with the provinces - a major tool with which to jump start Pakistan's economic revival.

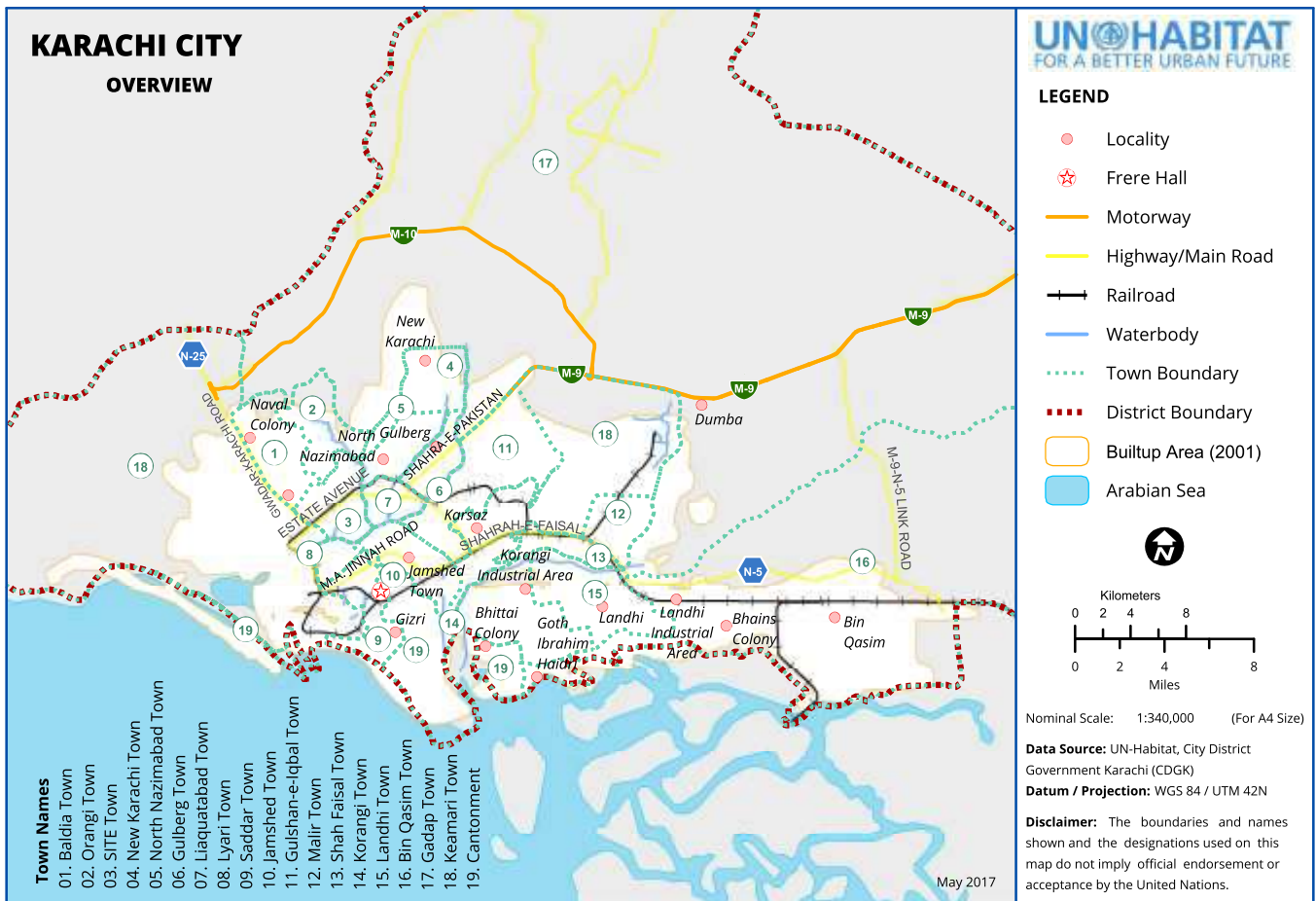
These improvements will be the first step in developing 'smart cities' - cities that are capable of adapting to increasing complexity and demand for knowledge communication given urban expansion. To be able to cope adequately to increasing populations and city size with respect to providing public services, real-time updates on city traffic patterns, pollution, crime, parking spaces, water and power will be required. Therefore, for our cities to become 'smart', they must be equipped to transfer such vast amounts of data instantaneously. Vision 2025 seeks to ensure that Pakistan's cities are digitally connected, equipped with wireless network sensors and there is e-connectivity in all parts where the free flow of information is possible, thereby laying the foundations for the cities of Pakistan to be smart and creative.



