

Debolina Kundu  
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Michael Kinyanjui *Editors*

# Developing National Urban Policies

Ways Forward to Green and Smart Cities

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Michael Kinyanjui  
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# Foreword

By 2007, over half the world's population was living in an urban environment, signalling a major demographic shift from rural to urban. Since then, the world has become more and more urban. Countries across the globe increasingly acknowledge the positive impact of urbanisation, as a creator of value and a strong source of wealth and prosperity. In order to seize the opportunities of urbanisation, and as a tool to potentially mitigate its negative consequences, a clear and structured framework must be put in place. A national urban policy provides a framework to manage urbanisation, to guide countries to utilise smart and green principles. The transformative power of sustainable urbanisation has the potential to effectively support and contribute to the implementation of the New Urban Agenda, Agenda 2030 for Sustainable Development and its seventeen goals, particularly Goal 11, which aims to make cities and human settlements inclusive, safe, resilient and sustainable.

Developing and implementing a national urban policy is a critical step towards properly planned and well-designed cities and human settlements. If national urban policies are developed with the concept of smart and green cities in mind, urbanisation can serve as a source of wealth, social and environmental sustainability. I therefore encourage countries to develop and implement national urban policies for smart and green cities, to address climate change, support participatory city-wide slum upgrading and enhance safe, inclusive and accessible public space for all.

The series of examples and cases presented in this book illustrate how a national urban policy and smart cities' approaches can serve as a framework to address urban challenges such as increasing disparity, unemployment, growth of slums, lack of basic services and spread of violence and crime. Many of these challenges have emerged precisely due to the absence of or ineffective urban policies.

This book further demonstrates that good urbanisation does not happen by chance but through deliberate policy choices accompanied by proper implementation of integrated plans. If the potential opportunities and gains of urbanisation are to be well understood by governments, policymakers and other stakeholders, they must acknowledge that such growth will not necessarily correlate with productivity

and prosperity in cities unless it is facilitated by a holistic urban policy. Using a smart city approach and technology to efficiently manage our cities, future positive development has a higher possibility of success.

Local and national leaders must, therefore, formulate and implement national urban policies that have smart city strategies as essential tools. Through that, governments, in cooperation with other stakeholders, can maximise the positive outcomes of urbanisation, going beyond city boundaries to reduce territorial disparities through balanced spatial development. Such national urban policies should be able to create the conditions for planned urbanisation through appropriate legal frameworks, municipal financing, planning and design, and harmonising development through horizontal and vertical coordination.

By presenting the valuable experiences of selected countries at various levels of urbanisation and development of national urban policies, this book will enrich the existing literature on national urban policies. It is particularly timely and in line with the New Urban Agenda, which explicitly notes the importance of national urban policies and smart cities in the overall development of countries and urban areas. I am confident that this book will serve as an essential guide for policymakers and make an important contribution towards the implementation of the New Urban Agenda.



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# Acronyms and Abbreviations

ABI	Apply Beyond Innovation
ADEME	Agence de l'Environnement et de la Maîtrise de l'Énergie (French Environment and Energy Management Agency)
AfDB	African Development Bank
AFINUA	Action Framework for the Implementation of the New Urban Agenda
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ANAH	L'Agence nationale de l'habitat (National Housing Agency)
BOD	Burden of Disease
BRGM	Bureau de Recherches Géologiques et Minières
BRT	Bus Rapid Transit
CAA	Constitutional Amendment Act
CCAM	Climate Change Adaptation and Mitigation
CDGK	City District Government Karachi
CDIAC	Carbon Dioxide Information Analysis Center
CEREMA	Center for Studies and Expertise on Risks, Environment, Mobility and Development
CFC	Central Finance Commissions
CGET	Commissariat général à l'égalité des territoires
CLC	County-Level City
CMP	Country Master Plan
CNTPs	Comprehensive National Territorial Plans
COAG	Council of Australian Governments
COP21	Conference of the Parties, 21st Session
CSS	Centrally Sponsored Scheme
DALY	Disability-Adjusted Life Year
DPMA	Development Plans of Metropolitan Areas
DRRM	Disaster Risk reduction and Management
DTADD	Directive territoriale d'aménagement et de développement durables (Territorial Directive for Sustainable Planning and Development)

