Bhutan Urban Policy Notes

Social, Social Urban, Rural Resilience Global Practice

WORLD BANK GROUP
Acknowledgements

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I. Executive Summary

Bhutan’s rapid economic growth has been propelled by the hydropower sector, which has effected a structural transformation of the economy from agriculture to industry and services. This has led to a more than ten-fold growth in GDP per capita between 1980-2016. The country has reduced headcount poverty from 31 percent in 2003 to 8 percent in 2017, as well as made significant advancements in human capital outcomes. Yet, as a landlocked and mountainous small country, Bhutanese economy faces unique challenges. Productive employment opportunities are scarce while the lack of diversification has led to economic vulnerability. The workforce is increasingly skilled but there are insufficient number of good private sector jobs. While overall unemployment rate was only 2.1 percent in 2016, youth unemployment was 13 percent overall and 28 percent in urban areas. A critical concern for policy makers is how to strengthen and extend Bhutan’s structural transformation toward an economy driven by the private sector and based on employment in manufacturing and services, with sustainable jobs for the educated, the skilled, the youth and women. To achieve this, Bhutan needs to better understand and leverage its demographic-spatial and economic-spatial transformations.

The total population in 2017 was 735,553, of which 37.8 percent resided in urban areas. Based on the most recent census data, the intercensal average annual urban population growth rate was 2.5 percent, four times the overall population growth rate of 0.6 percent. The population and economic base are concentrated in the western part of the country. Thimphu district is home to 15 percent of the entire population and its synonymous thromde comprises around 40 percent of the total urban population. Phuentsholing, Samdrup Jonkhar and Gelephu are the next most populous municipalities.

At Nu 150,000, median household incomes in the urban areas are nearly triple those in the rural areas. Rural dzongkhags in the central and south have the highest incidence of deprivation. The poverty rates in rural Dagana, Zhemgang and Mongar districts are up to 10 times higher than Thimphu municipality. Literacy rates in these areas hover around 66 percent, far below Thimphu (80.2), Gelephu (85.6) and Phuntsholing (83.2). Overall, the literacy rate of urban dwellers is 23 percent higher than rural areas. Land ownership is higher in rural areas, but there is an inverse relationship between landholding and per capita household consumption quintile. However, access to basic infrastructure is converging between urban and rural areas: for example, per 2017 BLSS, for electricity and improved water, the rates in both areas are hover between 95 and 100 percent, including both poor and non-poor households.

Urbanization trends suggest that migration may be driven more by the “pull” factors of urban areas, such as employment—especially the higher wages in urban areas—and education opportunities or family linkages, than by “push” factors such as infrastructure scarcity, landlessness or conflict.

Cities are a critical driver of economic growth and Bhutan’s urbanization trends are starting to reflect this shift. Agriculture’s contribution to GDP has been diminishing, from 23.2 percent to 16.6 percent, but it constitutes a significant share of employment, rising from 43.6 percent in 2005 to 57.2 percent in 2016. The public sector, at around 20 percent of total, is the second largest employer after agriculture. In urban areas, the share of public employment exceeds 46 percent. Manufacturing and services sectors represent approximately 80 percent of the value of economic activity. Emerging sectors include hydropower, construction, transport, tourism and communication. Manufacturing contributes around 10 percent of the GDP and consists almost entirely of small and medium enterprises with less than 100 workers. The largest shares of light manufacturers are clustered in Thimphu, Paro, Chukka and Sarpang. Construction has growth potential in urban areas. Service sector accounts
for 90 percent of nonfarm private sector firms and jobs clustered in the Thimphu-Paro region and around Phuentsholing. Tourism is the largest service sector industry, accounting for 31 percent of all firms, 18 percent of jobs and about 9 percent of GDP. ICT, Finance, Insurance and Real Estate sectors are small but emergent industries.

Overall, spatial-economic transformation in Bhutan is largely driven by the economic opportunities that cities offer. However, Bhutan’s larger urban centers are not well equipped to seize the benefits of agglomeration economies, in terms of specialization and market access, which affect the number and the quality of jobs, and in terms of quality of services, which affects their livability and competitiveness. The four largest Thromdes face infrastructure and service delivery backlogs, shortage of serviced land and affordable housing, and environmental pollution. For example, Thimphu Dzongkhag (with Thimphu Thromde) and Chhukha Dzongkhag (with Phuentsholing Thromde) have the highest number of households without reliable water; traffic congestion is also a key issue in these two Thromdes; and only 20 percent of households in Thimphu have sewer connections.

Gaps in connectivity infrastructure, both hard (such as roads and telecoms) and soft (information on and regulations facilitating market access), across cities and regions are also hampering the diversification of the economy and the development of private sector. Due to low connectivity with the rest of the country, cross-border trading with India and Bangladesh occurs largely at the border towns themselves, rather than at the end market location. This restricts access and knowledge about market conditions, terms of trade and the dissemination of business practices and skills or finance tools to other parts of the country. Limited international connectivity places additional costs on firms and consumers. Freight forwarding cost per container is the highest in the world. This is compounded by the additional time and costs required to access the major international port at Kolkata.

RGoB’s policies on regional development are set out in the 10th, 11th and 12th Five Year Plans (FYPs), the National Urban Strategy (NUS, 2008) and the National Human Settlements Strategy (NHSS, 2017). These policies aim at planned urban development that is economically, socially, and environmentally sustainable, and at stimulating economic growth while ensuring regional balance. The 10th and the 11th FYPs prioritize balancing regional development to manage the rapid pace of urbanization and to spread development and opportunities equitably across the country, through the development of regional growth centers outside Thimphu and Phuentsholing. Both NUS and NHSS aim to reduce regional imbalances in population and economic activity through placed-based approaches that encourage more equitable economic development and in-migration. Finally, a Comprehensive National Development Plan for Bhutan 2030 (CNDP), aimed at addressing issues of rural-urban migration and regional imbalances in development, is also being presently formulated.

The RGoB’s spatial policies do not distinguish between the demands of enabling growth and the needs of equitable service delivery. These require differentiated yet complementary approaches that involve “place” and “people”-based approaches. “Place-based” levers such as large infrastructure investments that are proximate to economic centers, where firms and people are concentrated, can enhance the benefits of agglomerations. “People-based” interventions targeted to rural areas and small towns, where poverty and human capital deprivations are more acute, would include support for basic infrastructure, health and education, complemented with policies and programs that facilitate better skilled people to migrate to more productive areas. Prevailing regional development strategies, such as the NHSS, tend to emphasize a narrow set of “place-based” approaches rather a comprehensive approach that support a convergence of living standards everywhere.

Rather, a regional development approach should integrate three related factors. Build on the benefits of agglomeration in leading cities, connect strategic regional hubs to better integrate markets and ensure equity for good living standards for people across the country.
Across the world, economic transformation is supported through the agglomeration and scale effects that city-regions provide. Agglomeration economies produce growth through concentrating firms and people and from processes of knowledge spillovers, innovation and technology adoption and the easy matching and sorting between firms and workers. Urban areas also concentrate services that benefit from scale economies and lead to greater productivity in cities. Bhutan’s rapid structural transformation and rural-urban migration parallel these global trends toward the urban concentration of population and economic activity. However, rapid and uncontrolled urban growth can have negative consequences. Bhutan is reaching the point where gaps in urban planning, service delivery and affordable housing within cities can start to negatively impact economic growth and competitiveness as well as quality of life over the long term. National policies on urbanization and local actions by municipal governments can a critical role in planning and managing this urban growth to not only sustain the economic advantages that cities provide, but also to ensure that they are livable and socially inclusive.

The figure above summarizes a basic approach for differentiating policies and prioritizing investments across settlements of different population densities and concentrations of endowments in Bhutan.

Regional development requires national and local governments to play complementary roles. At the national level, RGoB can ensure that regional and spatial development policies are aligned with decentralization, economic and public investment policies. It is also best placed to prioritize large, complex capital investments that can connect settlements and improve access to international markets, with a focus on Tier II cities, which would function as nodes between Thimphu and Phuntsholing and smaller market towns. Finally, the national government has a key role in improving the overall investment climate for emerging service sectors, especially agribusiness, tourism and ICT, on both the regulatory and taxation side, as well as also on the networking and business and investment promotion side, especially in large and medium size settlements and special economic zones.

For settlements such as Thimphu and Phuntsholing (Tier I), efforts should be on improving livability, reducing disparities in access to services and leveraging urban agglomerations for deeper and more diverse private sector investments. To do that, it is important to ameliorate emerging congestion forces, such as land and housing shortages, traffic congestion and environmental pollution. These cities can make density work better through improved planning and land administration, re-densifying existing built up areas and strengthening urban resilience to reduce exposure to natural disasters. The municipal governments in these urban centers need to be equipped with greater role in planning and managing their land resources and assets and strengthening their service delivery.
mechanisms. These cities would also benefit from improvements to the business climate and technical and vocational skills development programs to enhance the labor force. Finally, regionally connectivity, both hard and soft, can also play a key role in extending the economic gravity of these towns.

For settlements with locational advantages and nascent economic clusters, such as for example Gelephu, Samdrup Jongkhar and Mongar (Tier II), the focus should be on improving the conditions for private investment to link to potential markets in emerging sectors such as agribusiness, agroprocessing and manufacture, scaling up SMEs and cottage industries by improving **connectivity**. This could include identifying demand-side obstacles that have limited access to finance, constrained linkages in product value chains and impeded the spillover of knowledge, skills and technology. These cities also need to boost capacity in urban planning and land administration as well as strengthen infrastructure and service delivery to accommodate new growth. These settlements would also require improving the road and ICT connectivity with larger regional hubs and ports of entry, both within Bhutan and to India.

For rural and remote regions and regions with low endowments, higher levels of poverty and infrastructure gaps, efforts should focus on **equitable access** to basic public services, especially health and education services, that will improve human capital outcomes, enhance the quality of the labor force and provide skills that residents can use to move to larger centers.
II. Introduction

This paper is part of a series of four Urban Policy Notes that provide a critical review on emergent challenges to Bhutan’s increasing urbanization and its ramifications for growth, livability and sustainability in line with the directives of the 12th Plan and Vision 2020. The four notes are: (a) Regional Development, (b) Municipal Governance and Finance, (c) Affordable Housing and (d) Urban Resilience. These notes build on the long engagement between the Royal Government of Bhutan (RGoB) and the World Bank on urban issues as well as the experiences of urban operations under Bhutan Urban Development Projects I (1999-2006)\(^1\) and II (2010-2019)\(^2\) and intend to support the RGoB on key and emerging urban topics and guide Bank’s future analytical and investment support in the urban sector.

This Policy Note aims to present critical policy options for leveraging urbanization and supporting regional development to enable Bhutan to achieve sustainable growth, spur private sector development job creation and support balanced spatial development. The Note (a) takes stock of recent trends in urbanization, economic growth, and demographic change from a spatial perspective, (b) suggests a framework to guide policy making and (c) better target investments to leverage the potential of urban areas for job creation and livability, while also addressing the needs of poorer small towns and less populated rural areas. These focused areas align with the RGoB’s overall goal of balanced and equitable development.

III. Bhutan’s Development Trajectory

**Bhutan has made remarkable achievements in economic growth and poverty reduction.** The more than ten-fold growth in GDP per capita between 1980-2017 far exceeded the regional average. The annual average growth rate, at 7.5 percent over the last three decades, is the third highest in the world. The country has made substantial advances in the eradication of extreme poverty, with the official headcount poverty rate dropping from 31 percent in 2003 to 8 percent in 2017. Bhutan also made significant advancements in human capital outcomes. For example, in a single decade, the primary school net enrollment rate increased from 59 percent to 89 percent, while infant mortality fell steeply from 186 per 10,000 births in 1969 to 27 in 2015, a figure that is well below the regional average of 43.

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<th>Figure 1. Poverty Decline Since 2007 (poverty head count rate using the national poverty line, %)</th>
<th>Figure 2. Sectoral Share in GDP since 1981 (constant values, %)</th>
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Yet, as a landlocked and mountainous small country, Bhutan faces unique challenges to its economy and growth model. Despite rapid growth, productive employment opportunities are scarce. Nearly 60 percent of all employed, and most of the poor, remain engaged in agricultural activities. Hydropower has driven the structural transformation of the economy. However, hydropower has limited direct job creation potential. After agriculture, the second biggest employer is the public sector; which attracts educated Bhutanese due to compensation, other benefits and social status, while quality job opportunities in the private sector remain limited.\(^3\) Overall unemployment was just 2.1 percent in 2016, but this may mask high under-employment, such as subsistence agriculture and informal services in the rural areas. There is evidence that (in line with international experiences), younger people are gaining higher aspirations with better education, and opting to migrate to cities and bear period of unemployment to secure higher-quality jobs, rather than rather than accept a subsistence lifestyle in rural areas; youth unemployment was 13 percent, but 23 percent in urban areas. Meanwhile, a substantial share of women has left the labor market; the female labor participation rate fell steeply, from 65 percent in 2009 to 54 percent in 2016.

A critical challenge is, therefore, how to advance Bhutan’s structural transformation toward an economy driven by the private sector and based on employment in higher value and tradeable manufacturing and, services, with sustainable jobs for the educated, the skilled, the youth and women. In order to achieve this, and to proceed toward the RGoB’s goal of balanced and equitable development, Bhutan needs to better understand the dynamics of its current Demographic-Spatial and Economic-Spatial transformations to better leverage the benefits of its economic shifts and spatial concentration of people.

d. Current Institutions and Policy Framework for Regional Development

The Bhutan Vision 2020 outlines the country’s long term strategic development vision.\(^4\) It is divided into FYP periods. The government has finalized the 12\(^{th}\) Five-Year Plan (FYP) for 2018-23. Relevant for spatial development, a Comprehensive National Development Plan for Bhutan 2030 (CNDP) is also under preparation, aiming to address issues of rural-urban migration and regional imbalances in development. While past five-year plans have focused on infrastructure development, the 12\(^{th}\) Plan places greater emphasis on strengthening institutions to maximize the benefits of existing infrastructure. One of the key objectives of the 12\(^{th}\) FYP is “just,

harmonious and sustainable society through enhanced decentralization.” The 12th FYP aims to empower local governments through provision of greater financial, planning, and administrative responsibilities and capacities.

**Box 1. Decentralized Authorities in Bhutan**

Bhutan has four main levels of government: the national government, 20 dzongkhags (districts), 205 gewogs (sub-districts), and thromdes (municipalities). Each district has a district town (which may also be a municipality) which functions as an administrative hub and is afforded powers by the Local Government Act of 2009. An additional level of government is municipalities, which report to a Municipal Authority (Thromde Tsogde) and come in two classes: 5 class “A” municipalities are more autonomous, and consist of Thimphu, Phuentsholing, Gelephu and Samdrup Jongkhar.

In addition, in 2015, Parliament declared the creation of 16 thromdes and 20 yenlang thromdes (satellite municipalities). This move – consistent with the Local Government Act (2009) and Municipal Finance Policy (2012) – aimed to create devolved urban authorities that function independently from the deconcentrated district administrations.

Bhutanese local governments, both Thromdes and Dzonkhags, have limited authorities, resources and capacities. Dzohkhags and gewogs primarily rely on central government transfers for current expenses and capital projects. Municipalities have the power to collect fees and taxes, yet (with the exception of Phuentsholing) also rely heavily on central fiscal transfers. Overall, incentives for own-source revenue collection are weak, and there are gaps in the efficiency, transparency, and predictability of the fiscal regime. As more thromdes are established, the demand for services they deliver will increase and local governments will have to identify additional sources of revenue and finance.

*The government has attempted to temper the concentration of firms and population around Thimphu and Phuentsholing through recent FYPs.* The 10th and the 11th FYPs prioritized spreading production and people across Bhutan’s territory, away from Thimphu and Phuentsholing. The government identified urban areas to serve as hubs for economic development in the western, central western, central eastern, and eastern regions, and Sarpang and Samdrup Jongkhar towns were designated as further regional growth centers because of their proximity to the Indian border and hence perceived potential for trade-related growth. Similarly, the National Urban Strategy (NUS 2008) and National Human Settlements Strategy (NHSS, 2017) aim to spread the population and economic activity more evenly across regions, focusing on placed-based approaches to attract firms and people to less concentrated places.

*In addition to Thimphu, the NUS proposes six more national-level growth centers with anticipated populations of more than 10,000 people by 2020.* These new growth centers – Gelephu, Samtse, Wangdue, Tsirang, Bumthang, Jongkhar-Nganglam and Gyalposhing-Monggar (mapped in red below) – are dispersed across the country, with typically over 5 hours travel time between each center. Although they represent local centers of population, they are currently small towns in sparsely populated areas overall. In addition to these growth centers, the NUS proposes sixteen district centers of 5,000-10,000 people, twelve “medium towns” of 1,500 to 5,000 people, and 23 “small towns” of 100-1,500 people. However, it is unclear what economic or social incentives

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5 Four of the five following criteria must be met: (a) population of at least 1,500, (b) population density of at least 1,000 per km², (c) more than 50 percent of population employed in non-primary sector activities, (d) the area of the urban centers should exceed 1.5 km², (e) potential for future growth of the urban center in terms of the revenue base.

6 A detailed analysis of local government and finance issues can be found in the accompanying “Municipal Governance and Finance Policy Note”.

7 These settlements are anticipated to have more than 10,000 residents by 2020. Under the 11th FYP, plans for Nganglam and Gyalposhing as regional hubs have been prepared and will be implemented by local governments.

8 These settlements would contain between 5,000-10,000 people, between 1,500 and 5,000 people and between 100-1,500 people.
there are for migration to these places as alternatives to the more common migration destinations of Thimphu and Phuentsholing.

Figure 5. Bhutan National Urban System as Proposed in the National Urbanization Strategy 2008.

The Progress Report on the Formulation of CNDP presents three strategic development alternatives as follows:

- Alternative A proposes to “promote development of advanced economic regions such as Thimphu and Phuentsholing to return development profits to backward regions.” This alternative prioritizes the National Capital Region, the Southern Economic Corridor along the Southern East-West Highway and the roads connecting the two regions.
- Alternative B aims to promote organization of settlement areas “esteeming spiritual richness and local culture in order to reduce regional disparity nationwide... (S)ince this development model requires improvement of basic living conditions in each Settlement Zone, improvement of feeder roads connecting urban centers and rural settlements within each Settlement Zone should be prioritized.”
- Alternative C encourages interaction between diverse sub-regions in order to balance development and conservation within each region. This emphasizes the development of regional urban centers of four longitudinal regions – especially of the three regions of the East, Eastern-Centre and Western-Centre – and link-roads connecting regional centers and other smaller centers in each region.

It is important for the regional development strategy to distinguish goals and indicators regarding the economic production, on the one hand, and living standards and service delivery, on the other. These need not follow the same distribution across space – for instance, production can concentrate, while living standards and service delivery equalize. Spatial patterns of both production and living standards/service delivery affect
migration trends, urbanization rates, human welfare and human capital outcomes, and other critical development outcomes. This note provides a review of the key trends in the location and concentration of economic activity, as well as the distribution of living standards and service delivery, throughout the country, to provide a framework for structuring policy and strategic investment decisions.

Spatial Transformation in Global Perspective

Although Bhutan has unique economic characteristics, its experience of rapid urbanization and spatial concentration reflects global experiences. The rapid growth of developing and emerging countries in the past century has been accompanied by an intense concentration of production, jobs, and people in major cities. This reflects the importance of agglomeration economies in the modern economy: dense, large, markets offer a host of critical benefits to firms and households, such as access to diverse inputs (labor, materials, business services, and so on), consumers for their products, learning through knowledge spill-overs, higher-wage off-farm jobs, social and educational opportunities, and more efficient service and infrastructure-delivery. This urbanization and concentration have played an important role in the unprecedented growth and poverty reduction of the past century in many countries.

However, this virtuous density has also raised an equity problem. Agglomeration entails intense ‘peaks’ of economic concentration and dynamism, surrounded by relatively less dense and concentrated ‘plains’ with much fewer firms and households, and often (though not exclusively) relatively worse welfare outcomes. This emerging regional inequality has become a major development challenge. Policy makers often respond to this challenge with attempts to ‘flatten’ the peaks of economic density and spread production more evenly across the country. The risk of this approach, however, is forgoing the crucial benefits of agglomeration economies for poverty reduction, job creation, and sustainable growth. Furthermore, attempts to flatten the peaks of density have typically failed, instead forcing activities in the leading areas into informality, exacerbating congestion and exclusion of the urban poor, while creating ‘stranded’ under-utilized assets in lagging areas at a high cost to both local and national governments.

Countries can reap the gains of agglomeration economies for job creation and poverty reduction, while ensuring these gains raise opportunities and living standards for people everywhere.9 These gains can be materialized when the most dynamic cities ‘pulling ahead’ are properly supported to serve their function as engines of national growth, job creation, and poverty reduction, while places with lower economic dynamism and density are integrated into the success of major cities, and robust social policies ensure that people in even the most remote, disconnected, rural areas are ensured a decent basic quality of life, the health and skills necessary to access opportunities elsewhere in the country. Through this package of complementary policies, countries can pursue unity across a territory, without uniformity in production across places, for fast and inclusive growth.

This global experience implies that settlements with different sizes and densities will serve different functions, and require different policy focuses. The appropriate policy focus for settlements with different levels of agglomeration and density is illustrated in Figure 1.