ANNEX II - Physical growth patterns of ten selected cities

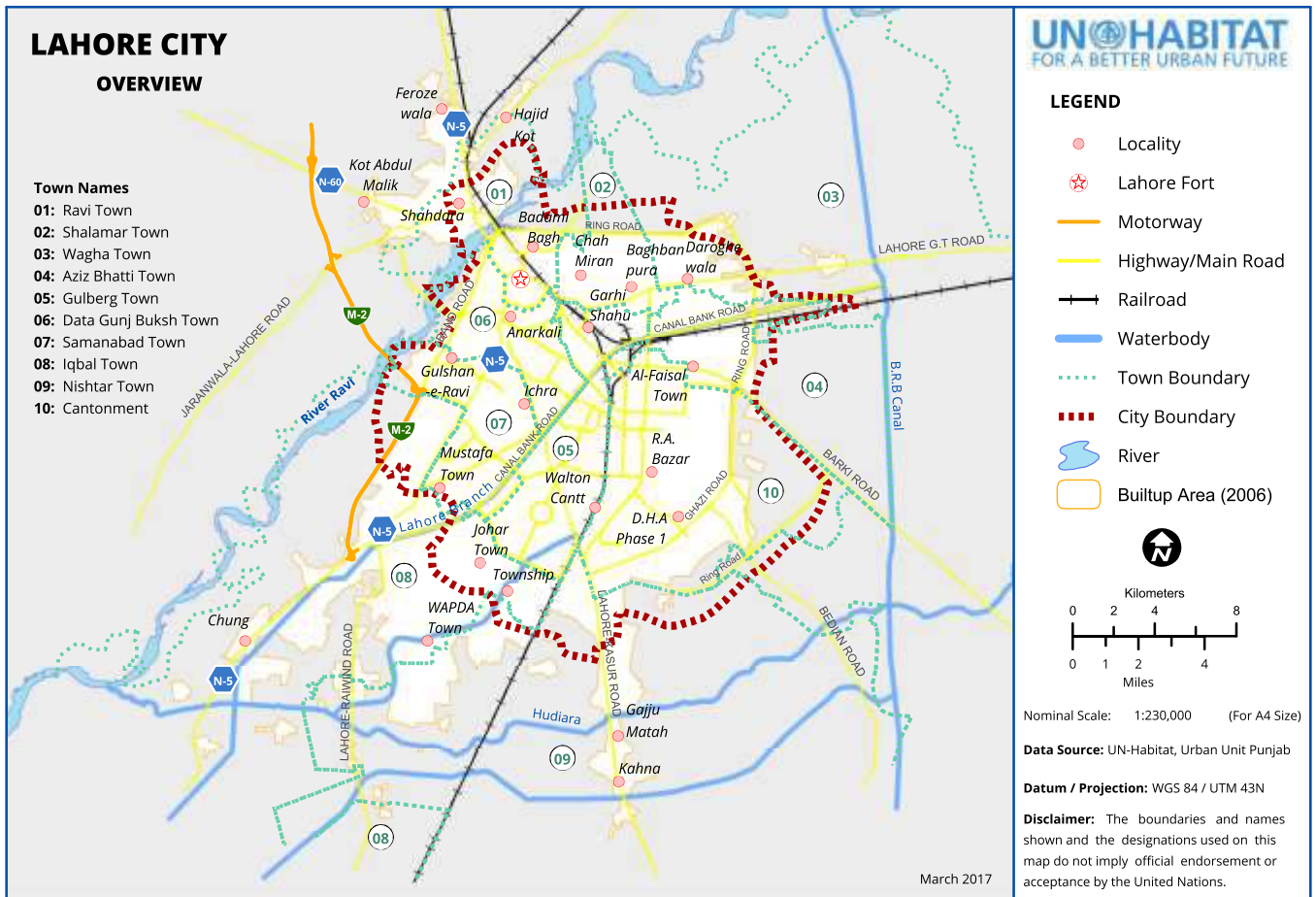
Annex II

Physical growth patterns of ten selected cities





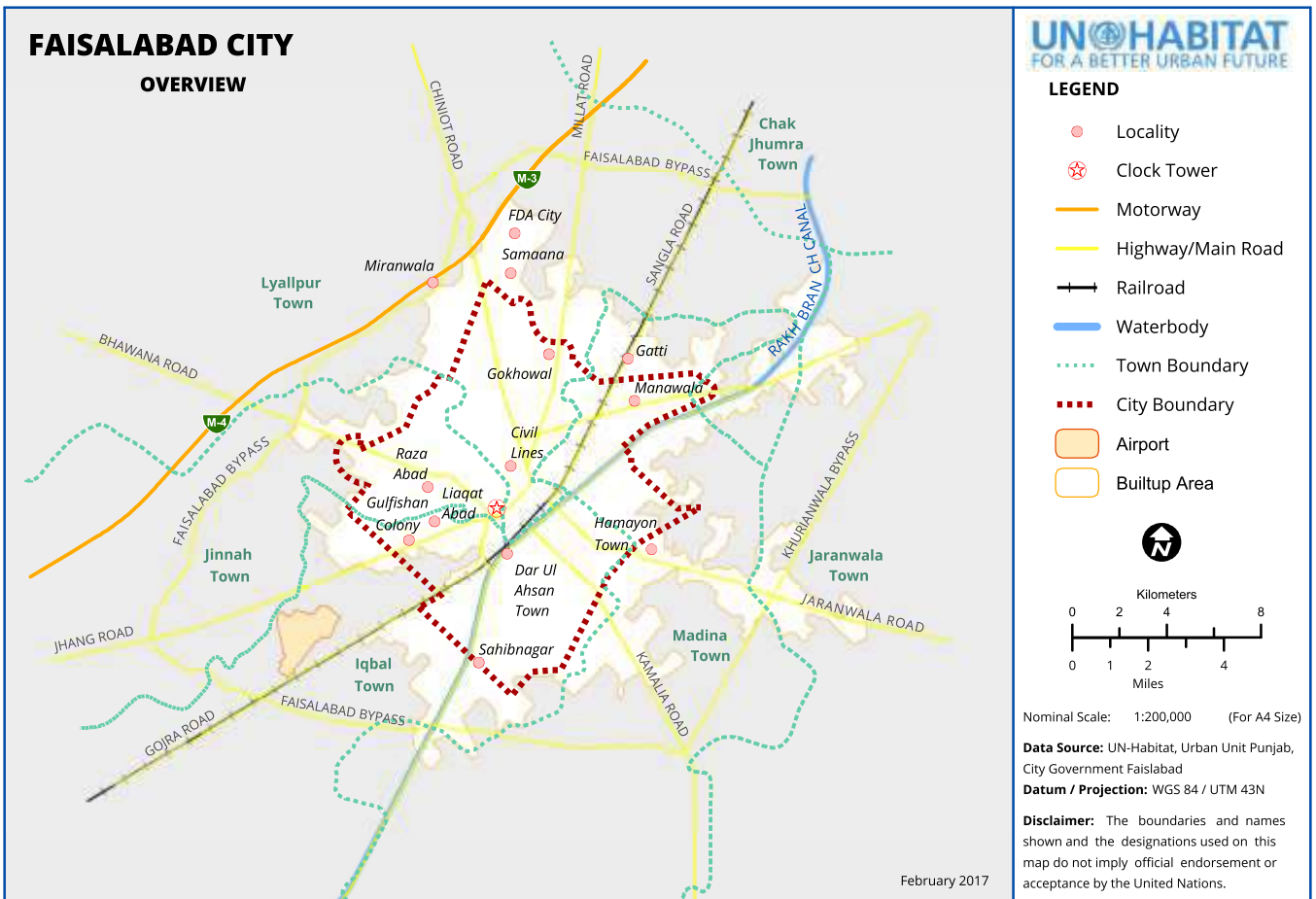
ANNEX II - Physical growth patterns of ten selected cities