DURD	Department of Urban and Regional Development
ERP	Electronic Road Pricing
EU	European Union
FCT	Federal Capital Territory
FGN	Federal Government of Nigeria
FYP	Five-Year Plan
GAA	General Appropriations Act
GCCSAs	Greater Capital City Statistical Areas
GDP	Gross Domestic Product
GGGI	Global Green Growth Institute
GHG	Greenhouse Gas
GIRoA	Government of Islamic Republic of Afghanistan
GNP	Gross National Product
GOVTECH	Government Technology Agency, Singapore
GoZ	Government of Zanzibar
GSSA	Geological Survey of South Australia
HCPD	National Urban Policy—Habitat Country Programme Document
HMS	Housing Master Plan
HPEC	High Powered Expert Committee
HRS	Household Responsibility System
HUDCO	Housing and Urban Development Corporation
HUL	Historic Urban Landscapes
ICNUP	International Conference on National Urban Policy
ICT	Information and Communications Technology
IDMC	Internal Displacement Monitoring Centre
IHSDP	Integrated Housing and Slum Development Programme
INS	National Institute of Statistics
INSEE	National Institute of Statistics and Economic Studies
JICA	Japan International Cooperation Agency
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
JTC	Jurong Town Corporation
KRIHS	Korea Research Institute for Human Settlements
LBOTPU	Bases do Ordenamento do Território e Planeamento Urbanístico (Law of Bases of Land Use Planning and Urban Planning)
LCGC	Low-Carbon Green City
LESCO	Lahore Electric Supply Company
LGUs	Local Government Units
LOTU	Law of the Planning of the Territory and Urbanism
LRMIS	Land Record Management and Information System
LWMC	Lahore Waste Management Company
MUDA	Ministry of Urban Development Affairs
N/RPP	National/Regional Physical Plan
NBS	National Bureau of Statistics of China
NDP	National Development Plan
NETS	Network for Electronic Transfers

NGOs	Non-governmental Organisations
NNUP	National New Urbanisation Plan
NSDS	National Spatial Development Strategy
NSGG	National Strategy for Green Growth
NSP	National Spatial Plan
NTU	Nanyang Technological University
NUA	New Urban Agenda
NUDHF	National Urban Development and Housing Framework
NUDP	National Urban Development Project
NUG	National Unity Government
NUP	National Urban Policy
NUPP	National Urban Policy Programme
O&M	Operations and Maintenance
OECD	Organisation for Economic Co-operation and Development
PCGSDP	Per Capita Gross State Domestic Product
PLC	Prefecture-Level City
PLU	Plan local d'urbanisme
POOTN	Principais Opções de Ordenamento do Território (Main Options for National Spatial Planning)
RATP	Transports à Paris et en Ile-de-France
RAY	Rajiv Awas Yojana
REOTN	Relatório do Estado do Ordenamento do Território Nacional (Report of the State of National Spatial Planning)
REPTUR	General Regulation for Urban and Rural Territorial Plans
RGEU	General Regulation of Urban Buildings
RMB	Renminbi
RNOTPU	Regulamento Nacional do Ordenamento do Território e Planeamento Urbanístico (National Regulations of Land Use Planning and Urban Planning)
SCoT	Schema de coherence territoriale (Territorial Coherence Scheme)
SCP	Smart City Plan
SDG	Sustainable Development Goal
SDRIF	Schéma directeur de la région Île-de-France
SEIFA	Socio-Economic Indexes for Areas
SEM	Société d'économie Mixte (Mix Economic Development Societies)
SMCs	Small and Medium-Sized Cities
SNCF	French National Railway Company
SNDGG	Smart Nation and Digital Government Group
SNTEDD	Stratégie nationale de transition écologique vers un développement durable
SoAC	State of Afghan Cities
SOP	Standard Operating Procedure (Law approving the Main Strategic Options)
SPL	Société publique locale (Public Development Society)
SPV	Special Purpose Vehicle