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Less economically dense places
Less spatially-targeted interventions

- Business environment, trade agreements
- National tax, transfer, and social policy
- Frictions to factor mobility (land markets, financial markets, etc.)

People-focused interventions

- Universal education, skill development
- Healthcare, water, and sanitation
- Wage subsidies

Connectivity

- Roads, railways, public transit, cycle and foot paths
- Internet access, information, logistics, border modernization

Place-based interventions

- Local infrastructure for production (e.g. energy, industrial parks)

More spatially-targeted interventions
More economically dense places

This figure illustrates a framework for understanding policy priorities for different places, according to their level of economic and population density. In less dense settlements, more ‘universal’, less spatially-targeted, policies are high priority, displayed at the top. As density rises, the more spatially-targeted policies towards the bottom become more appropriate. However, even for high density settlements, policies need to be addressed in a complementary manner, with effective institutions and human capital constituting the foundations, for the success of heavier place-based investments. Thus, these categories of investment can also be understood as ‘building blocks’ – as presented at the end of this paper.

Source: Authors’ own.

Territorial Development Trends in Bhutan

Urbanization: Bhutan’s Leading Cities are Creating Opportunities

Despite its land area approximately one quarter that of Bangladesh or Nepal, Bhutan has one of the smallest populations in the world at 727,145 according to the 2017 census. Population density is thus very low by international standards, at around 20 people per km², compared to over 200 per km² in Nepal, and over 1,200 per km² in Bangladesh. This low average density masks important variation across the country. Around one percent

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10 Population and Housing Census of Bhutan, 2017
of the land area of Bhutan is used for human settlement,\textsuperscript{11} and the population is fairly dispersed among these settlements. Just 19.5 percent of the population resides in Bhutan’s two largest municipalities, all other cities have less than 10,000 people, and 62.2 percent of the population reside in rural areas in 2017.\textsuperscript{12}

The most substantial agglomerations of people and production are in two leading centers in the West and South – the cluster formed by Thimphu (the capital), Paro and Wangdue Phodrang, and the area around Phuentsholing at the Southern Indian border, as well as the corridor connecting these two clusters. Thimphu municipality comprises around 40 percent of the urban population, while the wider Thimphu district hosts 125,551 people (15 percent of the population). The next largest center, Phuentsholing, at the main trading post with India, hosts approximately 28,000. Other small centers (such as Gelephu at the central border with India, Samdrup Jongkhar at a South-Eastern Indian border, and central Trongsa) have fewer than 10,000 people and less than 4 percent of the national urban population each. The Eastern population and economy are much smaller, and more dispersed across smaller settlements. Figures 7 and 8 utilize nighttime lights data to estimate economic activity and population density. The peaks demonstrate the concentration of people and economic activity in and around Thimphu and along the southwestern border area.

Table 1. Population Characteristics of the Most Populous Four Municipalities

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<td>Thimphu</td>
<td>106,487</td>
<td>38.8</td>
<td>2.9</td>
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<tr>
<td>Phuentsholing</td>
<td>27,658</td>
<td>10.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Gelephu</td>
<td>9,858</td>
<td>3.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Samdrup Jongkhar</td>
<td>9,376</td>
<td>3.4</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Source. PHCB 2017.

Figure 7. Economic Density Across Bhutan (Proxied by nighttime lights, VIIRS 2015).

\textsuperscript{11} National Human Settlements Strategy, 2017
\textsuperscript{12} Population and Housing Census of Bhutan, 2017
Nighttime lights (VIIRS 2015) data provides a proxy to visualize the economic density across space, accounting for both urban and rural economic density. Here, we map economic density within Bhutan. This exercise highlights the primacy of Thimphu in the urban system.

Source. Authors’ own, using VIIRS 2015 nighttime lights data

**Figure 8. Bhutan Population Distribution (Landscan 2012)**

This map shows an estimate of population distribution across Bhutan, using 2012 Landscan data. Concentration in the same centers is observed, though as expected, compared to economic density, the population is more spread across rural areas, while certain secondary cities (such as Phuentsholing and Samdrup Jongkhar) have relatively high population density relative to economic density, suggesting a greater need for interventions to support growth in these cities.

Source. Authors’ own, using Landscan 2012 population density data.

**Figure 9. Economic density (nighttime lights) overlaid with topography.**

13 VIIRS Day/Night Band Nighttime Lights (yearly VIIRS Cloud Mask - Outlier Removed - Nighttime Lights), Earth Observation Group, NOAA National Centers for Environmental Information (NCEI)

14 LandScan 2012 global population database. Oak Ridge, TN: Oak Ridge national laboratory. This is the most recent population dataset available for the LandScan analysis.
This map overlays the former data on economic density across space with a topographical map, illustrating the general alignment of population and economic centers along valleys and areas of low elevation. This also highlights the advantage of the Southern border region, with far lower elevation and flatter land supporting greater agriculture and development of urban structures.

Source. Authors’ own, using VIIRS 2015 nighttime lights data.

The distribution of urban settlements according their size and rank in the urban system suggests that Bhutan’s case is reflective of other urbanizing and landlocked countries. In countries that are urbanizing, global experience shows that people and firms initially tend to concentrate in one city. These “primate” cities are typically home to the main concentration of industries, services, and government functions. These cities benefit from a large and more diverse pool of labor and skills, which encourages more rapid innovation and diffusion of knowledge and increasing returns to scale. Across the world, cities as diverse as Male (Maldives), Bangkok, Buenos Aires, Cairo, Jakarta, Kuala Lumpur, Lima, Mexico City and Tehran are examples of such primate cities.

The primacy of Thimphu is proportionate to Bhutan’s income level and urbanization. Global experience shows that the concentration people in a country’s largest city tends to increase (up to around 40 percent of the national population) as per-capita incomes rise, until approximately US$10,000. After this per-capita income level, the total population share of the largest city tends to plateau or even decline as livability, economic diversity, and market access in secondary cities improve. In more complex urban systems, secondary cities often begin to

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15 As above, Version 1 VIIRS Day/Night Band Nighttime Lights (yearly VIIRS Cloud Mask - Outlier Removed - Nighttime Lights), Earth Observation Group, NOAA National Centers for Environmental Information (NCEI)
16 https://ipfs.io/ipfs/QmXoypizjW3WknFiJnKLwHCnL72vedxiQkDDP1mXW06Uco/wiki/List_of_primate_cities.html#cite_note-2
17 Geographers have proposed that countries where the largest city is twice that of the second largest city are characterized by a condition of urban primacy (see Jefferson, M. 1939 “The Law of the Primate City”). Countries that are undergoing rapid urbanization typically have more extreme primacy conditions. Over time, primacy reduces as other cities become more specialized in economic production and population concentration in the main city slows (see Davis, J.C. and Henderson, J.V. 2001 “Evidence on the Political Economy of the Urbanization Process”). Some upper income countries still retain a degree of primacy, including Korea, Japan and the UK where the largest cities around three to four times the population of the second. In contrast, the United States, Canada and most Western European
specialize in certain lower value-added industries, benefiting from ‘spillover’ growth as prices rise in dynamic leading hubs. At Bhutan’s current levels of per-capita income, private sector dynamism and diversity, and agglomeration, a system of robust secondary cities as alternative migration and investment poles is unlikely to emerge soon. Among international comparators, the share and total size of the population in Thimphu is relatively low (greater concentration may even be expected given the large travel times between settlements, and topographical limits on population dispersion).

Table 2. Urban Capital City Primacy in Selected Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Capital</th>
<th>Second City</th>
<th>Population</th>
<th>Primacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>Thimphu</td>
<td>Phuntsholing</td>
<td>114,551</td>
<td>4.14</td>
</tr>
<tr>
<td>Nepal</td>
<td>Kathmandu</td>
<td>Pokhara</td>
<td>975,453</td>
<td>2.29</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Dhaka</td>
<td>Chittagong</td>
<td>18,906,039</td>
<td>2.55</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>Kabul</td>
<td>Herat</td>
<td>3,564,855</td>
<td>7.69</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Colombo</td>
<td>Dehiwala</td>
<td>561,314</td>
<td>3.04</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Ulaanbaatar</td>
<td>Erdenet</td>
<td>1,372,000</td>
<td>14.03</td>
</tr>
<tr>
<td>Thailand</td>
<td>Bangkok</td>
<td>Nonthaburi</td>
<td>5,782,159</td>
<td>21.37</td>
</tr>
<tr>
<td>Egypt</td>
<td>Cairo</td>
<td>Alexandria</td>
<td>18,290,000</td>
<td>3.52</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>Managua</td>
<td>Leon</td>
<td>1,033,622</td>
<td>5.01</td>
</tr>
<tr>
<td>Capital Thimphu</td>
<td>Kathmandu</td>
<td>Dhaka</td>
<td>114,551</td>
<td>4.14</td>
</tr>
<tr>
<td>Populations</td>
<td>975,453</td>
<td>18,906,039</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sources</td>
<td>PHCB 2017</td>
<td>CBS, 2011</td>
<td>PHC 2011</td>
<td></td>
</tr>
</tbody>
</table>

Bhutan is undergoing a rapid spatial transformation, characterized by high rural-urban migration and migration from east to west. Bhutan experienced the fastest rural-urban migration rate in the South Asia region for the period 2000-2010 with an annual growth rate of 5 percent. Between 2005 and 2017, the share of the population that has migrated from their place of birth increased from 32.7 to 39.8 percent. The eastern part of the country has been characterized by net out-migration, while the western region has been the main recipient. In some Western provinces, 40-50 percent of inhabitants are lifetime migrants from other regions. Overall, net urban migrants represent 47 percent of all urban residents. From 2005 to 2017 the average annual population growth in rural areas was actually negative (-0.27 percent). The districts with the highest rate of out migration (per 1,000 people) are concentrated in the central and eastern regions with high isolation from major domestic or international markets, including Zhempang (-640), Lhuetse (-593) and Trashigang (-537) and Trashi Yangste (-518).

High rural-urban migration appears to be driven by ‘pull-factors’ – the opportunities cities offer, and higher aspirations of citizens – rather than rural desperation. High universal service delivery and rural land ownership suggest that migration may be driven more by positive pull-factors of urban areas, such as employment and education opportunities or family linkages, rather than negative rural push-factors such as infrastructure scarcity, landlessness or conflict. Bhutan’s migration patterns are in line with global experience on wage-driven rural-urban migration. Overall, the most cited reasons for migration in 2017 is family move (17.8 percent), followed by employment (12.7 percent), and education (8.3 percent): this likely reflects both the ‘pull factor’ and the age profile of migrants. Young people are far more likely to migrate.

Migration trends particularly reflect the higher aspirations of the younger generation. Migration to western and urban centers is the norm among younger people, while older people tend to stay in the region in which they were born. About 66 percent of the 25-29 age group have already migrated since birth, and a higher share of 10-14-year-olds have migrated than those over 60. This reflects the global experience, in which as human capital rises and off-farm opportunities grow, young people are highly motivated to migrate to acquire new skills and enjoy the
countries as well as China and India do not have urban primacy at the national level. Also see World Bank 2009, pg. 61; Ades and Glaeser 1995; Krugman and Livas 1992.

18 World Bank 2009
19 PHCB 2017
21 PHCB 2017 and PHCB 2005
22 PHCB 2017
higher wage differentials offered by emerging service and manufacturing sectors, compared to small plot or subsistence agriculture.\textsuperscript{23}

Although the urban migration of youth is not unusual, policy-makers and other stakeholders have increasingly expressed concerns about the unemployment of urban youth. While the overall unemployment rate was 2.1 percent in 2016, the youth unemployment rate was 13.2 percent, with urban youth unemployment more than twice that at 23.3 percent. Three considerations are important here: First, rising youth unemployment reflects a transition out of under-employment in the rural economy – with more educated youth preferring to risk and bear periods of unemployment to secure a better urban job, than work in low-productivity rural jobs (median household incomes in urban areas are 2.6 times those in rural areas\textsuperscript{24}). Second, international experience shows that, while rural productivity can be improved, the dense markets of major cities are the most promising locations for large-scale job creation of the kind required. Third, Bhutan’s leading cities are underperforming with respect to private sector job creation; just 50 percent of those employed in urban areas in 2016 were employed by private businesses, the majority remaining employed by the government, and as above, many remaining unemployed.\textsuperscript{25} Diagnosing and unlocking the barriers to their greater dynamism is at the heart of delivering on the aspirations of the younger generation and putting growth on a sustainable and inclusive footing.

Job Creation and Structural Transformation

**High growth has not been translated into job creation.** Nearly 60 percent of all employed in 2016, and most of the poor, remain engaged in agricultural. This share of employment in agriculture has declined rapidly since 2003 (79 percent) but the decline has slowed in recent years as the share has fluctuated between 62 in 2012 and 55 percent in 2018.\textsuperscript{26} Agriculture’s share in GDP also fell since 2000, from 31 to 16.6 percent in 2016. Most producers, particularly in northern areas, grow subsistence staples, such as rice, maize, wheat and potatoes.\textsuperscript{27} The fluctuation in agricultural employment may be a response to limited private sector job availability in urban areas for more skilled rural migrants, leading workers to instead return to the agricultural sector.\textsuperscript{28}

The public sector attracts young and skilled workers, reducing the competitiveness and growth potential of private sector firms. While nationally public employment is 20 percent, in urban areas, the share of public employment exceeds 46 percent,\textsuperscript{29} suggesting cities are not yet functioning as dynamic centers of job creation and entrepreneurship in the private sector. Thimphu is the primary government administrative center and a hub of cultural, educational and medical facilities. Public sector jobs offer higher pay, social status, and other benefits, making them the sector of choice for most educated Bhutanese. Indeed, this has created challenges for private sector firms in need of skilled labor, which struggle to both attract and retain skilled workers.\textsuperscript{30}

As well as low private sector dynamism, and a return to low-paid agricultural work, these challenges have begun to create urban unemployment challenges. A critical concern for policymakers is therefore how to


\textsuperscript{24} Nu 150,000 vs. Nu 57,000

\textsuperscript{25} Labor Force Survey Report 2016, pg 45.

\textsuperscript{26} World Bank/ILO STAT https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=BT

\textsuperscript{27} World Bank 2017. Increasing Agribusiness Growth in Bhutan

\textsuperscript{28} World Bank 2017, Increasing Agribusiness Growth in Bhutan

\textsuperscript{29} Labor Force Survey 2016, pg. 45. Public employment is defined as “civil service,” “other government agencies,” armed forces” and “public/government companies.”

\textsuperscript{30} This may also help account for the contradiction in the broad private sector demand for worker skills but their reluctance to invest in these programs as workers may take the skills elsewhere.
strengthen and extend Bhutan’s structural transformation toward an economy driven by the private sector, with high employment in higher value and tradeable manufacturing and services.

Table 3. Employment and GDP Contribution of Select Industries

<table>
<thead>
<tr>
<th>Sector</th>
<th>Industry</th>
<th>Employment in 2016</th>
<th>GDP Contribution in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary (% share)</td>
<td>Agriculture, Livestock, and Forestry</td>
<td>198,429</td>
<td>17.4%</td>
</tr>
<tr>
<td>Primary (% share)</td>
<td>Mining</td>
<td>1,148</td>
<td>4.2%</td>
</tr>
<tr>
<td>Secondary (% share)</td>
<td>Manufacturing</td>
<td>19,833</td>
<td>7.3%</td>
</tr>
<tr>
<td>Secondary (% share)</td>
<td>Construction</td>
<td>9,106</td>
<td>15.9%</td>
</tr>
<tr>
<td>Secondary (% share)</td>
<td>Electricity, Water, Gas</td>
<td>2,539</td>
<td>13.2%</td>
</tr>
<tr>
<td>Tertiary (% share)</td>
<td>Wholesale/Retail Trade</td>
<td>26,660</td>
<td>8.2%</td>
</tr>
<tr>
<td>Tertiary (% share)</td>
<td>FIRE (finance, insurance, real estate, &amp; business services)</td>
<td>3,315</td>
<td>7.1%</td>
</tr>
<tr>
<td>Tertiary (% share)</td>
<td>Transportation/Storage/Communications</td>
<td>11,101</td>
<td>9.1%</td>
</tr>
<tr>
<td>Tertiary (% share)</td>
<td>Other services</td>
<td></td>
<td>12.8%</td>
</tr>
</tbody>
</table>


Regional Markets and Economic Geography

A country’s interaction with regional and wider export markets has substantial impacts on its domestic economic geography. For instance, locations with higher accessibility to international trade routes and ports, and those which specialize in products in which a country has a comparative advantage, may tend to grow more quickly, while less connected areas, and those lacking an advantage in internationally competitive products, grow more slowly and experience higher outmigration. India (with which Bhutan has a major free trade agreement and to whose currency the Bhutanese ngultrum is pegged) is by far Bhutan’s most important trading partner, accounting for over 80 percent of Bhutan’s trade, 90 percent of which passes through Phuentsholing, around which Bhutan’s major secondary city has formed. The Indian market also offers opportunities as a large export market for more informally traded goods, and as source of knowledge spill-overs for Bhutan’s typically small firms.

However, Bhutan faces disadvantages in competing with India (and other regional neighbors) in attracting investment. Bhutan struggles to compete through low-cost labor, given India’s large pool of low-cost workers in dense cities. Figure 10 below presents population density across the region, showing the comparative density of countries and areas surrounding Bhutan. The country’s topography, small population and long distances between domestic settlements raise the cost of Bhutanese goods and limits competitiveness. The freight forwarding cost per

\[31\text{NB, the total GDP contribution of Agriculture and Mining are combined here with the later removed from “Secondary Sector,” as the 2016 Economic Development Policy only counts Agriculture’s GDP contribution as “Primary Sector” (pg. 3).}
\[32\text{Hotels and restaurants, public administration, education and health, and private social and recreational services.}
\[33\text{http://www.kuenselonline.com/bhutan-india-trade-grows/}

19
container of US$2,577 is the highest in the world, while mean road speeds between Phuntsholing and Kolkata port range between 9 and 15 km/hour, and customs requirements, depending on the type of products traded, take up to 29 days to complete. Cross-border trading occurs via smaller merchants and wholesalers in the border towns themselves, rather than at the end market locations; this restricts knowledge-sharing about market conditions, terms of trade, and the dissemination of business practices and skills or finance tools to other parts of the country. Finally, Bhutan’s much smaller cities offer far reduced local markets and agglomeration benefits.

**Figure 10. Population Distribution in the Region (Landscan 2012)**

LandScan (2012) maps population density at a highly granular level across space. Here, we map population density in the wider region around Bhutan. Overall, it is clear that India and Bangladesh offer very important nearby markets, with several large dense cities around Bhutan’s southern border, as well as relatively developed rural areas compared to Bhutan. There is important economic density along trade corridors from Bhutan to the coast (and in North-Eastern India), reflecting important markets for longer-distance regional trade and value chain integration. The largest nearby cross-border markets are around Darjeeling (South West), Bongaigoan (South central), and Guwahati (South East).

*Source.* Authors’ own, using Landscan 2012 population data.

**Box 2. Geography is Not Destiny (But it is Important): Structural Transformation in Small Isolated Economies**

35 ADB 2017. Trade and Transport Facilitation Monitoring Mechanism in Bhutan: Baseline Study
37 LandScan 2012 global population database. Oak Ridge, TN: Oak Ridge national laboratory
Other countries with similar geographic and demographic challenges have managed both urbanization and economic transformation to their advantages.

Small island countries face a somewhat analogous situation in terms of distance from international markets and small populations. The Caribbean nation of Trinidad and Tobago, for example, has transformed from an economy that was historically reliant on cash crop agriculture, to become a competitive petroleum and chemical processor, raising GDP per-capita to US$16,240 (World Bank 2009). Today, to shift from a reliance on extractives and preserve the natural environment and tourism potential of the islands, the government has begun supporting the growth of more knowledge-intensive jobs in ICT, export-oriented agribusiness, eco-tourism and cultural/creative industries, renewable energy, and energy sector consulting and equipment services for other emerging markets.

Strategic management of natural resource rents can also pay off. In Norway, the government established an Oil Fund in 1990 with contributions of revenues from the petroleum sector used to fund public sector pensions (it is currently the largest pension fund in the world, with assets valued at over US$1 trillion). This fund frees up other sources of public revenue that could be used for investment for wider economic development and diversification, while also providing a safety net for formal sector employees.

Switzerland is today one of the wealthiest countries in per-capita income terms, despite being landlocked, having a small population, a history of dependence on agriculture, and limited connectivity with its neighbors. In 1820, by contrast, it had among the lowest per-capita GDPs in Europe (Weder and Weder 2009). However, through extended periods of peace and neutrality, the government has built on Switzerland’s niche 20th century market of international banking and financial services, to develop a diverse and robust services economy. The economy today also has important concentration in high-value add precision manufacturing, pharmaceuticals, hospitality and boutique agriculture products.

The lessons that emerge from these cases suggest that Bhutan can consider how to:

- Invest revenue sources from natural resource exports, such as hydropower, to support wider economic diversification, human capital development, and social protection.
- Develop flexible assets that can perform different economic functions as the economy and sectoral balance transforms (as in the case of Trinidad and Tobago). This means delivering strong human capital, competitive major cities, and broad-purpose basic infrastructure.