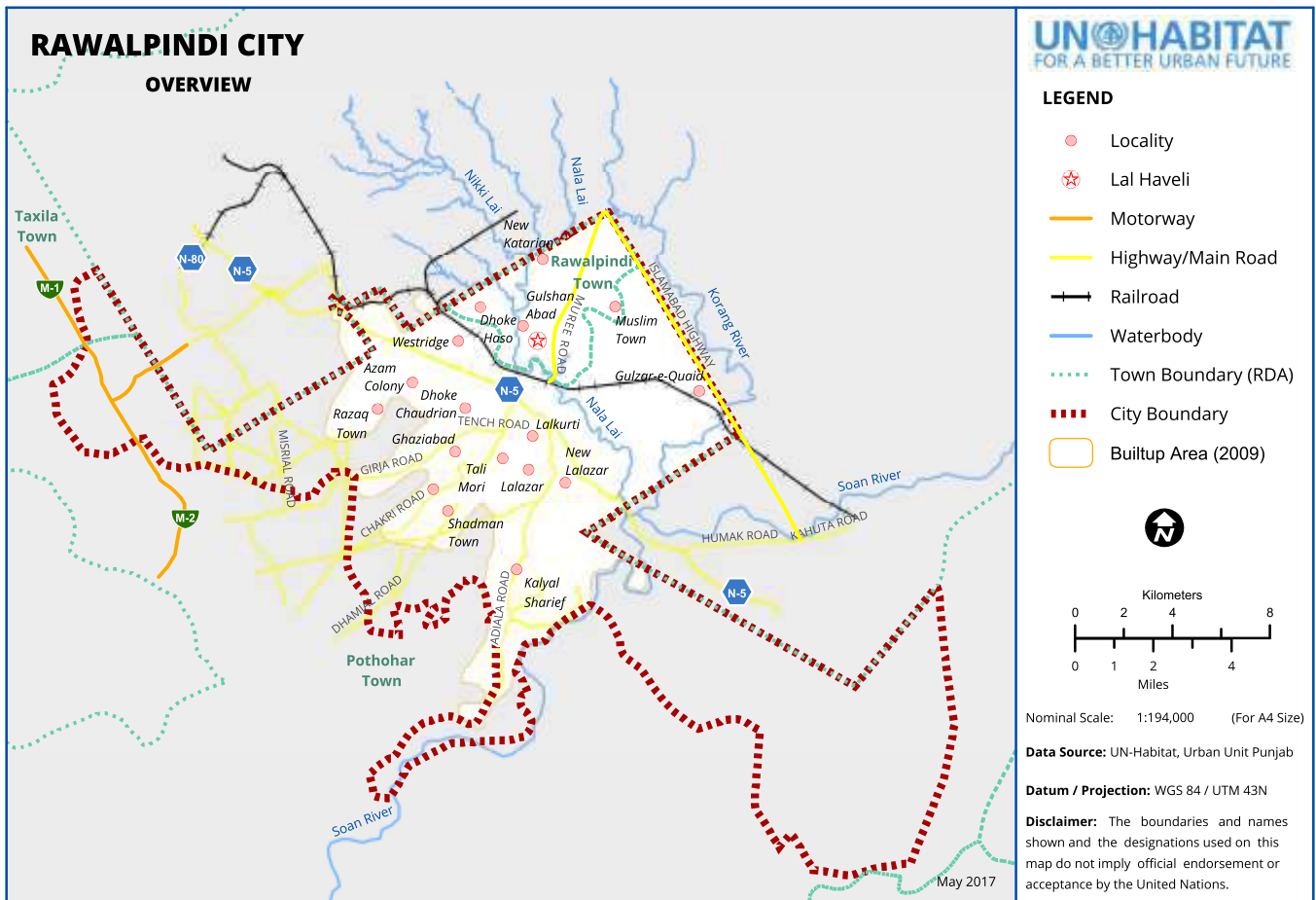


ANNEX II - Physical growth patterns of ten selected cities



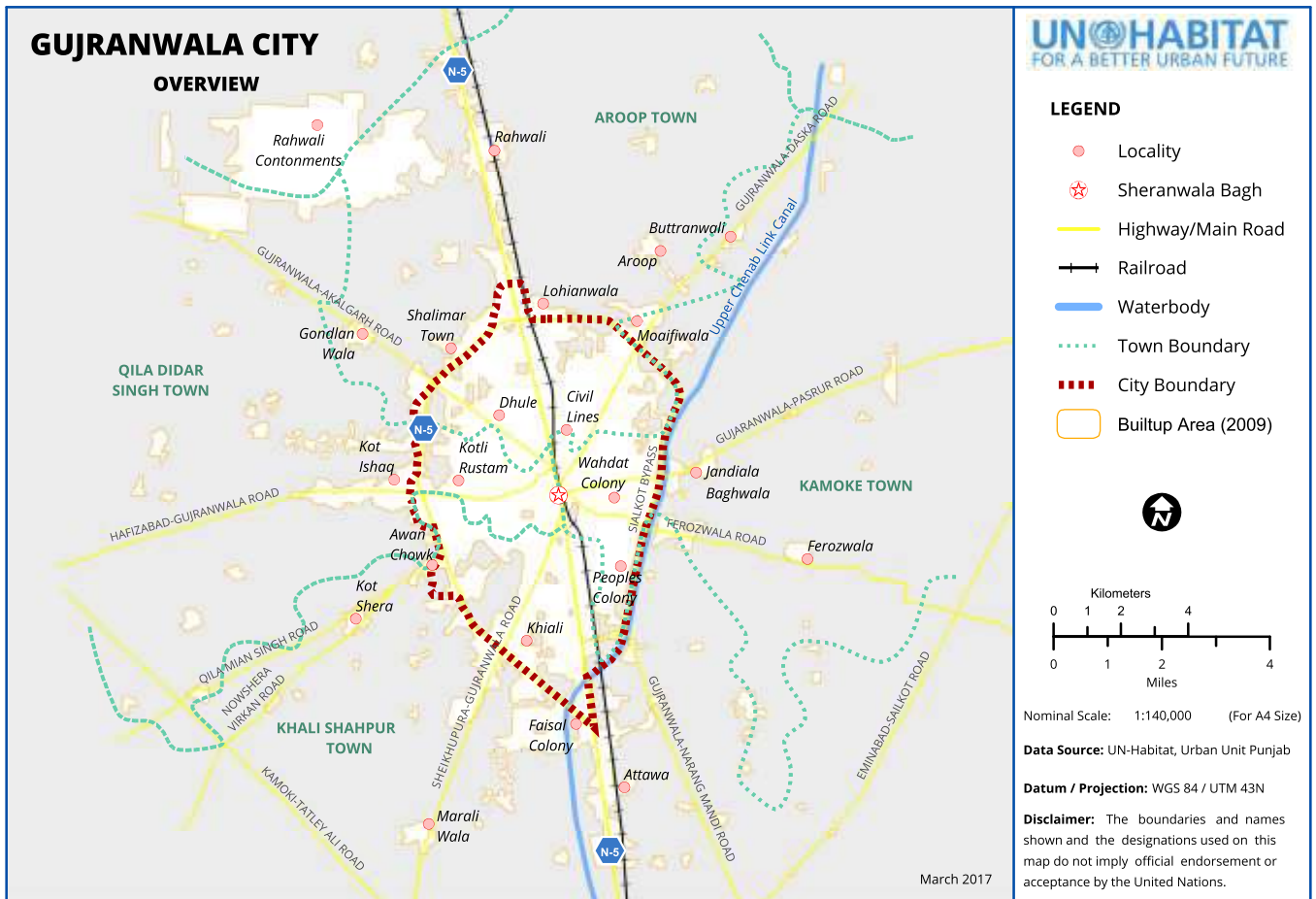


ANNEX II - Physical growth patterns of ten selected cities