SRADDET	Schéma régional d'aménagement, de développement durable et d'égalité des territoires
SSB	Singapore Savings Bond
STCDA	Stone Town Conservation and Development Authority
SUA	Significant Urban Area
SUP	Sub-national Urban Policy
TVEs	Town and Village Enterprises
UA	Urban Agglomeration
U-City	Ubiquitous City
UDHA	Urban Development and Housing Act
UIDSSMT	Urban Infrastructure and Development Schemes for Small and Medium Towns
UIPT	Urban Immovable Property Tax
UK	United Kingdom
ULB	Urban Local Body
UN DESA	United Nations Department of Economic and Social Affairs
UN	United Nations
UNCHS	United Nations Centre for Human Settlements
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UN-Habitat	United Nations Human Settlements Programme
UNPD	United Nations Procurement Division
U-NPP	Urban National Priority Programme
URN	Urbanization Research Nigeria
URP	Urban and Rural Planning
US	United States
USD	United States Dollar
WCD	Women and Child Development
WEF	World Economic Forum
ZansPlan	Zanzibar Master Plan

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**Part I**  
**Supporting National Urban Policy**  
**with Smart and Green Urban Principles**

# Chapter 1

## Locating the Importance of NUP in the Context of Present Urban Challenges



Debolina Kundu, Remy Sietchiping, and Michael Kinyanjui

### 1.1 Introduction

Urbanisation is intrinsically linked to development. Globally, cities are considered as engines of growth. This optimism is reflected both in economic and demographic terms. In fact, urbanisation has become a significant global trend in the twenty-first century. Although urbanisation levels and rates vary across regions and also over time, it is increasingly becoming a global phenomenon, and affecting nations by posing challenges and opportunities—both of which, it is argued, can be managed by national governments, if they are competent and have a framework in place for its urban development.

For urbanisation to play a transformative role in integrating the economic, social and environmental dimensions of sustainable development, coherent policies must be put in place. These could help to address the contrasting growth and shrinkage challenges in developing and developed world, respectively. To achieve the desired outcomes, a National Urban Policy (NUP) is an important tool available to governments to manage urbanisation. It provides a vision for urban transformation and to harness opportunities while mitigating inevitable challenges. Due to its ability to structure and organise urbanisation and its value as a tool to capitalise on the opportunities, the NUP has been identified as one of the tools to support implementation and monitoring of the 2030 Agenda for Sustainable Development and to implement the New Urban Agenda (NUA). It is further argued that in the absence of adequate National Urban Policies and associated frameworks, cities will continue to face multiple challenges that will aggravate urban inequalities and poverty. Building smarter

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and sustainable cities is a common agenda among policy makers and other stakeholders in the twenty-first century. In this respect, NUPs are an important tool for considering how smart and green principles can be incorporated into urban policies. The inaugural International Conference on National Urban Policy in 2015 echoed the importance of NUPs as a multi-sectorial process and tool to help achieve compact, integrated, connected and inclusive cities that are resilient to climate change. In fact, the rich literature on NUPs gathered at this conference and the interesting discourse on the subject led to the initiation of this book. The Second International Conference on National Urban Policy, 2017 offered the first opportunity following the Habitat III Conference and during the ongoing Sustainable Development Goals (SDGs) process to consider, in a global forum, the role of National Urban Policy in implementing the global urban agenda. Furthermore, the Action Framework for Implementation of the New Urban Agenda (AFINUA), 2017 identified National Urban Policies as a strong foundational element for achieving sustainable urbanisation. In fact, successful NUPs dealing with rapid urbanisation can inform urban policy in other rapidly urbanising and developing countries.

This book brings together NUP experiences of countries across the globe which are at different levels of urbanisation and economic development. It brings a collection of review of the National Urban Policies in 15 countries (India, Pakistan, Afghanistan, China, Philippines, Iran, Singapore, Korea, Nigeria, Zanzibar Islands, Lusophone Countries, South Africa, Australia, Germany and France). It has been divided into three main sections. The first section focuses to understand the current urbanisation trends and patterns and related challenges at the global level. A basic understanding of the need for NUP against this backdrop followed by a discussion on the importance of NUP as a tool to deal with urban challenges is also covered in this section. The second section tries to critically understand the efforts of the developing countries across various continents to plan and manage urbanisation. The last section is focused on the experiences of developed countries along with two case studies on the smart and green cities initiatives of two countries.