**The service sector is particularly important for Bhutan’s structural and spatial transformation.** Services account for 90 percent of nonfarm private sector employment. Firms are clustered around the leading cities of Thimphu, Paro and Phuentsholing. Most are small firms (particularly sole proprietorships). Secondary and tertiary sectors represent approximately 80 percent of GDP, with major industries including hydropower, tourism, construction, transport, and communication, which together amount to about 38 percent of GDP.38

**At a more granular level, tourism is a particularly important sector for future non-farm job creation.** Tourism accounts for 31 percent of all firms and 18 percent of private sector jobs.40 It is also a growing sector: once closed to tourists completely, Bhutan attracted just over 7,000 tourists in 1999, rising to 254,704 (and US$79.8 million) in 2017.41 Tourism has potential to spread employment across the country, due to the dispersion of natural and cultural attractions. However, current tourism infrastructure and accommodation are concentrated in the more developed western region. Thimphu, Paro, Punakha, and Bumthang account for 87 percent of tourist

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38 Exports in 2016 alone accounted for $190m
39 BNUS, pg. 26
40 World Bank 2016. “Bhutan’s Labor Market: Toward Gainful Employment for All” pg. 27
41 Bhutan Tourism Monitor, 2017.
overnights. A location quotient analysis highlights that Thimphu, Paro, Punakha are a specialized tourism corridor (figure 12). There may be chance to expand the sector to create employment opportunities in rural hub towns such as Gasa, Monggar, or Trongsa. This could be facilitated by a strong tourism sector strategy that emphasizes improved institutional management of the sector, such as coordination between the Ministry of Agriculture and Forests, Ministry of Home and Cultural Affairs and the hospitality sector, expanded visa and immigration services to other entry ports, protection and promotion of heritage sites, and investment in wider tourism infrastructure and training.

Figure 11. Location Quotient of Firms in Tourism, Manufacturing and Hydropower for Ten Most Populous Districts, 2017.

A location quotient expresses the concentration of firms in a given economic sector in a subnational region compared to the national concentration of firms in that sector. Quotients greater than “1” indicate that the local region is relatively specialized in the given sector (with a higher share of firms in that sector than the national average), while quotients of less than “1” show that firms are less concentrated than they are nationally. It should be noted that the lower-than-average specialization in Thimphu reflects its influence over the national sectoral share of firms.

The figure shows the location quotients for tourism, hydropower, and manufacturing in the ten most populous districts of Bhutan. Hydropower is the most spatially concentrated sector, with high specialization in Wangdue Phodrang, Trashigang, and Monggar (and, to a lesser extent, Chhuka). Manufacturing is relatively specialized in Samtse, followed by Chhuka and Trashigang, reflecting the location of these areas along export corridors and close to natural resources used heavily in the manufacturing sector, including agriculture and forestry. Tourism is less concentrated, but Thimphu, Paro, and Punakha, have relatively high specialization, reflecting their position as a tourism corridor.

Skill-intensive services, though currently underdeveloped, have strong job creation potential. Transport, Storage and Communication and high value “FIRE” (Finance, Insurance and Real Estate) are currently small but emergent industries within the service sector, constituting 9 and 7.1 percent of GDP in 2017, respectively. Thimphu Tech Park, developed in Thimphu in 2012, generated about 700 jobs in a group of internationally-based IT firms were attracted by low taxes, a productive workforce, and electricity cost and reliability. Two key challenges have emerged for the industry so far, however. First, internet access is comparatively expensive and less reliable than regional comparators. Second, relevant ICT skills are scarce even among nonfarm workers –

43 For example, less than 10 percent of tourists arrive by land.
44 The table shows the location quotient of each district relative to the national share for each of the three sectors.
46 World Bank. 2017. Bhutan Investment Climate Assessment
around 60 percent of firms report that workers do not have appropriate computer skills\(^{47}\) (while only 14 percent of firms offer training for their workers).\(^{48}\)

**Manufacturing represents less than 10 percent of GDP, and consists almost entirely small and medium enterprises with less than 100 workers.**\(^{49}\) Manufacturing is concentrated around major population centers, trade corridors, and natural resources. A large share of manufacturers are situated around the capital city – Thimphu and Paro –, where labor and skills are concentrated. Planned industrial estates in Jigmeling (Sarpang), and Bondeyma (Mongar) aim to build on this concentration of labor and firms (see Figure 12). However, small towns with access to international markets have also enjoyed above-average manufacturing. Above-average shares of manufacturing are found, for example, in Chukka, Sarpang, and Samtse, located along export corridors or near the Indian border, while also being proximate to more valuable agriculture and forest materials. Planned industrial estates in Montanga (Samdrup Jongkhar), and Dhamdhum (Samste) aim to leverage proximity to the border for input and export markets.

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**Figure 12. Location of Current and Planned Industrial Estates, Overlaid with Economic Density (nighttime lights)**

= Industrial estate

Pasakha (existing estate, Chukka)

Jigmeling (planned, Sarpang)

Dhamdhum (planned, Samste)

Bondeyma (planned, Mongar)

Motanga (planned, Samdrup Jongkhar)

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*Source:* Authors’ own, using locations from GoogleMaps and VIIRS 2015\(^{50}\) economic density data.

**Although subsistence agriculture dominates employment, the southern border region has potential to grow higher value-add crops.**\(^{51}\) Bhutan has potential to raise productivity and exports in several crops, considering its more competitive prices, despite current under-use of mechanization and land consolidation.\(^{52}\) The success of agriculture depends on both natural conditions like climate, topography, and water access, and on access to


\(^{49}\) According to the Cottage, Small and Medium Industry Policy these small firms make up more than 90 percent of total firms in the industrial sector.

\(^{50}\) Version 1 VIIRS Day/Night Band Nighttime Lights (yearly VIIRS Cloud Mask - Outlier Removed - Nighttime Lights), Earth Observation Group, NOAA National Centers for Environmental Information (NCEI)

\(^{51}\) 10 percent of farmers (growing higher-value crops) account for 73 percent of sales of higher value-added agricultural products.

\(^{52}\) World Bank 2018. “Bhutan Agriculture Policy Note,”
markets. Given the importance of market access, value-add agriculture is performing best near Bhutan’s main cities and border posts, while subsistence agriculture prevails in more isolated places. This highlights the essential interdependence between rural and urban areas – in this case, cities providing essential markets for rural products; for the agriculture sector, this entails that Bhutan needs a place-sensitive strategy, emphasizing food security to reduce poverty in more isolated, rural places, and supporting commercial agriculture in places with higher market access and investment returns. The NHS identifies several smaller towns along the Indian border, such as Samdrup Jongkhar and Sarpang, with strong potential in higher-value export crops, due to a favorable climate, elevation, access to water, and access to export markets. These advantages could be leveraged through improved mechanization, improved connectivity to international markets, and institutional reform to reform public sector ownership and management of the sector as key factors for success in these places. Barriers to selling or consolidating rural land owned by absentee owners may also agricultural limit productivity and income growth for those remaining.

**Hydropower has been an important source of rapid growth and structural transformation, but with limited impacts on job creation or equalizing incomes across places.** Bhutan’s otherwise challenging topography has supported steady investment in hydropower for export. Hydropower capacity will reach 5,260 MW by 2024 and constitute as much as 36 percent of government revenues. Existing and planned facilities are concentrated in the west (Wangdue Phodrang District), central (Trongsa District) and southern (Chuka District) regions. Trashigang, Wandue Phodrang and Monggar have a relative specialization of employment in hydropower. However, rather than spurring broader local growth in these settlements, the sector has created relatively few direct jobs locally, and has weak linkages to the local economy. Hydropower locations remain largely rural, small towns, despite their outsized contribution to GDP and government revenue.

**Spatial Dimensions of Poverty and Service Delivery**

**Despite relatively concentrated production, Bhutan has made substantial advances to equalize welfare and service delivery across regions.** Poverty fell from 31 percent in 2003 to 8 percent in 2017. Considerable spatial inequality in incomes remain, though income inequality is not excessive considering cross-country comparisons. Median household incomes in urban areas are 2.6 times those in rural areas (Nu 150,000 vs. Nu 57,00), and monetary poverty is 11.9 percent in rural areas, versus 0.8 percent in urban areas. Income patterns also suggest considerable inequality within/between rural areas, however, with the top 20 percent of rural households earning slightly more (Nu 138,000) than the second richest 20 percent of urban households (Nu 124,000).

**On non-monetary deprivations, substantial differences remain between rural and urban areas.** Multidimensional poverty (MPI) is based on a composite index of deprivations including income, education, access to housing, electricity and water, and asset ownership. The main contributors to MPI include lack of education (32 percent), child mortality (23 percent), and school attendance (13 percent). MPI shows considerable variation between districts (map 1). The poorest districts —Dagana, Zhemgang and Mongar — have multidimensional poverty rates up to 10 times higher than Thimphu (3.4 versus 46.6); however, from 2007 to 2017, MPI poverty has also fallen fastest in the poorest districts, reflecting strong convergence in welfare outcomes across places.

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54 Those noted include oranges, chilies, apples, various spices, lemons, asparagus, mushrooms, and walnuts.
55 These include wild mushrooms, honey, fruit, nuts and spices.
57 World Bank 2019, Bhutan Development Report
59 BLSS pg. 64
MPI shows divergence of access to basic infrastructure between urban and rural areas. More than 95 percent of households has access to electricity and improved water, across urban and rural areas. However, quality gaps remain. The BLSS asked households the top actions government should take to improve their welfare, and in both the urban and rural areas, timely and continuous water supply was among the top three priorities mentioned; regarding electricity, 60 percent of households report power outages of at least an hour in the past 7 days, with the rate approximately 20 percentage points higher in rural area. Gaps in improved sanitation coverage are also substantial: 97.6 percent in urban versus 88.1 percent in rural areas overall, while 8 of 20 districts have under 80 percent coverage, with the lowest coverage rate just 55 percent in Gasa. Considerably more urban households have piped water inside the dwelling than those in rural areas, though the remaining rural households typically have piped water in their compound.

Despite overall improvements in human capital, divergence across districts remains substantial. Infant mortality has fallen from 186 per 1,000 births in 1969 to 25 in 2017. In a single decade, from 2001-2012, the primary school net enrollment rate increased from 60 percent to 89 percent. While the high overall primary completion rate is universal across the country, there is considerable inequality in secondary school attendance and completion across districts. In urban areas, the secondary school completion rate is around 90 percent, while the rate is 60 percent in rural areas. The net attendance ratio at district level ranges from 22.7 percent to 66.4 percent for middle secondary, and from 7.7 to 70.7 percent for upper secondary. The national literacy rate is 66 percent, there is a 23 percentage point gap between urban and rural literacy rates (81.7 percent vs. 58.3 percent); and wide variation between rural districts (45.7 percent in Wangdue Phodrang) and more populous municipalities like...
Connectivity to services and markets is a major challenge for households and firms across Bhutan, but with considerable subnational variation. Nationally, transport and communications are the largest nonfood household expenditure item (accounting for 25.2 percent of the nonfood budget, compared to, for example, just 15.4 percent for rent). According to the BLSS, road infrastructure improvements are the second highest priority for government attention and in rural areas, they are the first... In five districts (Gasa, Haa, Samdrup Jonghar, Trashi Yangste, and Zhemgang), at least 10 percent of households must travel over an hour to reach any road head. Public transport use is low in part due to limited routes and frequencies, with just 3 percent of rural households and 16 percent of urban households using public transport daily.

Internet and mobile phone access can overcome the connectivity challenge, but more isolated people are also less connected through ICT. While mobile penetration is almost universal, half of rural households do not own a smartphone (versus 10 percent in urban areas). Internet access is also low everywhere, and particularly so in isolated places. The highest rate by far is in Thimphu, where 26.7 percent of households have internet access, but penetration rates fall to under 5 percent in 14 of Bhutan’s 20 districts, falling to lows of 0.6 percent in Gasa. Mobile banking services have in other contexts greatly extended financial access in isolated places and to the poor, but are not yet developed.

Access to Services in Municipalities

Public investment in fastest-growing urban centers has not kept pace with households’ demand. The four municipalities suffer infrastructure and service delivery backlogs, a shortage of land serviced with basic infrastructure (improved roads, drainage, sanitation, etc) and affordable housing, and environmental pollution, threatening the inclusiveness, dynamism, and sustainability of the cities. Thimphu municipality has the greatest backlogs, followed by Phuentsholing municipality. Thimphu’s population has increased nearly 40 percent since 2005. Thimphu has created important job opportunities and agglomeration economies, but its rapid development also creates a need for better management of the city to take account of negative externalities such as congestion and environmental degradation.

- Resilience. The urban area in Thimphu has increased from 7.13km$^2$ in 1990 to 26.5km$^2$ by 2008. Housing affordability is also a concern, with Thimphu’s mean monthly rents of Nu 5,104 being the highest in the country. As a result of urban expansion in the increasing scarcity of land, there is increasing demand to develop hilly topography and in low lying flood areas. It has consumed considerable flat agricultural land and greenfield spaces, while putting increasing pressure on steep slopes and in flood and landslide prone areas, elevating the risks from natural disasters.

- Transport. Traffic congestion has also increased. Vehicle registration has risen to 52.9 percent of households in Thimphu and 36.2 percent in Phuentsholing, with higher automobile usage exacerbated

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67 BLSS 2017  
68 PHCB 2017  
69 BLSS 2017  
70 BLSS 2017  
73 CNDP Progress Update, 2017  
by a lack of parking management and inadequate public transportation coverage and service frequency.\textsuperscript{75} Air quality in urban areas such as the Thimphu valley, Phuentsholing, and around the Pasakha industrial estates is deteriorating – particularly during winter months – both due to industrial activity and additional vehicular traffic.\textsuperscript{76}

- **Sanitation.** Water contamination has become a key concern in major cities. Only 20 percent of households in Thimphu and 60 percent in Phuentsholing have sewer connections, and there is evidence of dangerous subsequent contamination of the Thimphu River,\textsuperscript{77} and risks of other seepage to ground and surface water.\textsuperscript{78} Solid waste generation has also exceeded the capacities of landfill and recycling facilities, which has further contaminated water supplies and exacerbated public health concerns. Thimphu Dzongkhag (with Thimphu municipality) and Chhukha Dzongkhag (with Phuentsholing municipality) have the highest number of households without reliable water.

- **Institutional capacity.** As detailed in the Policy Note on Local Governance and Finance, there are important gaps in municipal capacity for planning and capital investment, particularly for the regeneration and densification of downtown areas and ensuring services are responsive to people’s needs. Revenue mobilization also remains inadequate. Institutions are not yet effectively engaging the business community and pursuing reforms to improve the business climate.

- **Land management:** A land pooling program has demonstrated the potential for land conversion to higher density mixed uses, to better accommodate new growth.

- **Transport:** Thimphu municipality has partnered with the IFC to implement a transport plan to pedestrianize the main commercial thoroughfare and collect revenue from a parking facility, to improve traffic and parking management.

- **Sanitation:** Investments under the World Bank’s Bhutan Urban Development Project (BUDP II) have helped to increase Thimphu’s water supply and treatment capacity, though demand still exceeds supply.

- **Institutional capacity:** The BUDP II has also improved the management capacities of Thimphu and Phuentsholing municipalities, enabling them to meet recurrent expenses from own-source revenues, and hence strengthen planning and budgeting for service delivery.

**Trade-Offs in Territorial Development**

Considering its future territorial development trajectory, Bhutan faces certain key trade-offs.

1. **Resist agglomeration, or work with market forces?**

The RGoB faces a choice in territorial development, between prioritizing the *place* or the *pace* of growth and job creation.

While living standards can be equalized across the territory, production tends to tightly cluster in leading centers, due to agglomeration economies and the need for strong market access. In Bhutan, this is observed in the concentration of people and firms in Thimphu, including the migration of young people from Eastern Bhutan to Thimphu rather than closer secondary settlements. The government can try to fight this concentration, but international experience shows that even heavy investment and regulation are often inadequate to counteract agglomeration forces. People and firms continue to cluster in leading centers, but are forced into the informal

\textsuperscript{75} Dorji, G.K. 2015 “Tackling traffic jams” *Kuensel* August 7
\textsuperscript{76} CNDP Progress Update
\textsuperscript{77} A sample of water collected in central Thimphu measured BOD 8.05 mg/L (Biological Oxygen Demand, a measure of water pollution), indicating a high level of contamination. Giri, N. and Singh, O.P. 2013. “Urban growth and water quality in Thimphu, Bhutan” *Journal of Urban and Environmental Engineering* Vol. 7, n.1 pp.82-95
\textsuperscript{78} World Bank 2014. “Green Growth Opportunities for Bhutan”
sector, while new infrastructure built to attract people to lagging areas goes under-utilized. These challenges are illustrated by the cases of South Korea, Egypt, and Indonesia outlined below.

Furthermore, when properly supported, dense leading agglomerations create opportunities that can benefit the whole country, through trade, migration, raising government revenues, and higher growth. Rather than trying to develop smaller and more peripheral places in isolation, a more effective strategy emphasizes their integration with leading growth hubs. This entails i) supporting growth and dynamism in the leading market, and ensuring these can absorb new trade, investment, and migration; ii) develop the connectivity of leading and smaller/lagging markets (considering hard and soft linkages—such as transport, financial markets, migration, information, and so on); and iii) addressing bottlenecks in lagging areas that impede their ability to benefit from integration (such as human capital, basic services, and business environment institutions).

Given these dynamics, an important trade-off is between prioritizing the place of growth, and the pace of growth. Prioritizing where growth takes place, upfront, typically comes to the cost of national growth, and with depressed outcomes in the targeted location. By contrast, supporting agglomerations, where market forces have signaled the strongest potential, can support faster growth nationally, and in time create opportunities for a wider portfolio of places.

The development path of South Korea (Box 3) demonstrates these priorities. The country achieved rapid and inclusive growth by allowing firms to concentrate according to market forces around Seoul, while providing quality institutions and human capital everywhere, and incrementally connecting secondary markets as their own density and Seoul’s dynamism rose. South Korea’s case also illustrates the challenges when governments resist the agglomeration of firms and people, and the adverse consequences of many efforts to spread industry contrary to the forces of agglomeration. These challenges are also illustrated in the case of Egypt’s failed attempts to deconcentrate industry (Box 4), and the poor performance of Indonesia’s isolated investments in SEZs in lagging areas (Box 5).

<table>
<thead>
<tr>
<th>Box 3. Long Term Regional Convergence: “Unity, not Uniformity” in South Korea79</th>
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</thead>
<tbody>
<tr>
<td>Home to more than 10 million people, Seoul produces one-quarter of Korea’s national GDP. The broader Seoul Metropolitan Area (SMA) covers 12 percent of the country’s land, contains half the national population, and generates around half of national GDP.</td>
</tr>
<tr>
<td>Since the middle of the 20th century, however, tensions arose over how best to manage the SMA. Some policy makers, concerned that rapid SMA growth would lead to regional imbalances, argued its growth should be constrained with strict regulations. Regulations restricted development in certain areas, imposed fines on buildings exceeding given parameters, limited allocations of SMA land to industry, limited the industrial output allowed in the SMA, prohibited various classes of activities, and required national government approval for land development projects exceeding one million square meters. In the 1970s a greenbelt strategy was employed to constrain Seoul’s growth and promote 14 alternative cities across the country.</td>
</tr>
<tr>
<td>These controls were not successful. Investors and citizens led to a rapid succession of new investments in the SMA regardless of policies, including residential complexes, metropolitan highways, new towns, and a new international hub airport—bypassing the objective of limiting growth. However, the controls did hurt efficiency: more than 200,000 factories in the SMA are unregistered, contributing to unmanaged urban development. Urban growth is also fragmented due to failure to invest adequate resources in managing and planning the SMA, exacerbating congestion and environmental degradation.</td>
</tr>
<tr>
<td>As Korea sought to position Seoul as a 21st-century world city, the government relaxed limits that restricted the location of new colleges, firms, industrial estates, and housing sites in the SMA. It moved instead to price instruments to regulate urban construction, levying a development charge on new commercial buildings.</td>
</tr>
</tbody>
</table>

79 Adapted from World Bank (2018), “Rwanda’s Future Drivers of Growth”
By recalibrating city management through deregulation and more market-based price instruments, Korea is making Seoul’s quest to become a competitive global city more likely to succeed.

Concentration was complemented by basic services everywhere, and incrementally connected urban centers\(^80\)

While production concentrated heavily in the SMA has also used strong universal social policy to deliver quality education, health, and sanitation, and to address poverty, everywhere.

|----------------------------------|-----------------------------|-----------------------------|

In addition, as the density of secondary economic centers (cities) grew, Korea made incremental investments to integrate these with Seoul and other major cities like the port area of Pusan. The image below, for instance, shows the incremental development of Korea’s expressways, from 1970 to 2010.

<table>
<thead>
<tr>
<th>Korea’s expressway development, 1970-2010</th>
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<tbody>
<tr>
<td>![Map of Korea’s Expressway Development]</td>
</tr>
</tbody>
</table>

This combination of universal human capital development and living standards, alongside powerful cities to interface with global markets, and incremental connectivity between cities, helped South Korea become one of the most successful development stories of the past century.