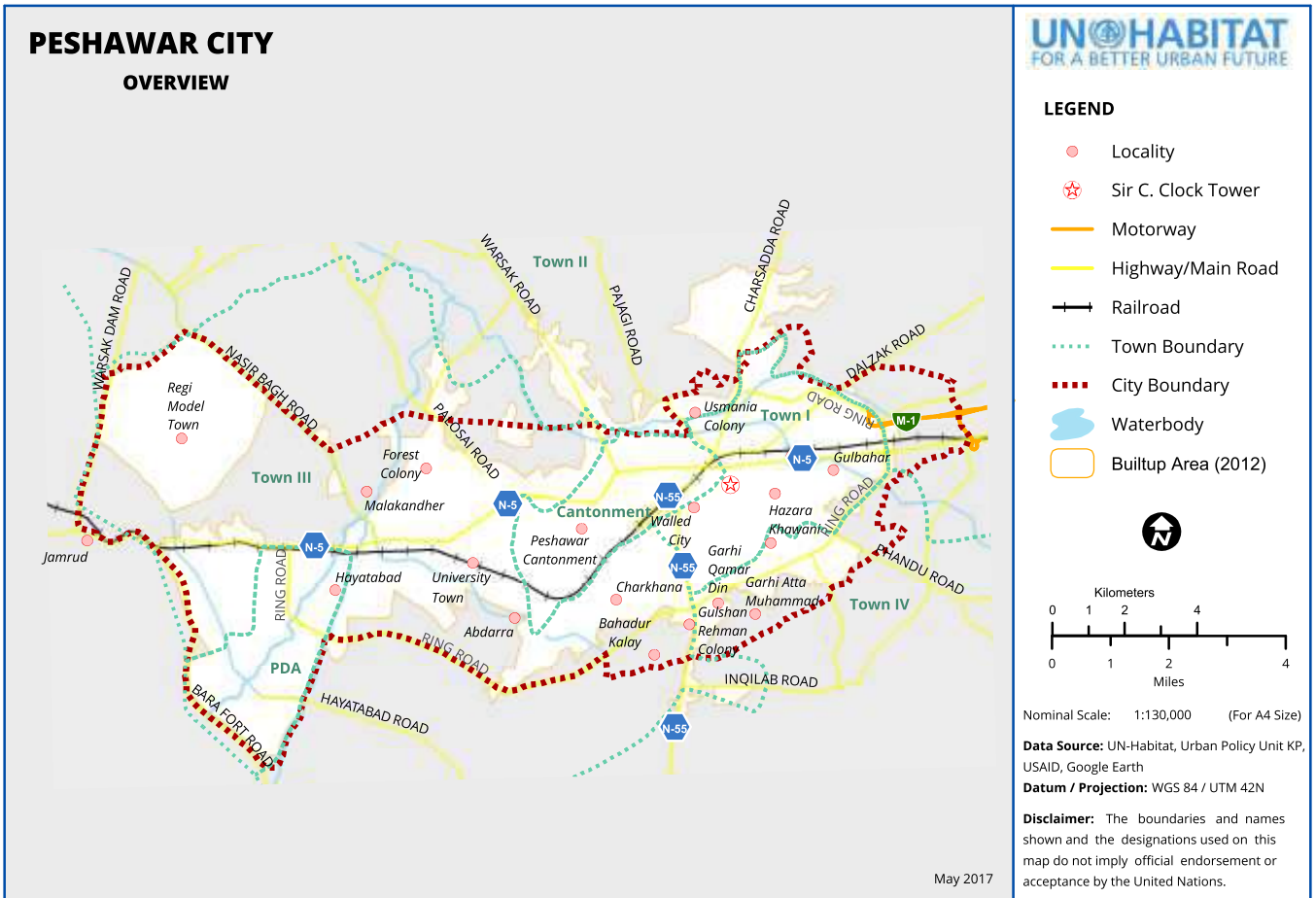


ANNEX II - Physical growth patterns of ten selected cities





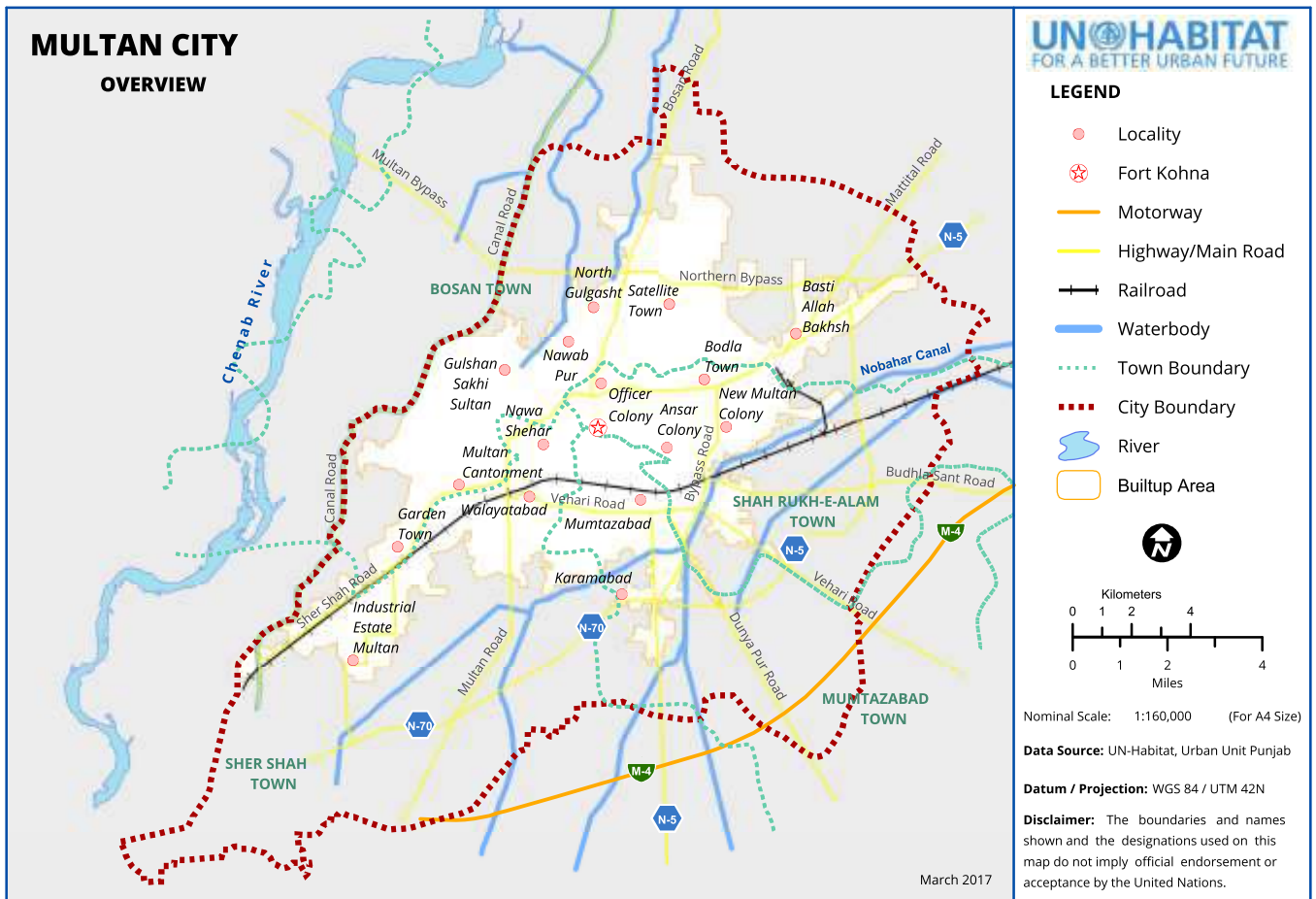
ANNEX II - Physical growth patterns of ten selected cities