## 1.2 Overview of Global Urbanisation

In Chap. 2, Kundu and Pandey discuss the current trends and pattern of urbanisation in different parts of the world, along with their major challenges. Since 1950s, the world has been experiencing very high growth of urban population. Currently 55.3% population live in urban areas (2018), the share of which is expected to rise to 68% by the middle of the twenty-first century, accounting to a population of 6 billion. However, projections indicate that the growth rate of urban population which started to decline in the eighties, will decline further to 1.13% by the middle of the twenty-first century (WUP 2018). The authors noted that most of the addition of the urban population that has been contributed by developing countries, especially, those of Asia and Africa, and the future global urban population will be concentrated mainly in these two continents. Urbanisation in the developing countries is mainly characterised by

rapid growth of mega cities, as in contrast with shrinking cities of the west. However, these cities of developing countries face several challenges related to overcrowding and lack of planning. Additionally, the challenges posed by climate change are likely to impact the entire globe, both the developed and developing countries.

In this context, it is important to highlight that national urban policies in Asian and African countries, which are currently least equipped to deal the challenges of urbanisation, need to address these issues in a manner which will lead to sustainable development. Countries from these two continents need to build capacities to deal with the added challenges of globalisation, income and spatial disparities as well as rising demographic dividend. National urban policies could be instrumental in guiding these countries towards sustainable and resilient future encompassing the agendas discussed in “Sustainable Development Goals” and “New Urban Agenda”.

### 1.3 National Urban Policy: Tools for Development

In Chap. 3, Kinyanjui argues that the geography of urbanisation is changing, affecting all countries but with greater magnitude in emerging and developing economies of the global South. Compared to urban transitions in developed economies, urbanisation in developing regions is largely driven by poverty, conflict and demographic change and to a lesser extent by industrialisation and employment growth (Turok and Parnell 2009).

In contrast, recent international debate on urban shrinkage with considerable population loss in European, North America and some East Asian cities is rife and the phenomena will become more widespread (UNDESA 2018; Großmann et al. 2013). Discussion on how to address such urban decline through “urban regeneration” and “neighbourhood revitalisation” is gaining traction in national urbanisation policies for these countries.

Referring UN-Habitat and Cities Alliance (2014), Kinyanjui argues that urbanisation that is supported with appropriate spatially integrated policies is a strong positive force for achieving national economic development, social transformation and environmental progress. He further notes that National Urban Policies are a key tool for achieving such desired outcomes. The policies not only foster entrepreneurial dynamism and creativity in urban areas, but also reduce transactional costs and facilitate competitiveness and business development. Countries that have national urban policies are generally most successful in the areas of human development, spatial integration and economic growth (UN-Habitat and Cities Alliance 2014). He further argues that both SDGs and the NUA can reach their targets and full potential through well-conceived NUPs.

## 1.4 Urban Challenges and National Urban Policy: Experiences in Asia and Pacific

Asia experienced rapid rate of urbanisation in the later part of twentieth century. Despite being one of the less urbanised regions of the world, it constitutes more than half of the world's urban population. India and China constitute one-third of the total urban population of the world. Asian urbanisation is mostly concentrated in mega and metropolitan cities. Therefore, overcrowding and informality along with lack of basic services and infrastructure are important components of urbanisation in this part of the world, except for a few countries like Korea and Singapore. These imply the requirement of the massive policy initiations to manage the diseconomies of large cities and direct it towards a more sustainable future. Most of the countries in Asia and Pacific region, with the exception of Philippines, are either developing their NUP as is the case in India or has just completed their policy drafting as in Pakistan.

In Chap. 4, Kundu discusses the Indian urbanisation scenario and the progress made by the country in the formulation of national urban policy. In this chapter, the author mentions that Indian urbanisation is characterised by low level and rate of urbanisation. She attributes the sluggish urban growth to slow down of rural–urban migration and exclusionary urbanisation. She adds that decentralisation in the country is yet to happen at the desired level. In the absence of a National Urban Policy, various programmes and missions for urban development run in silos.

She further argues that in 1990s, the national five-year plans adopted an inclusive agenda and launched several programmes in mission mode with private sector participation. These programmes, however, demonstrated a “big-city bias”. The much-acclaimed Smart Cities Mission, for instance, mainly focuses on retrofitting parts of cities by engaging special purpose vehicles (SPVs), which are likely to further disempower the already weak ULBs. In the light of these transformations, this chapter evaluates India's post-liberalisation urbanisation scenario; current urban development programmes and system of governance, as well as ULBs. It suggests that the National Urban Policy should take into consideration the challenges faced by urbanisation and prepare a roadmap for sustainable urbanisation in the future.