\(^80\) Adapted from World bank (2018), “Rwanda’s Future Drivers of Growth”

\(^81\) Adapted from ‘Reshaping Egypt’s Economic Geography’, World Bank (2012)
Egypt’s capital, Cairo, produces 50 percent of GDP on just 0.5 percent of the country’s land. Concerned about pressures this may put on Cairo, Egyptian policy-makers have attempted to divert firms and people to less developed areas.

Egypt thus restricted manufacturing outside of industrial parks, and focused these parks in remote, often lagging, areas. Of 139 industrial zones created in 1975-2012, almost all were in desert locations disconnected from large domestic cities and the services, customers, and labor they offer. Most also suffered poor access to international markets, particularly those in Southern Egypt, far from Egypt’s Northern ports.

Given these disadvantageous locations, the rational for firms to invest there was weak. The main incentives for firms were ‘compensatory’ – in the form of highly subsidized government land –, and ‘coercion’ – legal restrictions that prevented them from locating elsewhere. This represents Egypt’s choice to prioritize the place production happens, at the cost of efficiency and hence the pace of development.

The results were poor. In some cases, to overcome the challenges of disconnected locations, new towns were built around the zones where – in theory – people could live and agglomerations develop. However, few workers settled here. For towns at a commuting distance from Cairo, the result has been huge fleets of buses shuttling workers daily from Cairo and other urban centers to the industrial parks. More remote new towns struggled even more, attracting just 800,000 of the 5 million people they were planned for. Overall, government-sanctioned industrial estates in Egypt’s new towns and governates, by 2006, had space for 2.5 million workers, but hosted just 483,000 jobs. By comparison, in 2009, there were 1.8 million workers in registered factories outside formal industrial zones, mainly within current urban agglomerations. Most jobs within industrial zones were in those near Cairo, rather than the most isolated zones Southern Egypt.

In Egypt, despite large supply-driven investments, subsidies, incentives, and legal regulations, firms and households have ‘voted with their feet’ for major cities with strong local agglomeration economies and access to international markets.

### Box 5. The Risks of Industrial Policy to Drive Regional Integration: Indonesia’s Empty Special Economic Zones (SEZ)

The west of Indonesia (Java, Bali and Sumatra) has been historically more prosperous than the east. Java and Sumatra account for more than 80 percent of Indonesia’s GDP, while Java accounts for 60 percent of the total population. The east has lagged relative to the west, with a sparse population and relative economic sluggishness.

From the early 1990s, the government introduced targeted policy to revive the eastern region. A centerpiece was the Integrated Economic Development Zone (KAPET) program, introduced in 1996 to promote growth and social development in the eastern region. The program provided a complete package (at least on paper) of tax and non-fiscal incentives for firms locating in the eastern region. Tax incentives included a 30 percent reduction of taxes on capital, more choices for amortization of capital and losses, fiscal loss compensation for 10 years and special reductions on taxes for foreign taxpayers. Moreover, firms received tax exemptions and benefits when importing inputs, renting for construction or expansion, or paying employees. Additional ‘complementary’ investments were implemented – such as up-skilling local workers and MSMEs, laying infrastructure, and introducing institutions such as ‘one stop shops’ for business registration.

In the first 15 years of implementation, twelve KAPET SEZs were launched in the eastern region, targeting high-tech firms. However, just 17 percent of planned investment was mobilized. All investment mobilized from 2005 to 2010, was in just three KAPET locations, and 80 percent of this was in a single KAPET SEZ in the – more developed – West (Sumatra). KAPETs did not create the much-anticipated inflow of workers to the region.

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82 Registered with the Industrial Development Authority (IDA)
83 Indonesia Investments, 2018
84 For instance, Papua, a province in the east of Indonesia, has a population density of 8/km².
85 Temenggung, 2013
86 Temenggung, 2013
Why did this approach fail? Investments and incentives were not informed by firm consultations and so did not address the greatest bottlenecks for firms. Tax incentives offered little compensation for poor conditions, where firms were unlikely to turn a profit. The firms targeted needed strong market access to supply various crucial inputs, such as diverse business services and a pool of varied skilled labor. By contrast, the East offered a small market, KAPETs had poor connectivity to larger markets elsewhere, and with so many KAPETs scattered across the East, firms could not be coordinated into any effective new cluster. Firms also required cheap and reliable energy and good transport infrastructure, which were largely missing in the East. The low capacity of local governments in the East, compounded by the Asian Financial Crisis and a decentralization drive from 2001, meant KAPETs were also poorly executed.87

The costs of failure were borne by all. Ultimately, the effort was costly not only nationally, but also to local governments in the East, which financed the zones from their scarce budgets, at the expense of addressing other urgent challenges like low human capital and service delivery, weak connectivity to national economic hubs, and poor governance.

2. Lead with hard infrastructure, or build from ‘soft’ foundations?

Territorial development strategies that focus on the roll-out of hard infrastructure (such as roads, railways, airports, and SEZs) in secondary and lagging regions are attractive, being highly visible and often politically popular. However, outcomes are often weak, when investments reflect political priorities rather than market demand. Supply-led hard infrastructure is often under-utilized, entailing minimal local impacts, yet heavy upkeep and running costs on local governments. An even greater risk is that, by opening local markets to tougher external competition, connective infrastructure can in fact lead to economic decline and outmigration from less advanced regions.88

Effective strategies therefore apply a multidimensional approach, examining the spectrum of conditions needed for successful regional development and addressing these in a coordinated manner. Efforts should follow from diagnosis of the greatest binding constraints to local productivity, and address these specifically, rather than assuming any particular infrastructure solution prima facia. The trade-offs involved in choosing a unidimensional versus multidimensional strategy are illustrated by the cases of Spain below and Korea above.

Box 6. Risks of a Unidimensional Strategy: Spain’s High-Speed Ghost Trains.89

Supported by EU financing, the Spanish government has invested heavily in transport infrastructure to boost lagging areas. This investment has focused on new hard infrastructure like high-speed rail and motorways, rather than upgrading and repairing existing services or addressing logistics and governance challenges. New infrastructure was politically rewarding – being highly visible and a relatively easy way to disburse EU funds, compared to softer governance, education, and social policy reforms. However, investments often bore no relation to demand, and were not accompanied by essential complements like education and institutional strengthening.

The result has been threefold. First, Spain has a dense network of some of the best infrastructure in the world. However, second, much of this infrastructure quickly became bankrupt due to gross under-utilization. A classic example is the high-speed train from Toledo to Albacete, which cost an average of 18,000 euros per day to operate for just 9 daily passengers; more broadly, a group of Spanish researchers conservatively estimate wastage on infrastructure at 80 billion euros (Romero et al., 2018). Third, connecting disadvantaged towns to leading centers in some cases deepened concentration, due to a lack of complements. For instance, a high-speed passenger train was hoped to boost the lagging economy of Andalucía by connecting it to booming Madrid.

87 Hofman and Kaiser, 2004
89 Posé (2018), “Models of the Use of European Structural and Regional Development Funds”
However, the train was overwhelmingly used by Andalucians, to access business services and tourism in Madrid. By enabling firms to serve the smaller market (Andalucía) from the more favorable environment of the larger market (Madrid), the rail line in fact deepened concentration in the leading city.

**Policy Options and Way Forward**

This note’s introduction presented a framework for place-sensitive policy, informed by the assets and potential of each place. This recommends supporting agglomeration economies in major cities and building on place-based endowments, while using social policy, education, and institutional strengthening to achieve convergence in well-being and access to opportunities everywhere. This framework differentiates between locations with higher density and market access, where more spatially-targeted investments can support firm growth and job creation, and areas of low density and relative isolation, where opportunities for growth and job creation are more limited, but welfare and education policies can ensure people have access to opportunities and a good quality of life, while place-neutral institutional reforms can unlock latent private sector development potential.

**Investment Priorities for All Places**

- **Institutions:** All places require quality institutions as the foundation for productivity and citizens’ well-being. While institutions are often national, they have profound effects on subnational outcomes and convergence. Social policy institutions (like taxes and transfers) can capture the benefits of agglomeration and redistribute to people in less advantaged places, supporting more equal welfare across space while production concentrates. Institutional reforms to the business environment also relieve bottlenecks to productivity, without placing expensive, fixed, capital investments in places with highly uncertain future trajectories.

- **People:** Investment in human capital are also high priority for all places, even those with lower economic density and dynamism. Human capital gives people opportunities, without making risky bets on the economic future of the place in which they reside, by enabling people to access better income opportunities either at home or in other locations. People-focused policies also include those addressing disparities in well-being directly, through basic public services such as health, education, local government services and basic neighborhood infrastructure.

**Spatially-Targeted Investment Priorities**

- **Access to Markets (connectivity):** A key factor for local economic and social development is access to markets – including the size and connectivity of the local market, but also connectivity to larger, external markets. For firms, market access extends access to inputs, products, and value chain integration, and facilitates knowledge spillovers, and for households increases access to jobs, public services, and other goods and services. Connectivity entails not just roads, but logistics, ICT, transport services, and so on. However, as highlighted under ‘trade-offs’ above, investment in connective must be moderated according to the density and market size of the targeted place, and local demand for the infrastructure: over-investment in under-utilized roads, railways, and airports with high operation and maintenance costs draining local budgets are a common, ineffective, approach to boost ‘lagging regions’. As also discussed above, connective investments need to be coordinated with complements to address remaining bottlenecks to local productivity, particularly the quality of institutions and human capital, or risk deepening concentration away from the targeted places.

- **Local Economic Development:** As noted above, firms and investment cluster in major agglomerations, which offer multiple benefits for productivity. These agglomerations are the most promising place for the government
to complement firms’ demand with heavier investments in support of local economic development. This includes investments to manage the forces of congestion attendant on agglomerations (such as traffic management, grid planning, and land management) and to minimize adverse effects like pollution. Successful cities make investments informed by quality consultation with firms and households, to diagnose the most important bottlenecks they face, rather than applying ‘one size fits all’ solutions (such as Special Economic Zones for every town).

Table 4. Summary of Endowments Along Above Dimensions for Select Districts

<table>
<thead>
<tr>
<th>District</th>
<th>Human Capital</th>
<th>Connectivity</th>
<th>Economic Specialties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tier I</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thimphu</td>
<td>Royal Thimphu College Khesar Gyalpo Medical School</td>
<td>East-West Highway</td>
<td>Government administration Services hub Agriculture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proximity to Paro Airport</td>
<td></td>
</tr>
<tr>
<td><strong>Tier II</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paro</td>
<td>Paro College of Education General Hospital facility</td>
<td>International Airport East-West Highway</td>
<td>Tourism, MICE(^9) destination and facilities</td>
</tr>
<tr>
<td>Wangdue Phodrang</td>
<td>College of Natural Resources</td>
<td>East-West Highway</td>
<td>Agriculture hub Tourism hub Punatsangchhu hydro plant</td>
</tr>
<tr>
<td>Punakha</td>
<td>College of Natural Resources</td>
<td>East-West Highway connectivity</td>
<td>Agriculture hub</td>
</tr>
<tr>
<td>Samdrup Jongkhar</td>
<td>Jigme Namgyel Engineering College</td>
<td>Strategic position along Indian border</td>
<td>Agriculture and forest products hub Motanga Industrial Estate</td>
</tr>
<tr>
<td>Chhuka</td>
<td>College of Science and Technology Gaeddu College of Business Studies</td>
<td>Proximity to Indian Markets East-West Highway terminus</td>
<td>Industrial and logistics hub</td>
</tr>
<tr>
<td>Sarang</td>
<td></td>
<td>Proximity to Indian markets Reliable electricity supply</td>
<td>Jigmeling Industrial Estate</td>
</tr>
<tr>
<td><strong>Tier III</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samtse</td>
<td>150-bed hospital</td>
<td>Border proximity to Indian markets</td>
<td>Proposed Damdhum Industrial Estate Agriculture and Forest resources</td>
</tr>
<tr>
<td>Trashigang</td>
<td>Sherubtse College</td>
<td>East West Highway terminus, Access to Yongphula airport</td>
<td>Tourism hub</td>
</tr>
<tr>
<td>Monggar</td>
<td>150-bed hospital</td>
<td>Gyelposhing-Nganglam Highway, Proximity to Bumthang and Yonphula airports</td>
<td>Bondeyma Industrial Estate</td>
</tr>
<tr>
<td>Trongsa</td>
<td>College of Language and Culture Studies</td>
<td>East West Highway Magde Chhu river</td>
<td>Tourism and cultural heritage Nikachhu Hydro Plants</td>
</tr>
</tbody>
</table>

*Source.* Adapted from National Human Settlement Strategy, MoWHS. 2017.

**Following the above framework, informed by the extent of local agglomeration, Bhutanese settlements can be categorized into three broad ‘tiers’, each serving a different function and requiring different policy and investment priorities.** Bhutan can harness its existing dynamic, dense clusters – centers of firm growth and in-

\(^9\) MICE refers to Meetings, Incentives, Conferences and Exhibitions which covers large planned gatherings and events for business, recreational or other purposes.
migration – as engines of growth and opportunities to address the development challenges. Smaller towns and cities can benefit from integration with the success of larger external markets (both within and outside Bhutan), and build on any place-specific endowments and advantages. In more remote and rural areas with lower viability as centers of production, Bhutan can deliver opportunities and quality of life for all through a people-focused strategy – closing gaps in human capital and addressing barriers to migration and using social policy to ensure quality of life (while not neglecting bottlenecks to productivity in agriculture and so on) (Figure 15).

Figure 15. Framework for Regional Development Approaches by Settlement Type.91

Source. Authors’ own.

This framework entails different priority policies to support each Tier of settlements, as well as priorities relevant for the national portfolio of places.

National Level Priorities

Synergies across regional development and other policy agendas: Spatial development requires a multidimensional approach, and is essentially cross-sectoral. Regional and spatial development policies should therefore be closely coordinated with economic, environmental, decentralization, and public investment policies at the national level. For example, alignment with the decentralization agenda would entail agreement on the definition and identification of different settlement types, which affect transfers, decentralized responsibilities, and regional investment and policy priorities. A clear delineation of settlement types can also improve the monitoring of urbanization, internal migration, and rural-urban disparities in living standards. Similarly, more efficient, better targeted, public investments, subsidies, and intergovernmental fiscal transfers can improve regional development outcomes, as detailed further in the accompanying Municipal Governance and Finance Policy Paper.

Business environment: Certain business environment challenges can pose bottlenecks to productivity across all settlement Tiers. Priorities in Bhutan include insolvency procedures, permits and licenses, quality certification,

91 Authors’ own
customs procedures, immigration restrictions, property transfer, and taxation, among others. However, while the national government must take the lead reforms here, it should also ensure that institutional quality improvements trickle down to regional hubs like Tier I and Tier II cities (such as by monitoring and modernizing local offices).

**Coordination:** Operating alone, local governments may tend to over-invest in connective and other productive infrastructure, and offer excessive incentives (like reduced taxes), to compete for investment. While a degree of competition can improve the business environment, the attendant risk is a ‘beggar they neighbor’ race to the bottom, with low-impact spending and large revenue foregone in tax breaks. The national government thus has an important role to coordinate and prioritize investments and regional development plans across the country.

**Place-sensitive national planning:** Decentralization can enhance the quality of local services thanks to local governments’ greater sensitivity to local needs, although the attendant risk is low government capacity; appropriate ways forward are detailed in the accompanying note on decentralization. Beyond decentralization however, the sensitivity of policies to local needs can also be enhanced by better spatializing national economic planning and diagnostics, as exemplified in the case of Colombia. Appropriate data systems can strengthen the regional tailoring of national policies and investments, and enable coordination vertically between different levels of government and horizontally across ministries or local government entities within particular regions. These might include spatially disaggregated data on:

- Private investment, economic productivity, specialization, market prices, firms and firm performance;
- Government spending, finance, service-delivery, and assets such as land, schools, and hospitals;
- Land use, roads networks, public transit services, trunk infrastructure networks;
- Climate change and natural disaster hazard maps;
- Incomes, living costs, living standards, and human capital outcomes.

**Tier I: Leading Cities (Supporting Engines of Growth and Managing Externalities)**

Large and dynamic cities (Tier I), such as Thimphu and Phuentsholing, are most important engines of national production and job creation, and the main interface with the global economy. These cities offer a different scale of agglomeration benefits and attendant dynamism, which can be leveraged to create the off-farm and higher-wage employment increasingly sought out by the population, and to drive spill-over benefits for other areas. Harnessing their dynamism requires (a) ‘growing the pie’ for productivity and job creation and (b) managing congestion forces and pollution through stronger urban planning for inclusive and sustainable access to new urban opportunities.

‘Grow the pie’ for productivity and job creation. For major agglomerations, it is less important to identify which products and services the city will produce, because the same fundamentals form the basis of productivity across a wide range of products. Whether a firm focuses on tourism, manufacturing, or transport and trade services, it will benefit from a dense, well-connected market of labor, suppliers, and customers (quality public transport, traffic management, land use planning to reduce sprawl, and accommodation of new migrants), a secure and transparent business environment (including for small firms), security, efficient land and property markets, skilled human capital, reliable and affordable electricity, and so on. These fundamentals can enable a broad ecosystem of complementary firms and sectors to flourish, and new comparative advantages to emerge. All cities should focus on these foundations, though they are particularly important for Tier I settlements, the productivity of which derives from broad fundamentals and agglomeration economies rather narrower place-specific advantages.

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Institutions

Business environment reforms are the foundation for private sector development everywhere, but particular agendas have elevated importance in Tier I cities. In Tier I cities, it is particularly important to address regulatory barriers that prevent firms and households converting scarce urban land to its most productive uses. Participatory urban planning institutions are also key. For example, evidence from ‘Competitive Cities’ across the world highlights that ‘growth coalitions’ – sustained, active, consultative forums between the private sector and city planners to inform policy – are central to shepherding strong and sustainable growth in cities.

Poorly-managed urbanization can deprive cities of their potential economic dynamism and inclusivity, as well as imposing environmental and social costs. As a complement to policies to grow the urban economy, local governments need to effectively manage congestion forces, to promote good density and urban livability:

- The negative externalities of urban firms and households, such as air pollution, congestion, and waste challenges (including contamination of rivers with sewage, and upgrading landfill and recycling centers), need to be controlled. Environmental risks such as landslides and flooding are major risks for people, private property, and infrastructure in Tier I cities. Infrastructure and the building stock, as well as planning and standards, should be strengthened to reduce susceptibility, and promote and energy and resource use efficiency.
- Urban expansion is inevitable, but good urban planning can ensure Tier I cities are compact and connected. Grid planning and enforcement is a priority to facilitate orderly, dense, urban expansion and avoid costly ‘retrofitting’. This can be supported by zoning to protect vulnerable or hazardous land, laying basic neighborhood infrastructure, and integrated land and transit planning. Mixed use development, and improving public and non-motorized transport, can reduce congestion and help ensure that firms and households are well connected to the opportunities, services and amenities (such as jobs, and health and education facilities) that drew them to the city. These efforts must be responsive to the needs of poor and vulnerable populations, who can benefit hugely from urban opportunities, but who can also most easily become excluded from the jobs and services cities offer, due to high costs versus purchasing power.

More broadly, local institutional strengthening would require the continuation and deepening of municipal planning and capacity-building that has been initiated in Thimphu and Phuentsholing, as detailed in the Municipal Governance and Finance Policy Note.

Human Capital

Human capital development is critical to create opportunities for people everywhere. However, Tier I cities are the most likely destination for highly skilled workers, where the returns to their skills tend to be far higher. Human capital is also particularly important to the productivity of Tier I cities, which should host more advanced and specialized firms requiring skilled human capital, and foster innovation through virtuous knowledge spillovers between their firms and residents.

However, the supply of skilled labor for private sector employment in cities is a recurring challenge. S well as national solutions, cities may benefit from human capital interventions tailored to their particular circumstances, such as the mismatch that emerge between the demand for and supply of skills following a rapid influx of formerly rural workers. This may include training for recent adult rural-urban migrants to cities, or supporting small urban.

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firms with business counselling or training vouchers for staff. Much learning within leading cities in fact occurs not through formal institutions, but informal and ‘on the job’ interactions. A key opportunity therefore lies in knowledge transfer from the large and diverse labor markets around Bhutan; addressing restrictions on the hiring of and investment by expatriates may help Bhutanese firms fill short-to-medium term skill gaps, while facilitating knowledge-transfer from immigrant co-workers and business leaders to local people and firms, as well as broader technology transfer.96

**Connectivity**

Given limited domestic market size, the sustainable and robust growth of Tier I cities will require connectivity to larger external markets. Bhutan’s isolated location might make air transport important, but flights to Bhutan remain some of the most expensive in the world despite renovated airports, due to low volumes and technical challenges.97 Thimphu’s connectivity can be enhanced through strengthening linkages with Phuentsholing, and with larger border towns in India like Alipurduar and Cooch Behar. This connectivity can include hard infrastructure, but most important may be complementing existing hard infrastructure with softer measures, like addressing and frictions to border trade, quality certification, encouraging Indian-Bhutanese firm linkages and collaboration, addressing logistics and public transport bottlenecks, engaging in joint planning, and reviewing limits on traveler numbers to enable economies of scale. Specific investment climate reforms that could raise external connectivity of the Thimphu / Phuentsholing corridor include:98

- In addition to creating a national single-window system, establishing joint border facilities with India to reduce border queues and clearance times on transit between Phuentsholing and Kolkata.
- Assessing the feasibility of a railroad connection between Phuentsholing and the Indian railway network, to enhance the dry port’s potential.
- Automated customs clearance to reduce time and costs in customs processing.
- Considering further investments in the regulatory capacity of the Bhutan Civil Aviation Authority (BCAA) and in the operational capacity of the Department of Air Transport (DOAT).