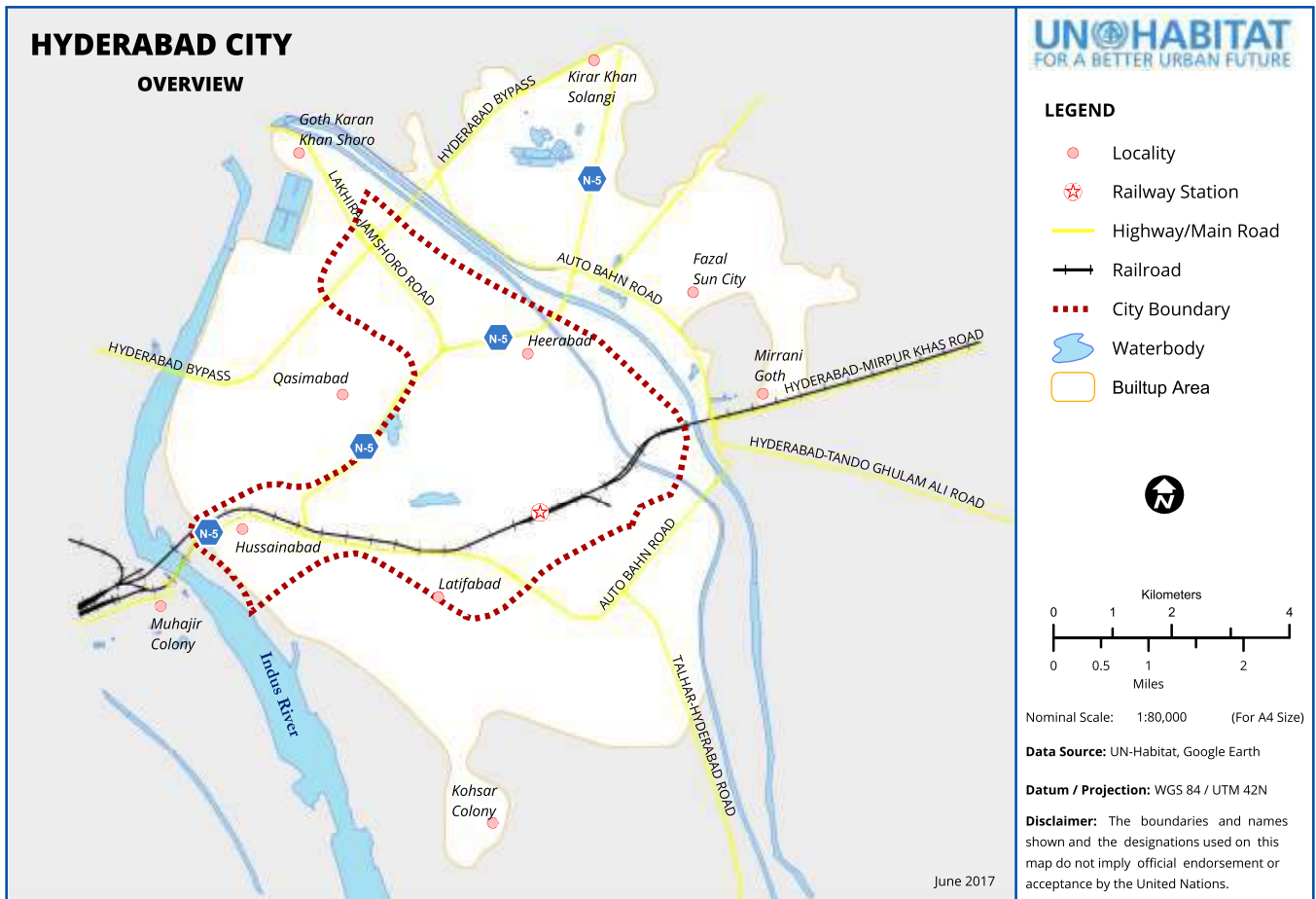


ANNEX II - Physical growth patterns of ten selected cities



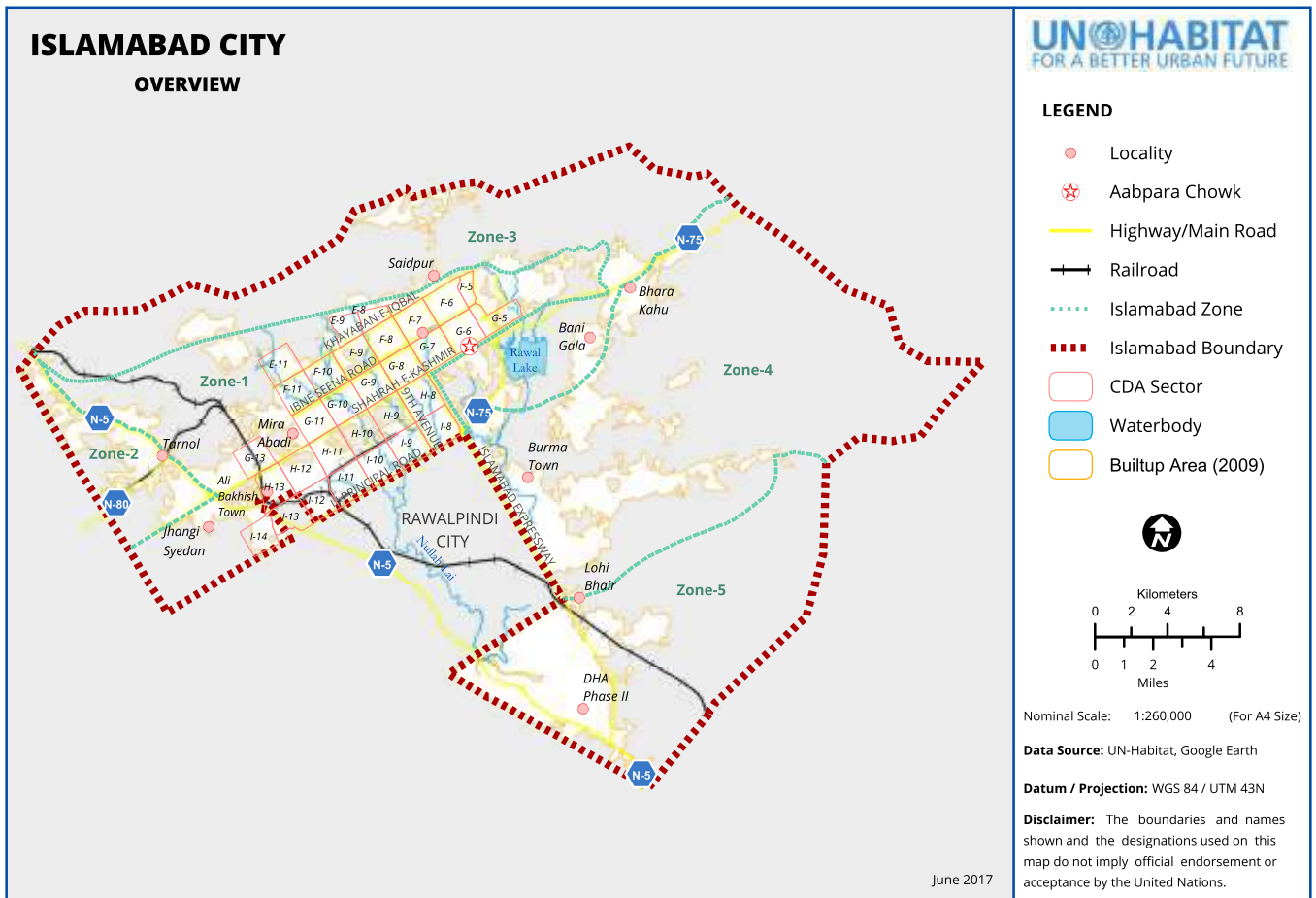


ANNEX II - Physical growth patterns of ten selected cities



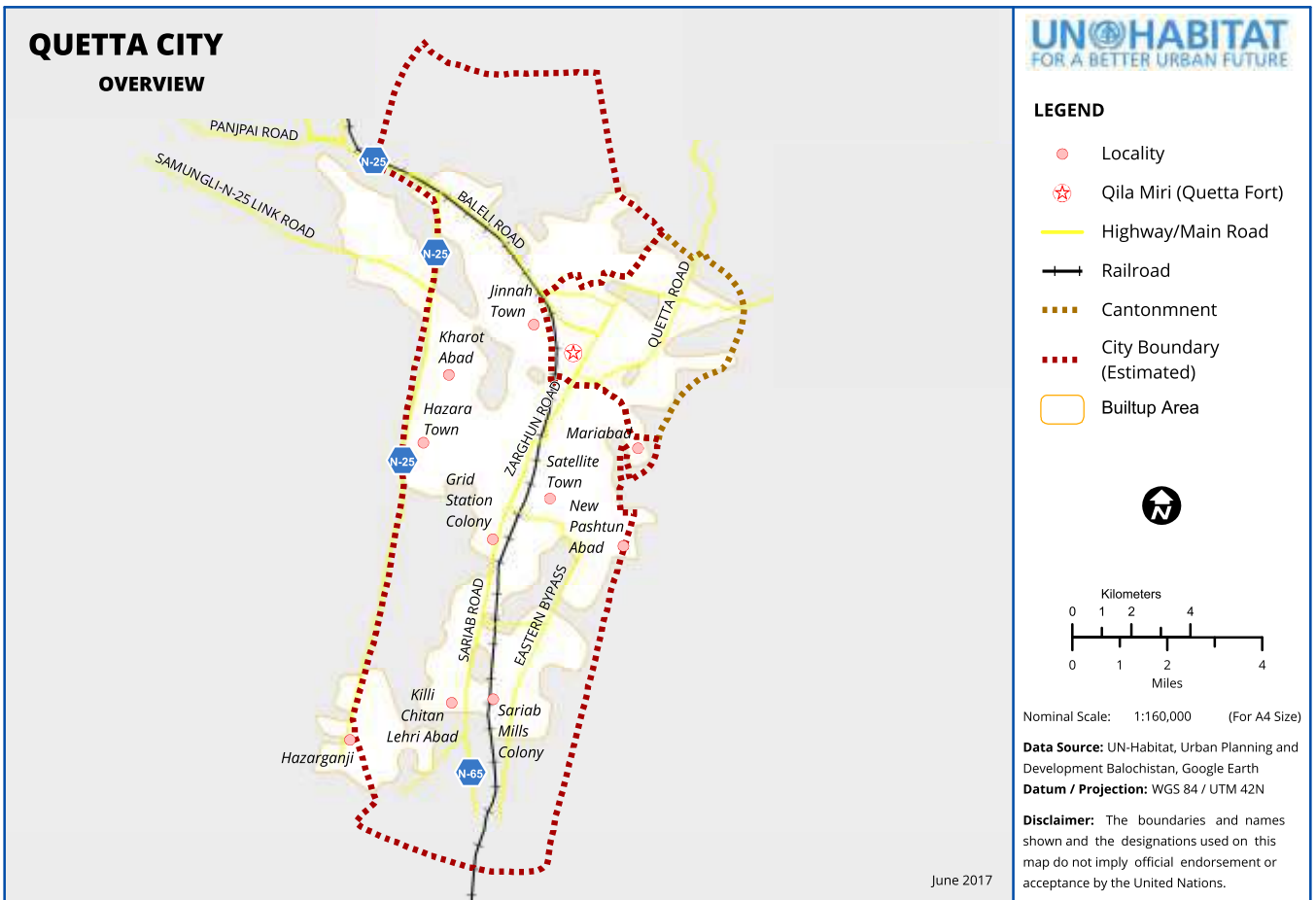


ANNEX II - Physical growth patterns of ten selected cities





ANNEX II - Physical growth patterns of ten selected cities







## BIBLIOGRAPHY

### Chapter 1

- 1 Population and Housing Census 2017, Pakistan Bureau of Statistics, Government of Pakistan
- 2 ibid
- 3 ibid
- 4 ibid
- 5 ibid
- 6 ibid
- 7 Making Spatial Change in Pakistan Cities Growth Enhancing, 2012, World Bank Policy Paper Series on Pakistan, World Bank
- 8 Population and Housing Census 2017, Pakistan Bureau of Statistics, Government of Pakistan
- 9 ibid
- 10 ibid
- 11 Population Growth Survey (PGS) and the Population and Demographic Surveys (PDS) reports, Pakistan Bureau of Statistics, Government of Pakistan
- 12 UNHCR Fact Sheet: <http://unhcrpk.org/wp-content/uploads/2013/12/Factsheet-July-2017.pdf>
- 13 Making Spatial Change in Pakistan Cities Growth Enhancing, 2012, World Bank Policy Paper Series on Pakistan, World Bank, and Ali, R. (2002). "Understanding Urbanization," Economic and Political Weekly, November 2-9 2002.

### Chapter 2

- 14 Country GDP indicators, 2016, The World Bank
- 15 Economic Survey of Pakistan 2016-17, Pakistan Bureau of Statistics. Government of Pakistan
- 16 ibid
- 17 Arby, M. 2010. The Size of the Informal Economy in Pakistan. Lahore: State Bank of Pakistan. Working Paper No. 33.
- 18 Labour force survey 2014-15, Pakistan Bureau of Statistics, Government of Pakistan
- 19 ibid
- 20 FBR- Revenue Division Yearbook 2014-15, Ministry of Finance, The Government of Pakistan
- 21 The Doing Business 2018, Economy Profile of Pakistan, The World Bank  
<http://www.doingbusiness.org/~media/WBG/DoingBusiness/Documents/Profiles/Country/PAK.pdf>