Javed, Hasan and Qureshi in Chap. 5 encapsulates not only the challenges in urban Pakistan but also the arbitrariness in conceiving the “urban” which excludes a large chunk of suburban and rural population settled in the peripheries of large cities. Borrowing World Bank's terminology, the authors describe urbanisation in Pakistan as “messy and hidden” and highlight a plethora of challenges in urban Pakistan. The authors also note that the past focus towards agriculture and feudal control over land have kept Pakistan's policy discourse at a distance from urban epistemology. Vision 2025 of Pakistan, which is in line with the NUP, sets forth the agenda of economic as well as urban development of the country with the introduction of smart techniques and more people-centric approach.

In Chap. 6, French et al. discuss Afghanistan's experience of revival from war-devastated condition to regeneration of its cities and development of National

Urban Policy. The authors mention that the forty years since 1970s have witnessed widespread violence, destruction of settlements and disruption of urban forms which led to fleeing of over six million refugees, particularly to Pakistan and Iran. Afghans remain the single largest group of refugees in protracted exile globally. They also constitute a huge magnitude of internally displaced people, especially leading to urban expansion, characterised mostly by “shocks or waves of migration”. Driven mostly by push factor, one-fourth of the population reside in urban areas. Lack of reliable, disaggregated and up-to-date data on population and conditions within the municipal boundaries, makes planning effort more difficult. Serious gaps in the urban legislative and regulatory framework with policy paralysis add to the problem.

Under the leadership of President Ghani (2014), the government identified urban development as a key to “Realising Self Reliance” (2015–2024) in Afghanistan. The existing National Priority Programme (NPP) was updated and Urban National Priority Programme (UNPP) endorsed in the national agenda. The UNPP was collaboratively drafted with assistance of UN to incorporate the priorities of National Unity Government (NUG) and with the overall objective of making Afghan cities hubs of economic growth with reduced inequality and increased power of local bodies.

Reyes, Gamboa and Rivera in Chap. 7, outlines Philippines’ long experience with urban policies and its limited success in the implementation. A very high rate of unemployment and lack of economic opportunities have compelled out-migration, which substantially affected the population growth rate and availability of skilled workers in urban centres.

Since 1987, Philippines had tried to build frameworks for urban development in its Constitution, followed by a series of policy attempts. It also adopted its National Urban Development and Housing Framework (NUDHF) in three separate phases. Its latest iteration (2009–2016), also adopted the smart and green technologies.

In Chap. 8, Kundu, Debnath and Lahiri describe the emerging urban challenges in China and its journey towards the formulation of its New Type Urbanisation Planning (2014–2020) with a more people-centric approach. They argue that, over the past few decades, China has experienced rapid urbanisation and economic growth, both in terms of its massive scale and pace. However, this economic boom did not result in equitable growth, largely due to exclusive policy approaches of the government. It is noted that the housing registration (*hukou*) system since 1958, resulted in exclusion of migrant workers from social welfare systems in cities. To address the existing problems, the government initiated a “New Urbanisation Plan” (2014–2020) which aims to achieve a more people-oriented urbanisation process.

It is noted that developing countries in Asia are trying very hard to tackle the urban challenges by adopting an integrated NUP framework. India and Pakistan have completed the formulation of NUP draft, whereas Afghanistan sought international help to deal with urban reconstructions along with the formulation of NUP. On the other hand, China and Philippines are dealing with the second generation NUP.

The growth of urban sprawl resulting from rural–urban unplanned transformation is a quintessential feature of urbanisation in Iran. Water crisis in the country, escalating land prices and growing informal settlements and low energy efficiency have deepened the urban crisis. In Chap. 9, Habibi et al. highlight that limited finance

base and lack of accountability of the municipalities has made urban planning and implementation difficult. Considering the deteriorating and underutilised urban fabrics, the National Strategy Document on Revalitising, Upgrading, Renovating and Enabling Deteriorated and Underutilised Urban Fabric (NSDUUF), approved by the Iranian Cabinet in 2014 initiated the sustainable regeneration of urban areas and neighbourhoods by urban revitalisation, rehabilitation and renovation. This step was furthered through rolling of the National Urban Policy Programme and Smart Cities Strategies on a pilot basis in 2017. The drafting and implementation of NUP in Iran is in collaboration with UN-Habitat, Republic of Korea and Islamic Republic of Iran. It aims to foster synergy, coherence, capacity building, transfer of knowledge and global experiences on NUP.