**Tier II: Secondary Towns (Leveraging Existing Endowments to Unlock Potential)**

Mid-sized towns such as Paro, Wangdue Phodrang, Gelephu, and Samdrup Jongkhar have some density of people, but low economic concentration. These Tier II settlements are smaller population centers – including clusters of linked settlements –, often along major east-west or north south connections.

These settlements tend to offer advantages including less expensive land and labor, and local advantages like tourism attractions, borders, or hydropower; however, outcomes are hard to predict or force. International experience is that lower private sector demand for these locations compared to leading cities makes land and labor relatively cheap in second tier settlements. This can constitute an attraction for private investors, depending on the importance of land and cheap labor (versus market access, skills, and quality institutions) in their production costs.99 In Bhutan, some also have underlying location-specific economic advantages, such as tourist attractions, hydropower potential, international borders, or proximity to agricultural inputs. This can be seen, for instance, in the case of Gelephu and Samdrup Jongkhar, situated near to quality agricultural land and on borders with the larger Indian market; the Punakha corridor, with its hydropower resources and cultural heritage; or Paro and Wangue Phodrang, which enjoy relative proximity to the capital Thimphu but have key place-based

infrastructure features (international airport and hydropower). However, outcomes in such smaller centers are harder to predict, and efforts to force or incentivize firms to spread to secondary centers can come at the expense of national growth and job creation, and lead to large wastage in public expenditure.

It is important to diagnose and address the bottlenecks to greater private sector dynamism in each Tier II settlement, ensuring investments reflect market demand and consulting well with the business community. For example, any investment in industrial estates should not be a means to initiate new industries, but should facilitate existing industries and demand. Likewise, emerging tourism hubs may have different priorities, such as improving land management and construction permitting to support development of suitable and sustainable hotels and attractions, or improved town planning to maintain cultural assets and public spaces.

Networking, branding, and investment promotion, supported by the central government, could help Tier II cities and their connected regions make the most of their potential. For example, in agribusiness, a recent report finds that Indian and Bangladeshi investors have few channels to interface with Bhutanese producers, which limits their knowledge of suppliers and market potential. This is particularly relevant for border towns such as Phuntsholing which are gateways for logistics and warehousing, but also for settlements of all Tiers with latent investment potential, such as in agribusiness, mining, and tourism.

Tier II settlement growth can be unpredictable, and local planners should be prepared to accommodate any population growth, while ensuring equity and efficiency in access to services and labor markets. This means developing capabilities in land management, infrastructure, service delivery, capital investment planning, and financial management.

Given their smaller market size, and often specialized industrial structure (e.g. Figure 11), connectivity to external markets is critical to the success of emerging sectors such as tourism and agro-processing. This connectivity not only opens markets for final products, but also to access inputs, and integration into wider value chains. External connectivity can include domestic city clusters (such as Paro-Thimphu-Wangdue) and economic corridors (such as the Punakha Valley- see Box 7 below) that together raise the scale of the local market, urban-rural connectivity, and connectivity to Tier 1 settlements for inputs and customers. Several Tier II cities in Bhutan are in fact better connected to large cross-border markets than other large settlements in Bhutan.\(^\text{100}\)

<table>
<thead>
<tr>
<th>Box 7. The Punaka Valley: A Multisectoral Valley Approach to a More Balanced Spatial Development in Bhutan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Located in western Bhutan along the Sankosh River, the Punaka Valley connects Punaka with Wangdue Phodrang approximately 20 km to the south. The valley has immense historic and cultural value, with each settlement containing a large dzong constructed in the 17(^{th}) century, along with many religious sites and monasteries in the surrounding villages. The population of each district has grown rapidly; between 2005 and 2017, Punaka’s population grew by 62 percent, while Wangdue Phodrang’s increased by 35 percent.</td>
</tr>
<tr>
<td>The population levels, connectivity to the East-West highway and Thimphu, and clustering of significant historical and cultural sites suggest that this valley may be considered a Tier II settlement. While the two districts is unlikely to reach the population size and density of Thimphu or Phuentsholing, the corridor may serve as both a regional service center for surrounding rural areas and also as unique cultural heritage hub. However, there are currently no strategic plans to manage land along the corridor and its towns, ensure provision of basic infrastructure, and manage the range of cultural and heritage resources and practices endemic to the valley.</td>
</tr>
<tr>
<td>The valley’s risk profile is also significant as it has clear vulnerabilities to natural disasters. In 2012 the Punaka Valley was struck by a sudden GLOF (glacial lake outburst flood), which damaged riverside buildings and property. That same year, the dzong at Wangdue Phodrang was severely damaged by a wildfire that reached the town. The</td>
</tr>
</tbody>
</table>

\(^{100}\) Such as Gelephu and Sarpang’s connectivity to Bongaigaon, or Nalbari and other border towns in the case of Samdrup Jhonkar.
RGoB has responded by developing flood and fire warning systems and undertaking more detailed study of resilience options for the valley with the support of the World Bank.

Recent efforts by the government have also focused on site or monument-based cultural heritage and preservation, focused on the dzongs and other significant structures. However, under the Draft Cultural Heritage Bill, the government will begin to take a more expansive approach by enabling districts and municipalities to identify and demarcate cultural landscapes, which consist not only of buildings and structures with particular cultural significance, but also “settlement patterns, land-use patterns, natural settings and … cultural and natural elements of Intangible Cultural Heritage [such as knowledge, social practices, languages and crafts].”¹⁰¹

Recognizing the Punakha valley’s potential, the RGoB has been supporting a series of initiatives, including the mapping of its cultural assets as a basis for improved land use planning by the National Land Commission, as well as the formulation of a Disaster Risk Management Plan for the Punakha Dzong and stewardship plans for the Nobgang and Chimi Lhakhang villages by the Ministry of Home and Cultural Affairs (MoHCA). These initiatives are fully aligned with the (date) National Human Settlement Strategy prepared by the Ministry of Works and Human Settlement (MoWHS), which calls for the development of regional economic centers – as a counter to the rapidly growing and saturated Thimphu and Phuentsholing.

While relevant, for lasting results, a concerted effort is required bringing all these agencies and initiatives together to ensure the appropriate land use planning, designations and controls are in place, the necessary resilient infrastructure and services are adequately planned and delivered, the cultural landscapes and its assets are properly demarcated and stewarded and income and jobs opportunities attractive particularly to educated youth are realized.

**Tier III: Rural Hubs (Investing in People)**

For sparse rural areas and small rural hub towns, it is critical that residents achieve a decent standard of living, and the human capital development needed to access productive opportunities.

**Economic development is challenging in isolated rural areas, due to their distance from major markets and inefficiency of extending quality public services. Development efforts here should put people first,** accounting for the preference of many rural households to migrate to more major towns and cities, to access the greater employment, educational, and other opportunities. A ‘people-centered’ approach would improve people’s access to these opportunities, addressing rural human capital gaps and challenges for cities to absorb new migrants in concert. Rural-urban migration can benefit remaining rural residents, through opportunities for land consolidation, trade with growing urban hubs, and domestic remittances; in Bhutan, this requires addressing barriers to the sale of rural land by out-migrants, and hard and soft connectivity challenges between rural and urban areas (such as internet connectivity, mobile banking, public transport, and so on). Overall, rural and urban areas should be managed together – addressing rural inefficiencies, alongside bottlenecks to rural-urban migration, and supporting the integration of rural migrants in more leading cities. A successful approach is demonstrated by the case of Chengdu (Box 8).¹⁰²

**Box 8. Chengdu’s coordinated approach to rural poverty and urban migration.¹⁰²**

Following rapid urban growth, Chengdu, China has pursued a model of urban-rural coordination since 2003. The approach emphasizes a combination of (i) support for early rural-urban migrants to succeed in cities, and (ii) “retention effects” that raise the welfare of rural residents who remain in rural areas or move to rural towns.

The model consists of three main pillars:

¹⁰¹ Draft Cultural Heritage Bill, Pg. 10.
¹⁰² Adapted from World Bank (2018), “Rwanda’s Future Drivers of Growth”
• Supporting engines of growth: Agglomerating firms in industrial areas to encourage the creation of nonfarm jobs. Chengdu’s ‘21+10 Industrial Restructuring Plan’ consolidated 116 pre-existing industrial development areas into 21 areas, and designated 10 major towns with the greatest endowments for new industrial projects.

• Addressing rural bottlenecks: Improved rural land exchange has reduced fragmentation of rural land and improved land use efficiency. Key mechanisms included (a) farmers voluntarily giving up land for urban settlement packages, (b) rural land-for-land exchanges to reduce fragmentation, and (c) land-use rights for shareholding, whereby farmers exchange their land for shares in a specialized agricultural enterprise (which reorganizes the land to encourage large-scale production).

• Supporting rural-urban linkages: To help rural migrants to find employment in cities, government offered subsidies to urban firms that trained recent rural migrants, micro loans to a small set of migrants to support their self-employment in the city, preferential employment conditions for migrants who gave up their land to become urban residents, and subsidies to firms that provide the same social insurance to rural migrants as to urban workers.

Over the course of these policies, income has grown in Greater Chengdu, while the disparity between urban and rural areas has narrowed at a faster rate than elsewhere in China. The model has been successful in encouraging rural migrants to move to periphery townships and in creating off-farm jobs in these urban areas.

Rural towns can play an important role in service delivery for the surrounding rural areas, and through their higher amenity and density, as centers for the densification of the rural population through migration. While power and water access in more remote rural areas has improved greatly in recent years, there remain important divides in health, education, and poverty outcomes between urban and rural areas – such as the rural-urban divide in secondary school completion, literacy, and piped water and improved sanitation in dwellings. The isolation and small scale of rural settlements often makes public service expensive – from roads, sewage and water pipes, electricity and internet cables, to schools, hospitals, government services, and financial services like banking. Rural towns play a crucial role, as hubs for service delivery to which remote settlements can be connected, and as centers for the densification of the rural population through migration.

Where barriers to migration and densification in rural hubs are insurmountable, more novel ‘last mile’, non-networked, service delivery models may be necessary. ‘Last-mile’ models for basic services (such as health, water, electricity and sanitation provision) may require additional investment in technology and capacity building at the local level (Error! Reference source not found.).

Box 9. Long Distance Services: disruptive technologies for the hard-to-reach

Disruptive technologies can overcome physical distances through ICT, saving costs of delivery to reach the last mile of citizens.

One example is community health workers and mobile-based health services, which together have greatly improved the reach of medical services into remote ‘last mile’ areas. Community health workers can use mobile and tablet devices for data collection, decision support, sending reminders for follow-up appointments, and so on. Remote diagnosis via telephone conversations, or even automated services, have also improved access to medical care for people in very remote areas and drastically reduced costs of hospital visits and treatment. In Bangladesh, these savings could amount to the equivalent of US$1 billion a year, or 5 percent of 2025 expenditure; in India, the sum could be US$7 billion, or 2 percent of 2025 expenditure; while in Pakistan savings are estimated at US$1 billion, or 4 percent of 2025 expenditure. A similar program is Telemedicine, which allows patients in remote areas to access specialty doctors, such as an eye doctor, from a more basic local health centre. Research showed that only

25 out of 100 patients needed to physically see a specialist after a telemedicine consultation. The other 75 people were saved a referral to a specialist.\textsuperscript{104}

**Disruptive technology can also improve access to education in hard-to-reach communities.** This includes professional training and networking for teachers, as well as direct learning opportunities for individual, such as through online information (like Wikipedia), and online courses such as university accredited Massive Open Online Courses (MOOCs) or flexible online training in languages or coding.

**Mobile technologies have also supported cash transfer programs for rural populations lacking easy access to banking services.**

### National social policies are particularly important for Tier III settlements, and should be calibrated to address poverty and service access disparity.

Universal policies not designed with a spatial lens – like progressive national taxes and transfers, pensions, social assistance, insurance, and education policy – can have powerful impacts on poverty reduction in rural locations, by redistributing wealth and incomes across places to ensure a basic level of security and standard of living, and funding local basic infrastructure and social programs. This is reflected by the ‘scissor effect’ in France, depicted in Box 10. Such programs can particularly elderly people less likely to migrate from rural areas, and children by raising their human capital through nutrition, health, and education. The case of Colombia illustrates how applying a spatial lens to national planning can support convergence in living standards across the country. Building on this, Error! Reference source not found. in the Annex provides an example ‘gap analysis’ of each district or municipality’s performance against key service delivery metrics and development outcomes, against national averages.

#### Box 10. France’s Scissor Effect for Unity, not Uniformity.\textsuperscript{105}

In France, progressive tax and transfer policies have reduced regional disparities in consumption, while allowing production to concentrate in the most competitive locations to ‘grow the pie’ of national growth.

From 1982 to 2002, regions were becoming more disparate in the value of their production, which concentrated in the most competitive regions and major agglomerations. However, despite this concentration, disposable incomes were becoming much more equal across regions.

How was this achieved? Progressive social, tax, and transfer policies redistributed the gains from productive regions and households to the less productive. These policies were not designed with spatial goals in mind and demonstrate how ‘universal’ institutions have an important bearing on spatial outcomes. France’s outcomes have been depicted as the ‘scissor effect’ shown in the graph below, where disparity in (NUTS 2) regional incomes (blue line) has fallen while disparity in (NUTS 2) regional production rose with agglomeration and concentration (orange line). This exemplifies ‘unity, not uniformity’.

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Box 11. Colombia’s National Planning with a Spatial Lens

Colombia\textsuperscript{106} has introduced a differentiated approach to \textit{national} planning, based on \textit{regional} characteristics. For the first time, it’s National Development Plan spatializes every sectoral priority, identifying the gaps in each region with respect to national standards and goals, to identify priorities for national convergence. It also, for the first time, features regional chapters, which provide a vision for each region and outline priority projects to deliver this vision. These were later translated into 8 regional pacts, which form a commitment (and detailed action plan) between the central and local government for delivery of these projects and outcomes.

Summary

In recent years, Bhutan has made great strides in reducing poverty and enabling more equitable access to basic services, though there remain a number of challenges to achieving the goal of balanced regional development. It is important to ensure that policy and investment plans are based on a spatially-informed approach reflecting specific local demands and economic conditions in each place. As this note has detailed, the country’s urbanization presents a critical opportunity to support structural transformation toward a service-based economy with higher levels of growth and a more competitive private sector. Population and economic activity are likely to continue to concentrate in only a few large cities – Thimphu, and second-tier cities and corridors with the strongest market access or economic advantages, such as Phuentsholing. These need to be planned and managed effectively to provide infrastructure and basic services to the rapidly growing population, support stronger private sector job creation informed by private-sector-government consultation, uphold environmental protection and connectivity (avoiding congestion challenges), and strengthen connectivity to external markets.

At the same time, it is important to ensure that there is continued convergence in quality of basic infrastructure, human capital, and well-being across the country. There continues to be persistent inequality between urban and rural areas in terms of income, education, and health indicators. An equity-based approach to investments in schooling, healthcare, improved water and sanitation and so forth in rural and remote areas can provide residents in these areas with better health outcomes and skills for entry into the service and manufacturing sectors. These investments can be complemented by a more spatially-informed targeting of transfers, subsidies and other welfare programs to poor households. Smaller regional cities and towns can serve as hubs for rural service provision, densification, and off-farm income, supported by rural-urban connectivity, connectivity to external markets, and addressing institutional and human capital bottlenecks to growth. This will contribute toward both increased overall economic growth and reducing spatial inequalities.

Table 5. Summary of Policy and Investment Needs by Settlement Type

<table>
<thead>
<tr>
<th>Agent</th>
<th>Institutions</th>
<th>Basic Infrastructure</th>
<th>Human Capital</th>
<th>Connectivity</th>
<th>Local Economic Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Harmonize regional development and other policies; Business climate;</td>
<td>Monitor, and develop standards and targets, for local service provision; Asymmetric decentralization of selected services</td>
<td>National education policy; FDI and backwards linkages.</td>
<td>Strategic capital investments in roads, highways, power, and communication to connect cities and overseas markets;</td>
<td>Spatialize national economic policies; Coordinate local development activities to avert wastage/ enhance synergies.</td>
</tr>
</tbody>
</table>

\textsuperscript{106} Dorado (2018), “Rethinking Territorial Development.” Unpublished PowerPoint presentation by the National Planning Department (DNP) of Colombia, October 2018.
<table>
<thead>
<tr>
<th>Tier I Cities</th>
<th>Spatialize national planning and data.</th>
<th>to capable local governments.</th>
<th>Regulation to improve air transport, public transport, traffic management.</th>
<th>Tailored actions informed by Growth Coalitions (private-public dialogue)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid property and land markets; Local business climate.</td>
<td>Effective Urban land management; Waste, electricity, and sanitation services; Strengthen urban planning and management to accommodate new growth.</td>
<td>Tailored skill development; Incentives for worker training; Immigration, FDI, and backwards linkages</td>
<td>Public transport and traffic regulation/management; Connectivity to large external markets; Connectivity to Tier II cities and rural hinterland.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tier II Towns</th>
<th>Networking, investment promotion and branding; Local business environment.</th>
<th>Capacity development in land and urban planning to accommodate new growth; Service delivery to more rural areas.</th>
<th>Tailored skill development; Incentives for worker training; Immigration, FDI, and backwards linkages</th>
<th>Border modernization and corridor improvements; Rural-urban connectivity.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Tier III Settlements</th>
<th>Progressive national tax and transfers.</th>
<th>Support migration and access to rural service hubs; Address ‘last mile’ gaps in basic sanitation, housing, public spaces, and so on.</th>
<th>Accessibility and quality of health and school facilities; Food security interventions.</th>
<th>ICT, smartphone, and mobile banking access in remote areas; Road rehabilitation given adequate density; Address barriers to out-migration from remote locations.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Address bottlenecks in major rural value chains (such as agriculture and tourism), informed by citizen and private sector dialogue.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Annex 1: Additional Figures

<table>
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<tr>
<th>Figure 16. Land Suitable for Development Based on Topography</th>
<th>Figure 17. Topography and Location of Settlement</th>
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</thead>
<tbody>
<tr>
<td><img src="image16.png" alt="Figure 16" /></td>
<td><img src="image17.png" alt="Figure 17" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Figure 18. Access to Primary and Secondary Roads by Geowog</th>
<th>Figure 19. Developed Land for Urban or Agricultural Purposes</th>
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<tbody>
<tr>
<td><img src="image18.png" alt="Figure 18" /></td>
<td><img src="image19.png" alt="Figure 19" /></td>
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</tbody>
</table>
Figure 20. Population Density by District, 2017

Source: Bhutan Census, 2017
<table>
<thead>
<tr>
<th>District</th>
<th>Population Share (%) (PHCB 2017)</th>
<th>Access to Services</th>
<th>Human Capital</th>
<th>Connectivity</th>
<th>Welfare</th>
<th>Outcomes</th>
<th>Economic</th>
<th>Old Age Dependency Ratio</th>
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<td>Bumthang</td>
<td>2.5</td>
<td>85.8</td>
<td>35.5</td>
<td>43.6</td>
<td>94.7</td>
<td>99.2</td>
<td>71.5</td>
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<td>62.3</td>
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<td>94.4</td>
<td>99.2</td>
<td>71.7</td>
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<td>Other than Phungtsholing Thromde</td>
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<td>37.7</td>
<td>23.8</td>
<td>94.6</td>
<td>97.8</td>
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<td>68.1</td>
<td>32.8</td>
<td>25.1</td>
<td>94.1</td>
<td>99.3</td>
<td>75.7</td>
<td>99.3</td>
</tr>
<tr>
<td>Gagye Thromde</td>
<td>1.4</td>
<td>65.4</td>
<td>34.5</td>
<td>50.5</td>
<td>95.3</td>
<td>99.2</td>
<td>75</td>
<td>99.3</td>
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<tr>
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<td>2</td>
<td>63.3</td>
<td>20.5</td>
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<td>95.3</td>
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<tr>
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<td>82.8</td>
<td>37.5</td>
<td>45.3</td>
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<td>99.4</td>
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</tr>
<tr>
<td>Trongsa</td>
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<td>99.2</td>
<td>75</td>
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</tr>
<tr>
<td>Other than Trongsa Thromde</td>
<td>3.3</td>
<td>66.3</td>
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<td>94.1</td>
<td>99.3</td>
<td>75</td>
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<tr>
<td>Trashigang</td>
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<tr>
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<td>47.2</td>
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<td>98.9</td>
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<td>75</td>
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<tr>
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<td>63.1</td>
<td>38.1</td>
<td>27</td>
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<td>98</td>
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<tr>
<td>Wangdue Phodrang</td>
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<td>98.1</td>
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<td>Wangdue Phodrang</td>
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<td>73.3</td>
<td>53.3</td>
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<td>91.6</td>
<td>97.8</td>
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Municipal Governance and Finance Policy Paper
Bhutan Urban Policy Notes

Municipal Governance and Finance Policy Paper

This paper is part of a series of four Urban Policy Notes that provide a critical review on emergent challenges to Bhutan’s increasing urbanization and its ramifications for growth, livability and sustainability in line with the directives of the 12th Five Year Plan (FYP) and the Vision 2020. The four notes are: (a) Regional Development, (b) Municipal Governance and Finance, (c) Affordable Housing and (d) Urban Resilience. These notes build on the long engagement between the Royal Government of Bhutan (RGoB) and the World Bank on urban issues as well as the experiences of urban operations under Bhutan Urban Development Projects I (1999-2006) and II (2010-2019) and are intended to support the RGoB on key and emerging urban topics and guide Bank’s future analytical and investment support in the urban sector.