- 22 Population and Housing Census, 2017, Pakistan Bureau of Statistics, Government of Pakistan

### Chapter 3

- 23 Motor vehicles registration records, 2015-2017, Provincial Departments of Statistics
- 24 Greening Growth in Pakistan through Transport Sector Reforms, 2013, The World bank
- 25 Road Safety Status- Pakistan, World Health Organization,  
[http://www.who.int/violence\\_injury\\_prevention/road\\_safety\\_status/2015/country\\_profiles/Pakistan.pdf](http://www.who.int/violence_injury_prevention/road_safety_status/2015/country_profiles/Pakistan.pdf)
- 26 Population and Housing Census 2017, Pakistan Bureau of Statistics, Government of Pakistan



## Bibliography

- 27 Total number of Vehicles REGISTERED / ON ROAD in Karachi – 2011, Urban Research Center, 2015,
- 28 Prediction of Traffic Congestion in Karachi Metropolis using Artificial Intelligence Techniques Research paper 2016, Department of Urban and Infrastructure Engineering, NED University of Engineering and Technology, Karachi cited Asian Development Bank
- 29 M.S. Ali et al., (2013) Estimation of Traffic Congestion Cost – A Case Study of a Major Arterial in Karachi' *Procedia Engineering* 77 (2014) 37 – 44. ScienceDirect.
- 30 The Punjab Development Statistics, 2015, Bureau of Statistics, Government of Punjab.
- 31 Majeed, S. and Batool, Z (2016). Identification of factors affecting modal shift in Lahore, Proceedings of the Pakistan Academy of Sciences

## Chapter 4

- 32 Pakistan Workforce Report, The World Health Organization  
[http://www.who.int/workforcealliance/countries/Pakistan\\_En.pdf](http://www.who.int/workforcealliance/countries/Pakistan_En.pdf).
- 33 Pakistan social living standard measurement survey 2014-15, Pakistan Bureau of Statistics, Government of Pakistan
- 34 PRSP Expenditure 2015-16 and Fiscal Operations 2015-16, Ministry of Finance, Government of Pakistan
- 35 Ibid