## **1.5 Urban Challenges and Experiences in Formulating NUP: Africa**

Urbanisation of Africa is very different from rest of the world. The continent which was largely rural is changing towards urban at a very fast rate. The levels of urbanisation increased from 14% to 42.5% during 1950 and 2018, and it is estimated to rise rapidly in the future. But it is quite unique in the sense that African urbanisation has not been accompanied by corresponding economic growth. African cities have grown in unplanned planner and therefore are characterised by commensurate infrastructural development resulting in inadequate housing, water supply and sanitation services.

In Chap. 10, Zubairu discusses the urban challenges in Nigeria and the country's experience with developing NUP. Nigeria, situated in the western part of Africa, has high level of urbanisation (around 50%) along with high per capita income compared to other sub-Saharan African countries. However, the country is still struggling with definition of urban, and such fluid definition of "the urban" and lack of disaggregated data at the city level makes planning and management of its cities difficult. Against this backdrop, the National Urban Policy of 2012 was promulgated by the Federal Government to address the legislative gaps and provide impetus to catalyse other complementary policies and programmes. The NUP helps to foster development of shared understanding between different stakeholders and integrate various national policies for sustainable urban development.

Everatt and Ebrahim in Chap. 11 outline South Africa's urban policy against the backdrop of long Apartheid era and mention that four hundred years of slavery in South Africa took a toll on the country's economic, demographic and social fabric. The racial discrimination that was implanted during the colonial period further strengthened during the rule of the National Party in 1948. While, South Africa became Republic in 1961, the legislation on apartheid continued until 1994, when it was abolished by the African National Congress under President Nelson Mandela.

The authors discuss in detail the evolution of urban policies in South Africa in post-Apartheid period, from the Reconstruction and Development Programme (RDP) in 1994, Growth, Employment and Redistribution (GEAR) in 1997 and Urban Development Framework (UDF) of 1997 to the development of the National Spatial Development Perspective of 2003 and 2006.

In Chap. 12, Juma has elaborated the unique experience of Zanzibar and formulation of NUP in the country. Zanzibar, a semi-autonomous region of Tanzania comprises of Zanzibar Archipelago in the Indian Ocean. The natural beauty of Zanzibar and the historic importance of the old city of Stone Town, which has been included as the UNESCO World Heritage Site, draws huge tourists annually, making this industry the most vibrant in the economy of Zanzibar. Against this backdrop, the administration initiated the development of fifth Master Plan, “Zanzibar Structural Plan” (ZansPlan), deriving its framework from NUP and preserving of historic cities under the Historic Urban Landscape (HUL) approach under UNESCO.

Guarneri, Holz and Ramalho in Chap. 13 discuss the NUP in African Lusophone Countries. They highlight the diversity in perceiving urban and developing NUP in the six different African-Portuguese speaking countries—Angola, Cabo Verde, Guinea-Bissau, Mozambique, Sao Tome and Principe, tied together by common colonial history, linguistic identity and similar legal and institutional framework. The current policies in these countries are unable to address current urban issues. Therefore, these countries are at different stages of development with NUP either being formulated or under consideration for formulation.

Probably, Africa is the most diverse continent at differential development levels starting from Lusophone countries at the lowest end to South Africa almost at par with developed countries. Inequality across cities is evident with concentration of economic activities, and amenities in few large cities. For most of the countries, NUP is only at the initial stage, probably being the first ever structured urban policy but expected to lead these countries towards more sustainable urban future.

## **1.6 Urban Experience of Developed Countries: Unique Challenges and NUP**

Having discussed the urban experience of various developing countries that differ in their social and historical process of evolution, the book aptly presents the case studies of two European countries and Australia, which picking momentum from industrial revolution have come a long way to become world leaders in advancing technology. With more than 74% of population being urban in Europe, the urban challenges are quite different from developing countries such as loss of population from their core, huge low density sprawl, degeneration of some urban neighbourhoods and rising social cohesion. Still these countries’ experiences are important lessons to be learnt.