Executive Summary

Bhutan’s rapid economic growth and expansion of urban population have highlighted the need for improved urban governance and management and the demand for higher order urban services. The Royal Government of Bhutan (RGoB) has taken important steps, over the years, to strengthen the role and capacities of Thromdes, Dzongkhags and Gewogs in service delivery and citizen engagement. Nevertheless, municipal governments in Bhutan, especially the four Class A Thromdes, continue to face policy and institutional barriers that limit their ability to become effective, responsive and accountable in urban planning and management, service delivery, and local economic development.

Since the early 1980s, decentralization has been a key policy objective of the RGoB. Article 22, Section 1 of Bhutan’s Constitution states that “(P)ower and authority shall be decentralized and devolved to elected local governments to facilitate the direct participation of the people in the development and management of their own social, economic and environmental well-being”. Promoting a “Just, Harmonious and Sustainable Society through Enhanced Decentralization” is a central objective of the 12th Five Year Plan (FYP), which has defined decentralization as “Empowering local governments through provision of greater financial, planning and administrative responsibility and authority”.

Following up on this, the Gross National Happiness Commission (GNHC) has developed a framework to divide roles and delineate responsibilities amongst the central agencies, Thromdes, Dzongkhags and Gewogs based on three key principles: (a) assignment of expenditure responsibilities, (b) assignment of tax and revenue sources, and (c) intergovernmental fiscal transfers between the national government and local governments. Bhutan’s functional and fiscal assignments, which are a combination of devolution, delegation and deconcentration, are largely consistent with the norms followed in many smaller countries, but they have not been matched with concurrent expansion of resources, strengthening of local government systems and enhancement of local accountabilities, all of which would create the capabilities and incentives for better municipal government performance. Thus:

- There are no institutional platforms in Bhutan for systematic exchange of information and dialog between the central government, the Thromdes and other local governments, thus limiting avenues for intergovernmental coordination and cooperation. The prevailing financial management systems also do not provide information on operating and financial performance of the Thromdes to the central government and citizens, thus reducing their transparency and accountability.
The Thromde Finance Policy (2012) states that Thromdes shall receive annual Current and Capital Grants until such time when they are able to sustain on their own resources. The intergovernmental fiscal transfer system for Thromdes, unlike those for Dzongkhags and Gewogs, is based on ad hoc grants from the national government. In the absence of objective, equitable and transparent criteria for grant allocation to Thromdes, the outcomes are dependent on bargaining power and influence of Thromde representatives. The ad hoc nature of the process reduces predictability in budgeting and incentives for greater own revenue collection for the Thromdes.

On average, the Thromdes are dependent on the national government for 32.5 percent of their current expenditures and about 78 percent of their capital expenditures. Weak revenue mobilization is partly due to issues with the existing revenue management system, among them: limited revenue authority of Thromdes, including the lack of authority to raise tax rates on their own; absence of incentives to strengthen revenue collection since Thromdes are considered budget agencies just like other government ministries and agencies; and the limited institutional capacity of Thromdes to assess and administer local taxes.

Currently there is no dedicated staff for Thromdes and the staff who get posted to Thromdes are from the general civil service cadre. This has resulted in frequent turnover of staff with hardly any specialization on issues relating to local government administration. Further, avenues for training and capacity building of staff who work in local governments exist but are rather limited.

Although permitted by law, private sector participation in the delivery, management or financing of urban services is nascent and rather limited presently. This is due to a combination of issues, among them, limited capacities of Thromdes and the private sector and the absence of an enabling regulatory and financing framework that incentivizes the stakeholders, including ways to assess and appropriate risks and returns across the public and private sectors.

Accountability systems, both upward to the central government and downward to citizens, while improving over time, can be further strengthened. For example, local governments are audited regularly, but there are no sanctions for receiving adverse or disclaimer audits. Performance audits of local governments are not backed up by incentives for the leading performers or sanctions and follow ups for the lagging ones. Avenues for direct citizen accountability are also limited presently.

Finally, Bhutan’s decentralization policy, while having a central place in the 12th FYP, is not fully coordinated with or supported by other important policy and program initiatives of the Government, for example, in areas such as economic growth, regional development, infrastructure, agriculture, trade and skill development. This reduces its effectiveness.

As Bhutan gets more urbanized, Thromdes and other municipal governments will become key institutional actors to ensure good quality services, attract private investments to cities and provide proximate and accountable outreach to citizens. A flexible and incremental roadmap of further reforms is necessary to deepen RGoB’s policy of decentralization and strengthening local governments. This would include key policy and institutional considerations, both at central and local levels, as noted below.

Asymmetric model of local autonomy: Bhutan’s decentralization strategy should complement its strategies in economic and human development, as well as inform its public investment programs. Consistent with the Regional Development paper’s proposal for three tiers of settlements, Bhutan could
consider an asymmetric model of decentralization and local autonomy. This would entail two critical policy imperatives. First, encouraging greater population consolidation, with a view to improve quality and reduce cost of service provision, as well as to enhance safety, resilience and economic agglomeration. While this is already happening organically, RGoB could support this process through improving connectivity to and infrastructure in key cities and towns. Second, imparting greater powers, responsibilities and resources to Tier I (Thimphu and Phuentoshling) and Tier II municipal governments (e.g. Gelephu, Samdrup Jhonkar and Mongar) to set them on a path of greater fiscal and administrative self-reliance and direct citizen accountability, and enabling them to better utilize their local social and economic endowments.

Clarifying local responsibilities and authorities: In line with the above, and with the establishment of more Thromdes, institutional roles and responsibilities between the deconcentrated administrative set up (Dzongkhags reporting to the Ministry of Culture and Home Affairs) and the decentralized local governments (Thromdes) as well as that of Central Government units, such as the Ministry of Works and Human Settlements, GNHC and Ministry of Finance, would need to be clarified to ensure coherent governance arrangements.

Establishing intergovernmental institutional modalities: More decentralized form of local governance would require institutional modalities to ensure vertical and horizontal coordination and cooperation across the different levels of governments. In establishing institutional modalities for intergovernmental dialog and coordination, keeping in mind the relatively small size of its local government sector, RGoB could consider one of three institutional models of intergovernmental cooperation that exist in other decentralized countries: independent grants commission (India, Uganda, South Africa), intergovernmental forum (Canada, Germany) and administrative bodies(arrangements (the Philippines).

Strengthening municipal finances: With greater devolution, there is a need for a stronger local government financing system. Considerations for establishing such a system include a clear policy on vertical fiscal balance and equalization, to not only strengthen the local government system, but also serve as a positive policy for regional convergence; adoption of fiscal and institutional incentives, such as performance transfers, hard budget constraints and service delivery benchmarking, for greater own source revenue collection, more efficient public expenditures, and transparency and predictability in the fiscal regime. To strengthen own source revenues of Thromdes, regulatory empowerment as well as systems and capacity support are required, which can be complemented with incentives such as performance transfers. Finally, ensuring regulatory and administrative ease of managing such a system is critical, since the overall size of the local government system is small and the capacities are limited.

Improving municipal institutional capacities: As authorities and responsibilities of Thromdes and other municipal governments increase, issues of staffing and human resource capacity building need to be addressed. A differentiated approach between the four Thromdes and other smaller urban Dzongkhags may be merited to address the higher order needs of the larger municipal governments. RGoB may consider a trained cadre of municipal staff, especially focusing on core competencies such as revenue, expenditure and financial management, urban management, service delivery, etc., as well as flexible models for staffing through which the larger Thromdes, are able to provide better incentives and to tap the market for higher level technical skills in a flexible manner.

Reinforcing citizen accountability in municipal governance: As Thromdes become fully functional municipal governments, they would need to strengthen accountability to their constituents as part of enhancing the overall social contract. Appropriate structures for effective citizen engagement would need to be bolstered in the Thromde governance system. To the extent such participatory forums and processes can be embedded within the local government systems and processes and complement upward accountability arrangements such as public expenditure and financial management systems, these have greater chance of success and sustainability.
**Strengthening information systems:** Finally, there is a need to strengthen information systems for informed decision making. This involves strengthening standards, systems, modalities and personnel to collect, catalogue, analyze and transmit key data on local governance, service delivery and local economic development to key public and private stakeholders.

I. **Introduction**

Although the population of the Kingdom of Bhutan is small (around 735,000 in 2017), its urban population growth rate (2.5 percent annually) is among the highest in South Asia. According to the most recent census data, 37.8 percent of the total population is estimated to be urban. The capital city, Thimphu, is the largest urban agglomeration followed by Phuentsholing, Gelephu and Samdrup Jongkhar are the other urban areas in Bhutan.

Since the early 1980s, decentralization has been a key policy objective of the RGoB to empower people and ensure balanced and equitable socio-economic development. Proving further impetus to this, in 2008, the ideals of democratic and decentralized governance were formally enshrined in the Constitution. Article 22 of the Constitution of Bhutan establishes the principles of decentralized governance. It “provides for direct participation of the people in the development and management of their own social, economic and environmental well-being through decentralization and devolution of power and authority”. It also provides for the formation of local governments for the development, management and administration of areas under their respective jurisdiction. Per Article 22, Section 1 of the Constitution “Power and authority shall be decentralized and devolved to elected local governments to facilitate the direct participation of the people in the development and management of their own social, economic and environmental well-being”.

Decentralization policy is expected to get a boost in the 12th FYP. The Gross National Happiness Commission (GNHC) has announced that the objective of the 12th FYP is to promote “Just, Harmonious and Sustainable Society through Enhanced Decentralization”. The 12th FYP has defined decentralization as “Empowering local governments through provision of greater financial, planning and administrative responsibility and authority”. The process is expected to unfold mainly in three areas of policy, budget and human resources. In support of the objective of enhancing decentralization, resources have been doubled for local governments in the 12th FYP compared to 11th FYP, resulting in an equal share of capital resources as the Central Agencies. Additionally, a revised division of responsibilities framework also provides for greater decentralization of roles, functions and authority to local governments.

Today, local governments – particularly Thromdes, which are urban local governments – face many constraints limiting potential. As Bhutan urbanizes, Thromdes will play a more prominent role in governance, service delivery and local economic development. To empower them, it is important to continue the current trajectory of deepening decentralization and strengthening local governments. This paper identifies the key constraints facing local governments (Thromdes in particular) and presents critical policy choices that can enable them to play their parts in Bhutan’s development.

II. **Legal Frameworks and Structure Governing Local Governments**
A number of acts and regulations define the policy mandates for local governments, among them:

- **The Local Government Act of Bhutan, 2009** - The institutional structure, responsibilities, and powers of the local governments have been enshrined. Subsequently, the Local Government (Amendment) Act of Bhutan 2014 included 30 amendments in various sections.
- **The Public Finance Act of Bhutan, 2007** - Governs the financial management aspects of the functions of local governments.
- **The Thromde Rules of the Kingdom of Bhutan, 2011**
- **The Thromde Finance Policy, 2012** - Enables Thromdes to effectively carry out their responsibilities based on sound financial management principles.

Local governments in Bhutan include Thromdes, Dzongkhags and Gewogs. Clause 1 of Article 22 of the Constitution states that power and authority shall be decentralized and devolved to elected local governments. Clause 2 further specifies that Bhutan shall have local governments in each of the twenty Dzongkhags (districts), comprising of the Dzongkhag Tshogdu, Gewog Tshogde and Thromde Tshogde. The objective of local government, as specified in Clause 4 (b) of Article 22 of the Constitution, is to ensure the provision of services to communities in a sustainable manner.

The Local Government Act, 2009 provides the legal for establishing local governments in each of the twenty Dzongkhags (or districts). These are overseen by the Ministry of Home and Cultural Affairs. The Act tasks all local governments with a variety of objectives, including promoting Gross National Happiness, providing democratic and accountable government, preserving culture and tradition, promoting development, protecting public health, and discharging any other duties specifically created by any other law. Local governments are headed by a Chairperson and a Deputy Chairperson who lead, represent, and manage their respective administrations, each answering to the body above it and to the Parliament. All local governments are administrative divisions and are prohibited to make laws; however, they are empowered to make rules and regulations consistent with law as established by the Parliament. Members of all local governments are in office for five-year terms, or until the local government is dissolved.

Thromdes are urban local governments. Per the Local Government (Amendment) Act, 2014, the Parliament shall declare a certain geographical or administrative or economic area of the country as Thromde based on the recommendation by the government. The demarcation of Thromde boundary shall be carried out in consultation with the National Land Commission Secretariat (NLCS), the concerned local authority, and land owners. Currently, there are four ‘class A’ Thromdes in Bhutan: Thimphu, Phuentsholing, Gelephu, and Samdrup Jongkhar. Although some steps were taken to declare all the district towns as thromdes, this process has been on hold following a Supreme Court order in August 2016.

### III. Key Functions of Local Governments

A division of responsibilities framework (DoRF) between local governments and the national government was initially developed by the GNHC in 2012. This provided a division of roles and delineation of responsibilities amongst the central agencies, Class “A” Thromdes, Dzongkhags and Gewogs based on the following key principles: (a) assignment of expenditure responsibilities, (b) assignment of tax and revenue sources, and (c) intergovernmental fiscal transfers. The DoRF has been amended in the 12th FYP, based on the following principles:

- Decentralize expenditures for assigned functions based on efficiency, proximity and competency factors to allow greater local autonomy and flexibility in terms of priority setting and choices for enhanced planning, implementation and provision of efficient public goods and services;
• Strengthen coordination and implementation of policies, plans and programs amongst different levels of government by providing optimum clarity of roles and distinct division of responsibilities;
• Provide a basis for resource sharing between Central agencies and the LGs for funding functions and provision of an “investment menu” for all levels of government; and
• Determine, plan and implement other aspects of decentralisation such as i) size, levels and capacities of functional burden, and ii) human resource and staff allocation for functions.

Following subsequent changes to this framework, the most recent assignment of responsibilities in key sectors as per the 12th FYP is noted in Table 1.
Table 1. Functional Assignments under the 12th FYP

<table>
<thead>
<tr>
<th>Function</th>
<th>Central</th>
<th>Thromde</th>
<th>Dzongkhag</th>
<th>Gewog</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community centers, bus stops, bus terminals, taxi parking</td>
<td>Regulate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Gewog center roads</td>
<td>Regulate</td>
<td></td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
</tr>
<tr>
<td>Farm roads, mule tracks</td>
<td>Coordinate</td>
<td>Inter-Gewog</td>
<td></td>
<td>Intra-Gewog</td>
</tr>
<tr>
<td>Waste management</td>
<td>Regulate</td>
<td>Maintain</td>
<td>Maintain</td>
<td></td>
</tr>
<tr>
<td>Water source protection</td>
<td>Regulate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Market sheds</td>
<td>Coordinate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Farm shops</td>
<td>Coordinate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Human wildlife conflict management</td>
<td>Regulate</td>
<td>Manage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigation channels/river protection works</td>
<td>Coordinate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Rain water harvesting</td>
<td>Coordinate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Livestock, agriculture, horticulture farms</td>
<td>Coordinate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Electric, solar fencing</td>
<td>Regulate</td>
<td></td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Veterinary hospitals</td>
<td>Construct</td>
<td>Maintain</td>
<td>Maintain</td>
<td></td>
</tr>
<tr>
<td>District hospitals</td>
<td>Construct</td>
<td>Maintain</td>
<td>Maintain</td>
<td></td>
</tr>
<tr>
<td>Rural water supply schemes</td>
<td>Regulate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Eco-tourism</td>
<td>Regulate</td>
<td>Undertake</td>
<td>Undertake</td>
<td>Undertake</td>
</tr>
<tr>
<td>Higher, middle and lower secondary schools</td>
<td>Regulate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Primary schools, extended classrooms, ECCD, non-formal education</td>
<td>Regulate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Disaster adaptation and mitigation</td>
<td>Regulate</td>
<td>Implement</td>
<td>Implement</td>
<td>Implement</td>
</tr>
<tr>
<td>Dzongs</td>
<td>Construct</td>
<td>Maintain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monasteries and temples</td>
<td>Regulate</td>
<td>Construct and maintain</td>
<td>Construct and maintain</td>
<td></td>
</tr>
<tr>
<td>Small, cottage and medium industries</td>
<td>Regulate</td>
<td>Initiate</td>
<td>Initiate</td>
<td></td>
</tr>
</tbody>
</table>


These functional assignments, which comprise a combination of devolution, delegation and deconcentration, are largely consistent with the norms followed in many smaller countries, wherein the central government stipulates standards and regulates the services while local governments manage service provision, either directly or through other service providers. The functional assignments also distinguish between different types of local governments—Thromdes, Dzongkhags and Gewogs—but the distinctions are rather limited. This is due to the small size and limited capacities of all types of local governments. Further, from these assignments, it is unclear if the functions are devolved, deconcentrated or delegated. In
this regard, one issue that is highlighted by recent assessments\(^{108}\) is the ‘deposit-work system,’ whereby the activity may be budgeted with a central ministry, but its execution is delegated to the Dzongkhag/Gewog administration. This creates three issues. One, the capacity of Dzongkhags and Gewogs gets stretched since they are not provided additional staff for such delegated services. Two, Dzongkhags and Gewogs local governments do not get credit for the delegated activities in their performance measurement as these are accounted in the books of the central ministry. Three, many of these activities are actually local; so those should have been devolved in terms of planning, budgeting and implementation.

<table>
<thead>
<tr>
<th>Box 1. Different Forms of Decentralization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deconcentration</strong> is the redistribution of decision making authority and financial and management responsibilities among different levels of the central government. It is often considered the weakest form of decentralization and is used most frequently in unitary states. Within this structure policies and opportunities for local input vary: deconcentration can merely shift responsibilities from central government officials in the capital city to those working in provinces or districts, or it can create strong field administration or local administrative capacity under the supervision of central government ministries.</td>
</tr>
<tr>
<td><strong>Delegation</strong> is a more developed form of decentralization wherein central governments transfer responsibility for decision-making and administration of public functions to semi-autonomous organizations not wholly controlled by, but ultimately accountable to, it. This is done by creating public enterprises or corporations, housing authorities, transportation authorities, special service districts, semi-autonomous school districts, regional development corporations, or special project implementation units that usually have a great deal of discretion in decision-making.</td>
</tr>
<tr>
<td><strong>Devolution</strong> is the transfer of authority and responsibility for services to local governments that elect their governors/mayors and local councils, raise their own revenues, and have independent authority to make investment decisions. In a devolved system, local governments have clear and legally recognized geographical boundaries over which they exercise authority and within which they perform public functions.</td>
</tr>
</tbody>
</table>

Bhutan’s approach to decentralization combines all the above forms of decentralization. While there is an effort to devolve greater authorities, resources and capacities to the four Thromdes, in the case of Dzongkhags and Gewogs, the RGoB has pursued a policy of delegation and deconcentration. This mixed model in itself is not problematic—and in some ways, may be well suited for Bhutan—but its application should be based on clarity in policy and incremental reform, rather than ad hoc steps. Thus larger cities and regions with significant endowments may benefit from more devolved approaches, while smaller towns could be better supported through more effective deconcentration of service delivery. In select areas or sectors, on a case by case basis, delegation of certain functions can prepare the ground for greater devolution.

Source: [http://web.worldbank.org/(

IV. Legal and Policy Foundations of Local Government Finance

Article 22 of the Constitution outlines the financial powers and entitlements to local government institutions. The relevant clauses, Clauses 18 (b) to (f) of Article 22, state that local governments are:

- Entitled to levy, collect and appropriate taxes, duties, tolls, and fees, in accordance with the procedures and subject to limitations, provided for by Parliament by law.
- Entitled to adequate financial resources from the Government in the form of annual grants.
- Allocated a proportion of national revenue to ensure self-reliant and self-sustaining

The Thromde Finance Policy (2012) formulated by the MoWHS states that Thromdes shall receive adequate financial resources from the government in the form of annual grants until such time when they are able to sustain on their own resources. The grants shall be in the form of Current and Capital Grants. These grants shall be used for carrying out ‘own services,’ while for any ‘agency services,’ Thromdes shall receive grants from the respective agencies.

The Policy further states that Thromdes shall receive Current Grants to cover the operating deficit for own services, and that such grants shall be phased out based on an agreement signed between the Ministry of Finance and the Thromdes. In addition, Thromdes shall receive Capital Grants to the extent they cannot be financed from own revenues. Capital Grants shall be used for development of urban infrastructure and, where possible, Thromdes shall provide matching contributions. Thromdes shall submit justifications along with the sources and application of funds. Any unutilized balance of Capital Grant shall be adjusted from subsequent Capital Grants to the Thromdes.

The Municipal Finance Policy details the ranges for various tax rates which can be set by the Local Government. The Policy also provides for the setting of a ‘Thromde Finance Committee,’ which shall provide the institutional framework for more transparent sharing of resources between the Central Government and Thromdes.