- 36 Pakistan social living standard measurement survey 2014-15. Pakistan Bureau of Statistics, Government of Pakistan
- 37 Water Supply, Sewerage and Drainage Stations, Water and Sanitation Agency Lahore,  
[https://wasa.punjab.gov.pk/infodesk\\_watersupply](https://wasa.punjab.gov.pk/infodesk_watersupply)
- 38 Daud M. K. et al., Drinking Water Quality Status and Contamination in Pakistan ,  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5573092/>
- 39 Conduction of water from Indus River system of Tarbela Dam to Islamabad and Rawalpindi 2017, Capital Development Authority, Islamabad, <http://www.cda.gov.pk/projects/watersupply.asp>
- 40 Zubair Qureshi Qureshi, 2014, Water and Sanitation in Khyber Pakhtunkhwa, Pakistan Urban Forum
- 41 Water Supply status, periodical reports, Water and Sanitation Authority of Balochistan
- 42 Annual Development Plan 2015-16, Draft Report, Planning and Development Department, Government of Punjab
- 43 Water Supply status, periodical reports, Water and Sanitation Agency Gujranwala,  
<http://www.gujranwala.gop.pk/GDA.php>
- 44 Bosan, A et al (2010) A review of Hepatitis infection in Pakistan, *Journal of Pakistan Medical Association*, Vol. 60, No 12, December, pp. 1045-1058
- 45 National Sanitation Policy 2006, Ministry of Environment, Government of Pakistan,
- 46 Water Supply and Sanitation in Cooperative and private Housing Societies in Rawalpindi, 2015, IUCN Pakistan  
<http://waterinfo.net.pk/sites/default/files/knowledge/Water%20Supply%20and%20Sanitation%20Analysis%20In%20Cooperative%20and%20Private%20Housing%20Societies%20-%20Rawalpindi%20-%20December%202014.pdf>
- 47 Karachi Master Plan 2020, Solid Waste Management. City District Government, Karachi
- 48 Karachi Strategic Development Plan 2020, 2017, City District Government Karachi
- 49 Profile, Lahore Waste Management, Company, <http://www.lwmc.com.pk/about-us.php>