In Chap. 14, Muller outlines Germany’s urban policies. Though pre-dominantly an urban country, urbanisation in Germany is characterised by declining population

growth rate, increasing ageing population and polycentric urbanisation with 60% population concentrated in medium-sized towns and cities (termed as “mighty middle”). To effectively handle these challenges, Germany developed its National Urban Development Policy (NUDP) in 2007 based on the “Leipzig Charter on Sustainable European Cities” (2007), the Urban Agenda of EU (2016) and New Urban Agenda (2016) of United Nations. The author concludes that Germany needs to foresee beyond national capabilities and forge supranational and transnational relations to support transformative re-designing of German cities.

France, which is one of the highly urbanised nations of Western Europe, is discussed in Chap. 15. Huybrechts, the author, notes that the definition to identify “urban” is not inclusive enough to reflect upon the existing urban reality. To overcome this paradox, France has identified the areas in transition as “Aires urbaines” or “City Areas” that takes into consideration the dependent relation of the surrounding urban territories. The French government has recently adapted the National Sustainable Development Strategy (NSDS) to promote sustainable development goals and New Urban Agenda and to link all the urban policies in a national framework involving diverse sectors.

In Chap. 16, Stace discusses the Australian urbanisation experience and their advancement towards the formulation of smart-city strategy in 2016, after successful implementation of NUP in 2011. Australia is one of most urbanised countries in the world. But, there were limited comprehensive policy attempts until the beginning of the second decade of twenty-first century. In 2016, with a change of government, the National Urban Policy was replaced with the “Smart Cities Plan”, and the State of Australian Cities was replaced by the National Cities Performance Framework Dashboard as an interactive data source on a wide range of cities issues.

From the policy experience of these three countries, it is noted that even if there is no NUP in these countries, the existing policies are very efficient and coherent. Continuous monitoring and institutional integration is responsible for the success of urban planning in these countries. These considerations must make room in any future urban policy, so as to contain its growth as one the leading nations of the world.

## **1.7 Smart and Green Cities—Case Studies of Korea and Singapore**

The Southeast and East Asian countries represents the fastest growing and developed economies in Asia. The last two case studies are on experiences of Korea and Singapore, which are global leaders of smart and innovative urbanisation.

In Chap. 17, Jeong discussed that the Korean experience of territorial evolution into smart and green city involves a long history of developing a national and centralised planning system. The author mentioned that this rapidly urbanising country is presently in its 4th Plan (2000–2020) that proposed a long-term vision for Korea to be a global gateway to Northeast Asia with focus on territorial planning through

decentralisation and de-concentration policies. The author also mentions that the “Green New Deal” and the “National Strategy for Green Growth” (NSGG) will be the guiding principles until 2050, with the focus being on “Low Carbon Green Cities” (LCGC). Though Korea does not have a national urban policy, the “Creating Smart Cities and Promoting Industry” Act forms the guiding principle of smart urbanism.

In their case study on Singapore smart and green cities, Chang and Das, in Chap. 18, interestingly introduce their paper with the debate on conceptualising “smart cities” and how it may vary depending upon the stage of development of a country. With respect to Singapore, the success of smart city has not only been the outcome of long history of adaptation of smart technology in urban solutions and smart initiatives to cater to the citizen’s needs but also in the unique geographical and policy scape.

## 1.8 Concluding Remarks

This book brings together NUP experiences of countries across the globe which are at different levels of urbanisation and economic development. Urbanisation, in case of developing countries, is accompanied by unplanned growth giving rise to multifarious challenges of inadequacy of infrastructure and basic amenities. On the other hand, the developed countries, which are already highly urbanised, face challenges related to decreasing density in the core, loss of population in many large cities, ageing population and increasing suburbanisation resulting in sprawls. However, the challenges posed by climate change are likely to impact the entire globe, both the developed and developing countries.

In this context, it is important to highlight that national urban policies in Asian and African countries, which are currently least equipped to deal the challenges of urbanisation, need to address these issues in a manner which will lead to sustainable development. Countries from these two continents need to build capacities to deal with the added challenges of globalisation, income and spatial disparities as well as rising demographic dividend. At the same time, NUPs in the developed countries could guide them in dealing with issues related to climate change, ageing population as well as shrinking cities. National urban policies could be instrumental in guiding the globe towards attaining sustainable and resilient future encompassing the agendas discussed in “Sustainable Development Goals” and “New Urban Agenda”.