V. **Intergovernmental Fiscal Transfers to Local Governments**

Article 22, Clause 18, sub-clauses (c) and (d) of the Constitution state that local government institutions are entitled to a share of the national revenue in the form of annual grants to achieve financial self-sustenance. Section 218 of the Local Government Act of 2009 states that local governments shall be allocated a proportion of the national revenue to ensure self-reliance and sustenance, for undertaking programs, activities, and for managing and maintaining infrastructure and delivery of services. Section 63 (a) of the Act further states that the Thromde Tshogde shall review and approve the annual budget to be met from its resources and review and endorse budget proposals for submission to the Ministry of Finance (MOF) for RGoB funding, where necessary. Although these provisions of the Constitution and the Local Government Act, 2009 allow local governments to approach the national government for funds to meet their expenditures, there is some ambiguity as to whether these provisions are valid for both current and capital expenditures or only for capital expenditures.

Resource allocation to local governments is based on the overall resource availability of the RGoB, the Budget Policy and Fiscal Framework Statement (BPFFS), macroeconomic framework and debt sustainability. Based on the resource envelope projected by Macroeconomic Fiscal Coordination Committee (MFCC) and after the assessment of the bottom-up resource requirement of local governments, Dzongkhags and Gewogs are allocated Capital grants for the five-year period. Subsequently, they receive annual grants directly from the government based on annual allocation for plan outlay. The formula-based mechanism is discussed in the next section. Formula based transfers from GNH are only applicable to Dzongkhags and Gewogs, and not yet to the Thromdes.
Allocation of capital grants under the 11th FYP: Five-year Capital grant ceilings for individual local governments were determined by the GNHC after taking into consideration the resource envelope projections given by the MFCC and bottom-up assessment of capital resource requirement of local governments, which is based on local government plans, implementation capacity, devolution of powers and responsibilities, past trends and needs of the local communities. The local government plans were formulated based on the Local Government Act 2009, the 11th FYP preparation guidelines, the Local Development Planning Manual, the Thromde Structural Plans, the Local Area Plans and the indicative five-year resource envelope. The process involved close consultations with communities to assess their needs and aspirations. These were further discussed at the Gewog Tshogdes, Dzongkhag Tshogdus, and Thromde Tshogdus before being finalized and approved. The draft local government 11th FYP was then submitted to the GNHC for further discussion and coordination at the national level. Once the five-year capital resource outlay was decided by GNHC, the Department for National Budgeting (DNB) provided the annual ceilings to the local governments in the budget call for submission of budget proposal for the coming year.

Table 2. Capital Grant Allocations under 11th FYP

<table>
<thead>
<tr>
<th>Amount (billion Nus)</th>
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</thead>
<tbody>
<tr>
<td>Total Capital Budget 92</td>
</tr>
<tr>
<td>Share of local governments 25</td>
</tr>
<tr>
<td>Share of Dzongkhags 9</td>
</tr>
<tr>
<td>Share of Gewogs 6</td>
</tr>
<tr>
<td>Additional allocation to Dzongkhags and Gewogs 5</td>
</tr>
<tr>
<td>Total allocation to rural local governments 20</td>
</tr>
<tr>
<td>Share of Thromdes 5</td>
</tr>
</tbody>
</table>

Source: GNHC

In addition to the Nu. 25 billion earmarked as capital allocation to the local governments, a provision of Nu. 4.5 billion was kept under Ministry of Education for Dzongkhag Education Services. The allocation under the targeted poverty intervention programs are also over and above the local government allocation. Moreover, many centrally executed plans and programs ultimately benefit the local governments and communities, although the resources are reflected under the sector concerned. It must be noted that while other sectoral activities at the local level are prioritized and planned by local governments, the planning for education activities is centrally coordinated by the Ministry of Education, given the strategic importance of the education sector and to ensure that all children across the nation have equal access to quality, adequate, efficient and cost-effective education services. The implementation is done by the local governments with resources provided by the Ministry of Education.

Based on the DoRF, past expenditure trends, and resource availability, the Capital Grants for Dzongkhags, Gewogs and Thromde ‘A’s for their 12th FYPs have been doubled to Nu. 50 billion from Nu. 25 billion in the 11th FYP. With this quantum increase in capital grants, it is important for the RGoB to ensure that the enhanced amounts are used in ways that advance the objectives of the 12th FYP on decentralization. Towards that, there may be a need to review and strengthen, as appropriate, the norms and guidelines for the allocation, modalities, use and accounting of these grants, and also scale up efforts to build capacities at the local government level for effective use of the enhanced resources.
VI. **Intergovernmental Fiscal Transfers to Dzongkhags and Gewogs**

**Allocation of Current Grants:** Allocation of Current Grants is subject to the criteria determined by the DNB, while earmarked funds are allocated based on norms of the concerned central agencies and departments. Current Grants are allocated to Dzongkhags and Gewogs based on the annual ceilings given by DNB in the budget call circular. These ceilings are based on past expenditure by the Gewogs and Dzongkhags. Since revenue generating capacities of these local governments are negligible, nearly all of their recurrent expenditure is financed through DNB. The proposal is submitted by the Dzongkhags and Gewogs and after deliberation with DNB officials the allotment is made.

**Allocation of Capital Grants:** Allocation of Capital Grants to Gewogs and Dzongkhags is based on the principles of equity, transparency and objectivity. A formula-based resource allocation mechanism was first launched in the 10th FYP. The formula was finalized by the GNHC after discussions with representatives of Dzongkhags and Gewogs. The criteria and their weights are subject to review and refinement from time to time depending on the current conditions and changes in development situation. The new system of resource allocation has provided greater predictability and higher flexibility to local governments.

The total resources provided for local governments are assigned on a 60:40 ratio between Dzongkhags and Gewogs. Following this ratio, the capital grants are allocated based on the following four factors with different weights attached to them:

- **Size of population:** In the 10th FYP, 70 percent of the total resource allocation was allocated based on population, but in the 11th FYP allocation this has been reduced to 35 percent.

- **Geographical size:** Local governments which have larger areas have higher service delivery costs due to longer distances. This is factored into the allocation formula; thus, 10 percent of the total resource allocation is determined by the geographical size of the local governments.

- **Multidirectional Poverty Index:** Poverty incidence which had a weightage of 25 percent of the total resource allocation was replaced by a refined measurement of multidimensional poverty index with a weight of 45 percent. The objective was to provide extra support to local governments with higher levels of poverty.

- **Transport Cost Index:** A new criteria on transport cost index with a weight of 10 percent has been included to account for high cost of investments in interior and remote Dzongkhags and Gewogs that face higher transportation costs.

Annual capital grants have been falling over the period, while current grants have been steadily increasing. This is because comparatively less Capital Grants are released in the initial phase of a FYP as the inception reports and utilization plans are prepared in the earlier years of the Plan period while execution is undertaken in the later years of a FYP. For example, more capital grants were released in 2010-11 to 2012-13, which were the final years of 10th FYP, compared to 2013-14 and 2014-15, which were the initial two years of 11th FYP. This approach is not desirable for Capital Grants as there is limited capacity to utilize the funds around the end of a FYP. It is better to release more resources in the initial plan period to promote better planning and budgeting, and improved utilization.
VII. Intergovernmental Fiscal Transfers to Thromdes

The 2011 Thromde Rules mandate the establishment of democratically elected local governments with an enhanced autonomy and accountability with regards to planning, staffing, finance and budget. The Rules introduce classification of urban areas based on their socioeconomic profiles, such as population and economic activities, and assigns clearer responsibilities based on the classification. Thromdes are administered independently by a Thromde Tshogde if sufficiently developed and populated (Class ‘A’ Thromdes) or directly by Dzongkhag Administration or the Gewog Administration, as decided by the Government (Class ‘B’ Thromdes and Yenlag Thromdes). Each Thromde Tshogde is composed of seven to ten elected members and is headed by a Thrompon (mayor).

Currently, there are four Class A Thromdes in Bhutan -- Thimphu, Phuentsholing, Gelephu and Samdrup Jongkhar. Thromde Tshogdes are empowered to levy taxes on land, property, property transfer (sales tax) and "betterment", to regulate advertising, and to enforce public health and safety rules. Thromdes are also authorized to levy special taxes on vacant and underdeveloped land to encourage development and to raise and spend money to promote local economic development.

Prior to the demarcation of Class A Thromdes, Thimphu and Phuentsholing city corporations were under the Ministry of Works and Human Settlement (MoWHS) and received their shares as part of the MoWHS budget. At present, all four Thromdes function autonomously and submit their budget requirements to the MoF directly. The resource allocation to Class A Thromdes are not formula, but need-based, mainly due to their social, economic and environmental diversity and complexity. The grants are fixed based on their requirements and the availability of funds with the RGoB. Although the central government tries to fill the financing gap of Thromdes, it is very much ad-hoc and not based on any specific principles. There is a widely-held view that the four Class A Thromdes should eventually become self-reliant and meet their recurrent expenditures from their own revenues.

Allocation of Current Grants: Current Grants are allocated to Thromdes annually through negotiation between the MoF and the respective Thromde during budget preparation. The ceilings to the Thromdes are decided by the DNB. The ceilings for a particular financial year are based on the actual withdrawal made by the Thromdes in the previous year and these ceilings are sent with the budget call. Given the ceilings, Thromdes submit their budget proposal to DNB with justification for proposed requirements. Thromdes submit their audited accounts to estimate their current account deficits. In the final stage, negotiations are held between DNB and Thromdes regarding filling the deficits in meeting recurrent expenditure. While approving the allocation, DNB takes into consideration the following key factors:

- Trends in past recurrent expenditure
- Disallowing any wasteful expenditure
- Incentivizing Thromdes to generate own revenue through better management and reforms in tax administration.

Current Grants to the Thromdes during four financial years (FY 12-15) show that, among the four class A Thromdes, as of 2014-15, only Phuentsholing has been able to cover its recurrent expenditures with its own internal revenues during the last four fiscal years (see Table 3). On the other hand, Thimphu is unable to finance its operating expenditures from its own sources and hence requires current grant support from the RGoB. The other two class A Thromdes, Samdrup Jongkhar and Gelephu, were established relatively recently and have limited resources and institutional capacity. At present Samdrup Jongkhar and Gelephu are able only to meet 31 percent and 35 percent respectively of their recurrent expenditure from their own internal revenues.
resources. As such, these two Thromdes will require more substantial RGoB support to meet their recurrent (as well as capital expenditures) for the foreseeable future.

| Table 3. Allocation of Capital and Current Grants to Thromdes (in million Nus) |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                 | Thimphu          | Phuentsholing    | Samdrup Jhonkar  | Gelephu          |
|                                 | Capital  | Current | Capital  | Current | Capital  | Current | Capital  | Current |
| 2011-12                          | 145.485  | 69.449  | 67       | 0       | 45.3    | 14.541  | 86.289  | 24.407  |
| 2012-13                          | 67.16    | 20      | 75.6     | 0       | 70.68   | 14.895  | 25.22   | 26.5    |
| 2013-14                          | 114.45   | 41.531  | 95.668   | 0       | 58.7    | 24      | 33.5    | 21.509  |
| 2014-15                          | 110      | 40      | 100      | 0       | 100     | 25      | 90      | 22      |

Source. DNB

Allocation of Capital Grants: On Capital Grant allocations, once the FYP outlay ceilings are given by the GNHC, the annual ceilings are determined by the DNB. These ceilings are conveyed to the respective Thromdes in the Budget Call Circular. Given these ceilings, the Thromdes respond with their proposals containing the planned projects over the coming year. In the final stage, negotiations are held between the GNHC, the DNB, and individual Thromdes for approval of capital grants. Over the fiscal year, the funds for capital projects are released by the DNB to the respective Thromdes as and when the proposal is submitted by the Thromdes. A certain degree of freedom is given to Thromdes with respect to utilization of capital grants as per their requirement; therefore, these capital grants can be classified broadly as untied grants. Such authority is not available to Gewogs and Dzongkhags.

In the 11th FYP, the total Capital Grants given to Class ‘A’ Thromdes was Nu. 5 billion. Out of this, Nu. 2 billion was earmarked for Thimphu due to its area and population. In addition, Thimphu being the capital has also received additional resources. The other three Thromdes were allocated Nu. 1 billion each. An additional allocation of Nu. 5 billion was earmarked for municipal infrastructure and services for the four class “A” Thromdes. Although Thimphu Thromde received largest total allocation, in per capita terms, it received the lowest share among the four Thromdes, as seen below.

Figure 1. Annual Per Capita Grant Allocations
Key issues with respect to fiscal transfers to Class A Thromdes:

- The intergovernmental fiscal transfer system for Thromdes is not principle-based but dependent on ad hoc grants from the DNB for both recurrent and capital expenditures. While there are specific guidelines and criteria for making transfers to Dzongkhags and Gewogs, no such guidelines are available for the Thromdes. Neither the Local Government Act, 2009 nor the Thromde Rules, 2011 have any definite formula or rule for transfers to Thromdes. The Municipal Finance Policy, 2012 states that the grant for meeting operating deficit would be reduced gradually for Class A Thromdes, while Thromdes build up their revenue base.

- At present, the Thromdes feel that, in the absence of transparent and predictable transfer mechanism, the outcomes are dependent on bargaining power and influence of their representatives. There should be objective, equitable and transparent criteria for grant allocation to Thromdes that would provide predictability in budgeting and strengthen incentives for greater own revenue collection.

- There is an absence of monitoring and evaluation mechanisms to assess the level of utilization of grants at the Thromde-level. The utilization of past year’s Current Grant is not reviewed during the allocation of Current Grants for the next year. Only the quarterly amount withdrawn during the past year is available with the DNB. There is a need to enhance the monitoring and evaluation system to ensure that grants are utilized in an efficient manner.

- There are no institutional platforms for a systematic exchange of information to communicate the priorities and needs of the Thromdes to the DNB and for the DNB to understand the real resource requirements of Thromdes. The discussions during the time of the budget formulation often tend to be negotiations between the Thromdes and the DNB, with each side not well informed about each other’s requirements and constraints.

- The prevailing municipal financial and management systems do not have the necessary capacity to convey information on operating and financial performance of the Thromdes to the DNB and stakeholders to increase the transparency of Thromdes and reduce the risks arising from asymmetric information that drives budget and plan discussions at present.

VIII. Own Revenues of Local Governments

Generally, all types of local governments are heavily dependent on the central government for their revenues. This is particularly so for Dzongkhags and Gewogs given their low share of economic activities. Section 57 of the Local Government Act empowers Gewogs to levy selected taxes, such as land tax, building tax, cattle tax, grazing tax and entertainment tax (Table 4 and Box 2). However, in practice, these local governments are fully dependent on the central government for financing their budget. Their local tax bases are small and mostly untapped. At present, there is no locally generated revenue financing the budget expenditures. For example, in FY 2016-17, fiscal transfers made up 86.6 percent of Dzongkhag financing, with the balance 12.7 percent coming from grant funding and 0.7 percent from loan financing.
The Local Government Act, 2009 codified the status of the Thromdes as the third level of administrative division and reaffirmed their authority to levy taxes. The list below gives an overview of tax and non-tax revenue sources.

Table 4. List of Tax and Non-Tax Revenue Sources for Local Governments

<table>
<thead>
<tr>
<th>Type of Own Revenue Source</th>
<th>Break-up of Revenue source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax revenue</td>
<td></td>
</tr>
<tr>
<td>Land Tax</td>
<td></td>
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<tr>
<td>Vacant Land and Underdevelopment Tax</td>
<td></td>
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<tr>
<td>Property Transfer Tax</td>
<td></td>
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<tr>
<td>Entertainment Tax</td>
<td></td>
</tr>
<tr>
<td>Betterment Tax</td>
<td></td>
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<tr>
<td>Non-tax revenues - fees</td>
<td></td>
</tr>
<tr>
<td>Land Development and Subdivision</td>
<td></td>
</tr>
<tr>
<td>Land Demarcation</td>
<td></td>
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<tr>
<td>Building Permit</td>
<td></td>
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<tr>
<td>Land Registration</td>
<td></td>
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<tr>
<td>Site Plan</td>
<td></td>
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<tr>
<td>Vehicle Parking</td>
<td></td>
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<tr>
<td>Market Vendor</td>
<td></td>
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<tr>
<td>Advertisement</td>
<td></td>
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<tr>
<td>Building Approval</td>
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<tr>
<td>Land leasing</td>
<td></td>
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<tr>
<td>Delayed Payment</td>
<td></td>
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<tr>
<td>Other fees</td>
<td></td>
</tr>
<tr>
<td>Non-tax revenues -charges</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Sewage</td>
<td></td>
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<tr>
<td>Connection charge</td>
<td></td>
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<tr>
<td>Solid waste</td>
<td></td>
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<tr>
<td>Pipe realignment</td>
<td></td>
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<tr>
<td>Essential charges</td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td></td>
</tr>
<tr>
<td>Other Service Charges</td>
<td></td>
</tr>
</tbody>
</table>

Source. MoWHS and Thimphu Thromde

Success in improving capacity for local revenue mobilization has been uneven. Apart from Phuentsholing Thromde, which has been able to meet recurrent expenditures with own source revenues, other Thromdes have made limited progress in mobilizing own source revenues. At present, all four Thromdes are fully dependent on the Government budget for their capital works. Even on the current expenditures, there is a
high dependence on the budget support. On average, they are dependent on the budget for 32.5 percent of their current expenditures and about 78 percent.  

Weak revenue mobilization is partly due to issues with the existing revenue management system, among them. While all local governments are impacted, the case of Thromdes merit special attention.

- **Limited revenue authority:** Thromdes have no control over several local revenue sources, even if those are generated within their area. An example is taxes levied on vehicles. About half of the total vehicle population in Bhutan is stationed in Thimphu, but the Thromde does not get any share of the sales tax, customs duty and green tax levied on these vehicles, even though they are the major contributors to the damages incurred on the roads and drains in the Thromde area.  

- **Lack of incentives:** Thromdes are considered budget agencies just like other government ministries and agencies, and hence they have little incentive or motivation to enhance their own revenue sources.

- **Regulatory issues:** A major regulatory hurdle faced by Thimphu and other Thromdes is the lack of authority to raise tax rates on its own. Even though the Local Government Act allows local governments to increase taxes, the final authority to approve the same is with the Parliament. For example, the main source of Thromde revenue is taxes on land and buildings. The existing tax rates have not seen any revision in the last 25 years. An attempt to revise the rates in FY2016/17 budget did not receive Government endorsement. Unless Thromdes can alter their tax rates, they will not achieve effective autonomy or accountability. Moreover, local tax rate setting gives them the flexibility to change rates in response to varying circumstances.

- **Institutional capacity:** Thromdes have limited capacity to assess and administer taxes. There is no proper revenue and budget management section, which can monitor collections and project revenue and budgetary requirements for the Thromde. The method of assessment is not transparent across the various sections. Most of the sections operate independently. The sharing of information across various sections is only on a need basis.

- **Operational issues:** The tax administration system in the Thromdes has been relatively primitive. The Thromde posts information and notice of tax payments in the local print media and the taxpayers are expected to make the requisite payments in the Thromde office revenue collection window. This process has resulted in many instances where the taxpayer has defaulted in payments.

### Box 2: Role of property taxes in local revenues

Across several countries, land and house or property taxes generally contribute much more than what is prevalent in Bhutan. As these are ‘immobile taxes’, they are also among the most predictable sources of revenues for local governments. For example, in the USA, state and local governments collected a combined US$488 billion in revenue from property taxes, or 17 percent of general revenue in 2015. While state governments collected US$15 billion or 1 percent of state general revenue from property taxes in 2015, local governments collected US$473 billion or 30 percent of local government general revenue in property taxes, surpassed only by government transfers, which were 36 percent of general revenue (Urban Institute, 2016). In OECD countries, in 2015, property taxes comprised 5.8 percent of total

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110 Ibid.
government revenues across all levels of government. In countries such as UK and Korea, this was as high as 12.6 and 12.4 percent respectively (OECD 2018).

There are major advantages to collect property (land and house) taxes by local governments, among them:

- Because these are immobile taxes, property taxes are among the most predictable sources of revenues for local governments. Due to the high demand for urban land and housing, these are usually buoyant revenue sources.
- Because they do not affect decisions to supply labor and to invest (including in human capital) and innovate, property taxes are more efficient and less distorting than several other types of taxes.
- They also help strengthen local accountability between the local governments and the residents.

To strengthen property (land and house) taxes among Thromdes in Bhutan, the following measures could be considered:

- Establishing and updating a sound, reliable register of properties, starting with the four Thromdes. The tax base must be fully covered and mapped using a GIS-based three-dimensional mapping system so that it captures all essential features of the properties.
- Determining the appropriate model of valuation is important. Computer-assisted Mass Appraisal systems are best practice solutions but can be difficult due to intense data needs and limited capacities for regular updating. Other valuation methods that may be more appropriate to the ground realities include After Repair Value, Area Based and Income-based models.
- Strengthening the capacity of the local government for assessments, including building on systems, processes and capacities installed under the Bhutan Urban Development Projects (BUDP), but focusing on introduction of new digital technologies that will allow greater efficiency and transparency in land and property management.