## Bibliography

- 50 Muhammad Rafiq et al., Willingness to Pay Private Solid Waste Management, Insights From Peshawar, 2017, PAKISTAN BUSINESS REVIEW JULY 2017.
- 51 National Power Policy 2013, Government of Pakistan
- 52 Pakistan Economic Survey 2015-16, The Ministry of Finance, Government of Pakistan
- 53 Foreign Trade Statistics July 2015 and July 2016, Pakistan Bureau of Statistics, Government of Pakistan

### Chapter 5

- 54 Making Spatial Change in Pakistan Cities Growth Enhancing, World Bank Policy Paper Series on Pakistan PK 11/12 September 2012, The World Bank
- 55 Ibid
- 56 Profile of Katchi Abadis, 2017, Sindh Katchi Abadis Authority, Government of Sindh
- 57 Pakistan Housing finance Project, data sheet, 2017 The World Bank
- 58 Pakistan's Urbanization: Housing for the Low-Income, 2014, Siddiqui, T, Washington DC: Wilson Centre.
- 59 Housing Inequality in Pakistan 2016, Hina Shaikh, International Growth Centre .

### Chapter 6

- 60 National Environmental Quality standard (NEQS)-PM10(250 microgram per cubic meter), PM2.5(40 microgram per cubic meter, NO (40 microgram per cubic meter)
- 61 National Sustainable Development Strategy, Ministry of climate change, 2017
- 62 Global Climate Risk Index 2016 – Germanwatch; <https://germanwatch.org/fr/download/13503.pdf>
- 63 Technology Needs Assessment, 2018, Ministry of Climate Change, Government of Pakistan,.
- 64 Annual Flood Report, 2015, Ministry of Water and Power, Government of Pakistan
- 65 National Report of Pakistan for Habitat III, 2015, Ministry of Climate Change, Government of Pakistan
- 66 Policy Brief: The Rise of Karachi as a Mega-City: Issues and Challenges; 2014. [www.mhhdc.org](http://www.mhhdc.org)
- 67 Disaster Risk Management Plan Sindh Province, 2008, Provincial Disaster Management Authority, Sindh
- 68 Technical Report on Karachi Heat wave June 2015, Ministry of Climate Change, Government of Pakistan,
- 69 Breathing in Poison: Lahore growing air problem. <https://www.theguardian.com/global-development-professionals-network/2016/dec/08/breathing-in-poison-lahores-growing-air-pollution-problem>
- 70 Policy on Controlling Smog 2017, Government of Punjab
- 71 Abdul Qayyum Khan Sulehria, Yasser Saleem Mustafa, BazghaKanwal and AdeelaNazish; 2013; ASSESSMENT OF DRINKING WATER QUALITY IN ISLAMPURA, Distt. LAHORE (Local Report); Sci.Int.(Lahore),25(2),359-361,2013
- 72 Masood, Maryam, Claire Y. Barlow, and David C. Wilson. "An assessment of the current municipal solid waste management system in Lahore, Pakistan." Waste Management & Research32.9 (2014): 834-847.
- 73 Developing an Integrated Flood Management Plan - The Way Ahead-Ch 9-Draft National Water Policy, Pakistan, <https://www.punjab.gov.pk/system/files/Ch9.pdf>
- 74 Faisalabad city: textile and environment, 2014, Sustainable Development Policy Institute
- 75 The weather extremes in Pakistan, Pakistan Meteorological Department
- 76 Atmospheric Ecosystem: <http://202.83.164.29/moclc/userfiles1/file/ECCO/Chapter-05.pdf>
- 77 Summary Environmental Impact Assessment, Rawalpindi Environmental Improvement Project, Pakistan,2005, <https://www.adb.org/sites/default/files/project-document/69214/rawalpindi-environmental-improvement.pdf>



## Bibliography

- 78 Rawalpindi Environmental Improvement Project: <https://www.adb.org/sites/default/files/project-document/69214/rawalpindi-environmental-improvement.pdf>
- 79 Ejaz., et al. " Environmental impacts of improper solid waste management in developing countries: a case study of Rawalpindi City." WIT Transactions on Ecology and the Environment: Vol.142 (2010)
- 80 Cities investigation of air and water quality (Gujranwala and Faisaabad), October 2003, Pak EPA/JICA
- 81 InamUllah E. & Alam A; 2013; Assessment of Drinking Water Quality in Peshawar, Pakistan; Bulgarian Journal of Agricultural Science, 20 (No 3) 2014, 595-600; Agricultural Academy; [www.agrojournal.org/20/03-14.pdf](http://www.agrojournal.org/20/03-14.pdf)
- 82 Multan Master Plan, 2008, Multan Development Authority, Government of Punjab
- 83 List of extreme weather records in Pakistan, Pakistan Meteorologically Department, Government of Pakistan
- 84 Appraisal of air and water pollution in hyderabad and karachi, pakistan. Asadullah kazi, Quaid-e-awam university research journal of engineering, science & technology, volume 13, No. 1, JAN-JUN. 2014
- 85 Hyderabad Sindh; [https://en.wikipedia.org/wiki/Hyderabad,\\_Sindh](https://en.wikipedia.org/wiki/Hyderabad,_Sindh)
- 86 Daud, M. K., et al. "Drinking Water Quality Status and Contamination in Pakistan." BioMed Research International, 2017 (2017).
- 87 National Report of Pakistan for Habitat III, Ministry of Climate Change, June 2015
- 88 Ambient Air Particulate Matter and water Quality Investigation in Quetta", May 2006, Pak-EPA
- 89 A Situation Analysis of Urban Disaster Risk Management in Pakistan, LEAD Pakistan 11/22/2013
- 90 Earthquakes in Pakistan 2012, Provincial Disaster Management Authority. Balochistan
- 91 Disaster Risk Management Plan District Quetta, Balochistan, The Director General, District Disaster Management Authority Balochistan