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## Chapter 2

# World Urbanisation: Trends and Patterns



Debolina Kundu and Arvind Kumar Pandey

**Abstract** This chapter attempts to overview the trend and regional pattern of world urbanisation. It also analyses the spatial pattern of urban hierarchy of cities by size class of settlements. The results show that global urban population has grown significantly from 0.75 billion in 1950 to 4.22 billion in 2018. The projected estimates show that by mid-twenty-first century, 68% of the world's population will live in urban areas. The growth trend of global population shows a consistent increase in urban population during 1950–2025, thereafter, a slowdown is projected during 2025–2050. The spatial pattern of urbanisation shows that epicentre of the urbanisation has shifted from global north to global south. Cities in Asia and Africa are currently growing faster as compared to other regions, and future estimates show that African cities will take the lead globally during 2015–2050 with faster growth rate. The highest number of mega and large cities have increasingly mushroomed in Asia and Africa. Projections indicate that this trend is likely to continue. The concentration of small- and medium-sized cities in these two regions has also increased over time. Two Asian countries—China and India will be home of some of the world's largest cities in twenty-first century. The future global urban population will be concentrated mainly in Asia and Africa. In contrast, several cities in Northern America and Europe are shrinking. The challenges posed by climate change are likely to impact the entire globe. With increasing level of urbanisation, cities of the global south are facing multiple challenges of food security, poverty, access to housing and basic amenities, especially with regard to the urban poor. In this context, it is important to highlight that national urban policies in Asian and African countries, which are currently least equipped to deal the challenges of urbanisation, need to address these issues in a manner which will lead to sustainable development. Countries from these two regions need to build capacities to deal with the added challenges of globalisation, income and spatial disparities as well as demographic dividend. National urban policies could be instrumental in guiding these countries towards sustainable and resilient future.

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## 2.1 Introduction

The history of mankind has witnessed several socio-economic revolutions which have played a significant role in transforming the lives of human beings. Among these, the three major revolutions—the industrial revolution, the agrarian revolution and the transport and communication revolution—triggered another revolution, which is urban revolution. Chen et al. (2014) elaborate this fact by arguing that ‘if the transformation of human society since the industrial revolution were to be summarised in no more than three words, there would be few better alternatives than industrialisation, urbanisation and globalisation’. These processes are interlinked. The industrial revolution helped the developed world to achieve economic development which gave impetus to the process of urbanisation in developed countries. Before the second half of the twentieth century, the process of urbanisation was mainly limited to the developed world but in the latter half, the developing countries also witnessed spectacular growth in the urban population. The epicentre of urbanisation progressively shifted from ‘the predominantly northern latitudes of developed countries to the southern ones of developing countries’ and ‘the mean latitude of global urban population has been steadily moving towards south’ (Mohan and Dasgupta 2005). The world urbanisation is changing rapidly, and the rate of change in last three decades was unprecedented. In the first decade of the twenty-first century, it was matter of speculation among scholars that soon half of the world’s population would be living in urban areas (Bloom et al. 2008 as cited in Chen et al. 2014). This has become reality now, as the global urban population has surpassed to the global rural population in 2007 (UNDESA 2015). The urban population of the world was not more than 250 million in 1900, less than 15% of the total. A century later, the global urban population increased to 4.22 billion accounting for 55.29% of the total. For the first time in human history, more people are living in cities than countryside. It indicates that twenty-first century would be the ‘urban century’ (Mohan 2006).

In this context, the present chapter attempts to provide an overview of the trends and patterns of global urbanisation since 1950 using the recent data on urbanisation in world urbanisation prospects-2018 provided by United Nations’ population division, Department of Economic and Social affairs (UNDESA). The chapter is divided into eight sections. Following the introduction (first section), the second and third sections provide the brief description of the overall and regional trends of global urban population. The fourth section of the chapter discusses the spatial pattern of urbanisation. The discussion on the city hierarchy elaborating on the trends and patterns of growth of cities across size classes are done in the fifth and sixth sections, respectively. The seventh section examines the interdependencies of urbanisation, urban–rural growth