These issues were exemplified in the case of Thimphu Thromde, which had no comprehensive database and updated data on physical or asset inventory. The total number of land holdings or buildings in Thimphu was not known because of which the Thromde’s tax base was untested. The taxes were calculated manually, often resulting in computation errors. In case the tax payer did not get the previous tax receipt, it was difficult to locate revenue assessment sheet for any specific land holding. Defaults were not tracked adequately since there was neither a proper database of taxpayers and nor proper coordination between the various revenue generating divisions that can pool together the information to track the tax payments/defaults. Further, the revenue collection mechanism has large human interface in handling cash, which created a possible environment for corruption.

Land Tax and Urban House Tax, which are recurrent, together contributed around eight percent of the total revenues of the Thimphu Thromde (then the City Corporation) in 2010-11; these are one of the top seven contributors to the Thromde’s revenue. A detailed analysis of these taxes has revealed that there is considerable scope for improving revenue collection.

**IX. Interventions to Strengthen Urban Governance and Finance\(^{111}\)**

Under BUDP2, several local government finance issues are being addressed, among them:

- Computerization of the tax and non-tax records and the asset registers of the Thimphu and Phuentsholing Thromdes are currently underway. This activity has now been extended to Gelephu and Samdrup Jhonkar Thromdes.
- Improving Municipal Financial Management Systems (including financial reporting, performance reporting, capital budgeting practices, internal control procedures etc.)
- Strengthening local revenue administration through business process re-engineering.

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\(^{111}\) The World Bank-supported BUDP-2 has been supporting the four Thromdes to address key finance issues governments.
Significant institutional development improvements have been achieved through BUDP2:

- Both Thimphu and Phuentsholing Thromdes have managed to digitize their property tax records and use these digitized records for sending tax invoices to citizens in a timely manner. The digitization of property tax records is starting in Gelephu and Samdrup Jhonkar and is expected to be completed in 2019.
- There has been a marked increase in the collection of property tax in Thimphu Thromde as the digitization of property tax records and the timely sending of tax invoices has improved the efficiency of property tax collection.
- Both Thimphu and Phuentsholing have digitized their asset inventory records while Gelephu and Samdrup Jhonkar are starting the same process. This will help all Thromdes in efficient asset management.
- Thimphu and Phuentsholing Thromdes have prepared Annual Performance Reports and displayed these in their websites. They have also prepared Annual Financial Statements and are currently in the process of preparing the Thromde Balance Sheets.

In addition, with World Bank support, the RGoB has put in place a transparent, formula-based fiscal transfer system for allocating Annual Plan Funds to Thromdes, similar to the GNHC’s formula-based allocation of Plan Funds to Dzongkhags and Gewogs. The GNHC is planning to adopt this approach for the allocation of funds under the 12th FYP. These reforms are intended to change the nature of the intergovernmental fiscal relationship between the RGoB and Thromdes, reflecting the intention of the Government to empower Thromdes to become fully functional local governments.

Recognizing the increasing urbanization, the RGoB is planning to charter 16 new Thromdes in the near future, although their establishment is now on hold. These new Thromdes are expected to be in areas that are currently part of Dzongkhags and do not have the necessary administrative and physical infrastructure to deliver municipal services. The municipal finance and management reforms in the four Thromdes provide a good foundation for asymmetric treatment and greater empowerment of these Thromdes and for extending these measures to new Thromdes, when they are established. The institutional and financial management systems currently operational in the four Thromdes would need to be replicated and rolled out to new Thromdes to make them fully functional local governments.

X. Expenditures of Local Governments

Limited information exists on expenditure patterns of local governments. Dzongkhags and Gewogs are often unable to utilize their budget allocations fully. Data from 2011 to 2015 suggest that, Dzongkhags and Gewogs were able to spend almost the entire budget allocated current expenditures, but only 89 percent of the allocated capital expenditures. The four Thromdes, on the other hand, were able to spend the entire budget allocated under the current and capital heads of expenditure. This may be due to capacity differences between more rural local governments and Thromdes. However, as the UNDP report (2017) notes, this may also be more of a systemic issue. The unutilized budget of Dzongkhags and Gewogs lapse at the close of the financial year, but Thromdes are not required to return the unutilized funds at the end of the year to the Ministry of Finance.

XI. Administration and Management in Thromdes

Currently there is no dedicated cadre of staff for Thromdes and the staff who get posted to Thromdes are from the general civil service cadre. This has resulted in frequent turnover of staff with hardly any staff
specialization on issues relating to local government management. The capacity building support provided through BUDP2 has been constrained due to the frequent turnover of staff, due to which Thromdes have not been able to build up core competencies in critical areas such as financial management, urban management, service delivery, etc. Avenues for training and capacity building of local government staff exist but are rather limited.

Thimphu Thromde is the apex example of the administrative and management set-up for Thromdes. The elected Thrompon (mayor) heads the Thromde and administers through the Executive Secretary, who is posted (as are most of the mid-level staff) at the Thromde through the Royal Civil Service Commission. There are six main divisions of the Thromde covering the core functions. Among these, the Administrative and Finance Division includes the Finance and Revenue sections and the Customer Service section. With BUDP 2 support, the focus of upgrading the municipal finance and management systems have been on improving the functions of these sections and their interface with citizens.

Irrespective of their size and population, Dzongkhags have similar staff strength and pattern. The Dzongkhag administration is based on sectoral ministries and agencies at the central level. Sectors include health, education, urban development, etc. with crosscutting sectors like planning, finance and administration, HRD, registration, survey and land records, culture, etc. The UNDP report notes that the staff working in these sectors are functionally under the Dzongkhag, but their administration is controlled by the respective central agencies. Recently, promotion of staff has been decentralized but the Dzongkhag has very limited control over the training or transfers of sector staff. Further, many Dzongkhags also face an acute shortage of qualified and capable civil servants, especially in technical areas.

The main human resource and capacity challenges of the local government system are:
- Fixed staffing numbers and patterns and lack of flexibility to seek temporary or market-based skills, especially for the Thromdes.
- Limited technical capacity of local government staff, especially in priority areas like engineering, financial management, project management, etc.
- Limited training and capacity building avenues, and loss of capable staff due to frequent turnover.

XII. Audits

Local governments undergo three types of audits: annual, performance and environmental audits:
- Annual Auditing is mandatory and conducted by the Royal Audit Authority (RAA) on an annual basis corresponding to the financial year (July to June). It covers all activities carried out within the selected year. While the emphasis is on financial aspects, it also covers technical and planning aspects as well.
- Performance Auditing is carried out on a random basis by the RAA. The frequency is typically once in two years. A performance audit of the Thimphu Thromde was carried out recently.
- Environmental Auditing is carried out by the National Environment Commission (NEC) on an ad hoc basis and the frequency is typically once in 3-4 years.

At present, audit findings are followed up through further observations and memos till the issues are resolved. Any outstanding audit opinion that is not resolved in a reasonable period of time is typically included in the RAA’s final report. However, there are no ‘sanctions’ against local governments that receive adverse or disclaimed audits. Further, performance audits are not backed up by incentives for the leading performers or sanctions/follow ups for the lagging ones. In the absence of such remedial actions, audits tend to become less effective as a control or incentive instrument. Finally, at present, Bhutan does not have any form of social auditing of local governments.
XIII. Service Delivery in Urban Areas

The Thromdes are chartered to provide several urban/municipal services for the town-dwellers, including water supply and sewerage, solid waste management, roads and sidewalks, street lighting, public spaces, and overall safety and beautification in the Thromde area. The Thromdes also provide for urban planning and development control services in the cities. The construction of new municipal infrastructure is provided through capital grants from different sources while a Thromde is expected to meet the operations and maintenance of such services.

Overall, the coverage of these basic urban services varies among the four Thromdes, including variation in the quality and quantity within Thimphu Thromde. As noted in the Regional Development paper, while the government has been very successful in ensuring that basic services are equitably distributed across the country, there are differences between urban and rural areas, both in access and in quality of service, remain both within and across Dzongkhags.

A Citizen Report Card survey, undertaken by Helvetas in 2015, provides valuable insights on the decentralization process, the enhanced role of local governments and service delivery. Overall, the report notes that, citizens in the surveyed communities exhibited high appreciation of the functions that local governments are carrying out but had low awareness on the minimum standards of service. While there was a high level of satisfaction with access to services, ratings on the quality of services were lower. Further, communities also noted the absence of complaints and redressal mechanism, which prompted them to address their complaints through a wide variety of channels, often with limited effectiveness.

Although permitted by law, private sector participation in the delivery, management or financing of urban services nascent and rather limited currently. This is due to a combination of issues, among them, limited capacities of Thromdes and the private sector and the absence of an enabling regulatory and financing framework that incentivizes the stakeholders, including ways to assess and appropriate risks and returns across the public and private sectors. Thromdes like Thimphu have been testing out private sector provision in a limited way. An example of this is the recent development and management of an integrated parking system including two new multi-level car parks with at least 550 parking spaces as well as the upgrading and management of about 1,000 off-street and on-street surface parking in Thimphu City on the basis of a design, build, finance, operate and transfer concession model with IFC support.

XIV. A Roadmap for Supporting Decentralization and Strengthening Municipal Governments

As Bhutan becomes more urbanized and its economy becomes more urban centric, Thromdes will become key institutional actors in ensuring good quality services, attracting private investments to cities and providing proximate and accountable outreach to citizens. A flexible and incremental roadmap to support RGoB’s policy of decentralization and strengthening local governments could include the key policy and institutional considerations, both at central and local levels, noted below. Table 5 provides a summary of key reforms across different tiers of government and with a timeline and sequence.

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Policy considerations

Considering an asymmetric model of local autonomy: Differences among local governments in terms of economic and natural endowments as well as financial and human resources provides a strong rationale for the adoption of asymmetrical arrangements for subnational governments. In many countries, large cities often have powers of taxation and regulation that smaller cities lack. New York City and Washington D.C., for example, have their own income and sales taxes. They also have greater remit over utilizing their local resources and endowments to catalyze local economic development. In Japan, for example, seventeen designated cities with larger populations and economic base have been provided greater powers — equivalent to that of a prefecture, in nineteen key policy areas — by the central government. Similar experiences are prevalent in a number of countries, including China and Indonesia (for Jakarta).

Overall, it would be important for Bhutan’s decentralization strategy to accommodate and complement its regional development strategy. The Regional Development paper presents a framework for responding to regional development prospects of Bhutanese cities and towns. Accordingly, it has organized three tiers of settlements. In Tier I settlements, such as Thimphu and Phuentsholing, efforts should focus on improving livability and catalyzing private sector investments by reducing disparities in access to services, improving land use planning and management and addressing critical congestion factors of urbanization. In Tier II settlements, such as Gelephu and Samdrup Jongkhar, the approach should be on improving conditions for private investment and link to potential markets in competitive sectors and industries. While addressing soft constraints, these cities also need to boost capacity for urban planning and land administration in addition to strengthening service delivery to accommodate new growth and ensure basic equity and efficiency in coverage and quality of access. In both cases, an enabling decentralization and intergovernmental fiscal framework plays critical role in achieving these policy objectives.

Specifically, an asymmetric model would imply two critical policy imperatives. First, encourage greater population consolidation, with a view to improve quality and reduce cost of service provision, as well as enhance safety, resilience and economic agglomeration. With rapid urbanization, this is happening organically. The RGoB could support and reinforce this natural process through a positive policy of strengthening cities and towns, by improving their connectivity, infrastructure and service delivery and enhancing the local governance structures and systems in these centers. Second, imparting greater powers, responsibilities and resources for the Tier I, which are the four large Thromdes, and Tier II cities, with a view of setting them on a path of increasing fiscal and administrative self-reliance and direct citizen accountability, and enabling them to better utilize their local social and economic endowments. With regard to smaller Dzonkhags and Gewogs, ensuring appropriate forms and adequate levels of fiscal and administrative support while enhancing their capacity incrementally would allow improved services in these localities. As noted previously, a mixed model of three Ds (devolution, delegation and deconcentration) may work well for Bhutan’s local governments, but it should be based on sound policy rather than ad hoc administrative decisions.

Clarifying functional assignments and local responsibilities and authorities: With the establishment of more Thromdes, the institutional roles and responsibilities between Dzongkhags and Thromdes would need to be clarified. As new Thromdes are set up with the aim of providing municipal services, the dividing lines of roles and responsibilities between the deconcentrated administrative set up (Dzongkhags reporting to the Ministry of Culture Home Affairs) and the decentralized local governments (Thromdes) as well as that of Central Government units, such as the MoWHS, GNHC and MoF, would need to be clarified to ensure coherent governance arrangements.

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Any review of local government responsibilities and authorities should also take into consideration the above observation about asymmetric arrangements across different tiers of cities and towns. It is important that the functional assignments and local authorities enable larger and more capable Tier I Thromdes to have a greater say in matters such as land use planning and land management, service delivery planning and management, including to set tariffs and to contract the private sector within specified rules, norms and standards, as well as to better utilize their local endowments and assets. In this context, the reform of the intergovernmental fiscal framework and the assignment of revenue-expenditure responsibilities and authorities could be seen as a medium-term roadmap for both current and future Thromdes, with prioritized and incremental improvements along the trajectory.

Enhancing sustainability of local government finances: As and when Thromdes get established and as demand for urban services increases, sustainable sources of financing would need to be put in place. The MoF and GNHC plan to put in place a formula-based sharing of resources for financing the FYPs and Annual Plans. The long-term view of the MoF is to have the plan financing restricted to capital investments and have the Thromdes finance recurrent expenditures from their own source revenues. As the number of Thromdes increase, the MoF and GNHC will have to put in place a strong intergovernmental fiscal and local government financing system. This is particularly important in the context of the emphasis on fiscal decentralization in the 12th FYP. Key considerations for establishing such a system include:

- Vertical and horizontal fiscal gaps and imbalances that necessitate revenue sharing and equalization arrangements. A clear policy on fiscal balance and equalization will not only strengthen the local government system but also serve as a positive policy for regional convergence;
- Fiscal and institutional incentives—for example, performance transfers, hard budget constraints, service delivery benchmarking, etc.—for greater own source revenue collection and more efficient public expenditures, transparency and predictability in the fiscal regime. To strengthen own source revenues of Thromdes, regulatory empowerment as well as systems and capacity support are required, which can be complemented with incentives such as performance transfers;
- Regulatory and administrative ease of managing such a system, since the overall size of the local government system is relatively small and capacities are limited.

Institutional considerations

Improving institutional capacities within local governments: As the number of Thromdes increase and their roles and responsibilities get enhanced, issues of staffing and human resource capacity building need to be addressed. A differentiated approach between the four Thromdes and other smaller urban Dzongkhags may be merited. The RGoB may consider trained cadre of local government staff, especially focusing on core competencies such as revenue, expenditure and financial management, urban management, service delivery, etc., so that the skills and experience once generated remains within the local government system. The Royal Civil Service Commission could also consider flexible models for staffing through which local governments, especially the larger Thromdes, are able to provide better incentives and to tap the market for higher level technical skills in a flexible manner.

Several countries have dedicated institutions for local government capacity development. Regional and nearby examples include the Kerala Institute of Local Administration in Kerala, India, the National Institute of Local Government in Bangladesh and the Local Government Academy of the Philippines. While Bhutan’s small size may not warrant a dedicated institution for local government capacity development of local governments, clear policy and dedicated resources are warranted. Partnerships with public and private academic institutions, such as universities and professional training institutes, could be employed to support local government institutional development.
Establishing institutional modalities for intergovernmental dialog and coordination: Moving away from a centralized and top down administrative set up towards a decentralized form of local governance would require arrangements to ensure coordination and cooperation between the different tiers of local governments. Such arrangements are relatively informal now, but, as and when the establishment of more Thromdes materializes, these issues would need to be addressed. The Thromde Finance Policy allows for a Thromde Finance Committee to establish a coordination model, a study of these different options was recently completed by Deloitte. There are three institutional models of intergovernmental cooperation that Bhutan could consider — independent grants commission (India, Uganda, South Africa), intergovernmental forum (Canada, Germany), and administrative bodies/arrangements (the Philippines).

Reinforcing citizen accountability as a foundation for a responsive local government system: As Thromdes become fully functional urban local governments, they would need to strengthen local accountability to their citizens and stakeholders as part of enhancing the overall social contract. Bhutan has already become a well-functioning democracy, having successfully managed the conduct of free and fair elections twice as well as ensured a peaceful transfer of power between successive governments both at the national and local levels. As the role of local governments increase in terms of efficient delivery of municipal services and being accountable institutions, adequate formats and structures for effective citizen engagement (such as, genuine consultative process) would need to be bolstered in the Thromde governance system. To the extent participatory forums and processes can be embedded within the local government systems and processes and work to complement upward accountability arrangements such as public expenditure and financial management systems, these have greater chance of success and sustainability.

Finally, the RGoB could also strengthen information systems pertaining to local governments, local planning, service delivery and local economic development. Norms, systems, modalities and personnel to collect, catalogue, analyze and transmit key data to stakeholders related to local governance is a priority and efforts are being made by the Government in this regard. Nevertheless, the full scope of opportunities offered by new digital and disruptive technologies, including big data, artificial intelligence, robotics and others, could be more systematically pursued, as also greater transparency in sharing the information across stakeholders.

Table 5. Timelines for Key Reforms on Decentralization and Local Governments

<table>
<thead>
<tr>
<th>National level</th>
<th>Short to medium term</th>
<th>Medium to long term</th>
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<td></td>
<td>• Clarifying functional and fiscal assignments of local governments with a view of empowering Thromdes and making the more capable, resourced and accountable, while also strengthening delegated and deconcentrated assignments at the Dzongkhag levels.</td>
<td>• Moving towards and asymmetric and differentiated model of decentralization strategy that is also consistent with the country’s economic, regional development and demographic policies and strategies.</td>
</tr>
<tr>
<td></td>
<td>• Formula-based transfers for Thromdes addressing key issues of fiscal gaps, predictability in transfers and incentivizing own source revenue enhancement.</td>
<td>• Establishing dedicated institutional modalities and systems for local government capacity building.</td>
</tr>
</tbody>
</table>
- Establishing institutional modalities for intergovernmental dialog and coordination between central government and thromdes as well as other devolved units of government.

- Strengthening information systems across all levels of government and introduction of new technologies that aid greater transparency, efficiency and effectiveness in decision making and public expenditure process related to local governance and service delivery.

<table>
<thead>
<tr>
<th>Local level</th>
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<tbody>
<tr>
<td>- Deepening citizen interface and bottom up accountability of local governments through new norms, capacity building and testing of new modalities of social accountability (social audits, citizen assemblies, report cards, score cards, budget transparency, etc.).</td>
</tr>
<tr>
<td>- Strengthening local government training and capacity building modalities, especially focusing on core areas such as revenue-expenditure management, own source revenue collection, financial management and procurement, project management.</td>
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*Source. […]*
Bhutan Urban Policy Notes
Urban Resilience

This paper is part of a series of four Urban Policy Notes that identify emergent challenges to Bhutan’s increasing urbanization and its ramifications for growth, livability, and sustainability in line with the directives of the 12th Five-Year Plan (FYP) for 2018–23 and the Vision 2020. The four notes are: (i) Regional Development, (ii) Municipal Governance and Finance, (iii) Affordable Housing, and (iv) Urban Resilience. These notes build on the long engagement between the Royal Government of Bhutan (RGoB) and the World Bank on urban issues as well as the operations under the Bhutan Urban Development Project I (1999–2006) and II (2010–19). This note specifically draws from the ongoing support to build a safe, sustainable, and climate-resilient Bhutan through the Hydromet Services and Disaster Resilience Regional Project, preparation of Bhutan’s Strategic Program for Climate Resilience Project, Improving Seismic Resilience Project, and related technical assistance. It is intended to support the RGoB on key and emerging topics relevant in the context of increasing urbanization and vulnerability to weather, water, and climate hazards, and to guide the Bank’s future analytical and investment support on urban- and resilience-related challenges.

Executive Summary

Bhutan’s vulnerability to natural disasters and climate-related hazards requires better planning of settlements and enhancement of resilience in urban development and its expanded services. Located in the seismically active eastern portion of the Himalayan arc, Bhutan is exposed to hydro-meteorological hazards. Urban density is projected to increase from 37.8 percent (2017) to 56.8 percent (2047) of the total population. The impact of natural disasters and a changing climate have potentially devastating effects in terms of human lives lost, economic livelihoods destroyed, and losses in sectoral productivity. Furthermore, clustered settlements with high density population are also at higher risk to fire disasters. In 2016, floods affected the entire country, with major destruction in the South. Apart from dozens of households directly affected, the floods destroyed critical infrastructure and led to fuel and food shortages.

The RGoB recognizes the devastating impact that natural disasters and climate change are having and can have on Bhutan’s economy and vulnerable communities. It addresses these challenges and opportunities in the country’s main development plans. The 11th FYP for 2013–18 and the upcoming 12th FYP for 2018–23 clearly reflect the urgency to enhance and integrate disaster and climate resilience in their developmental activities as two of the National Key Result Areas. There are, however, challenges to implement the activities.

Bhutan has a strong policy and legislative framework but with relatively weak implementation. Guided by the Local Governments Act and the Disaster Management Act of Bhutan, an enabling environment is in place to ensure the safety of people, assets, and services. However, the 2016 Performance Audit of Disaster Management indicates ineffective coordination among agencies; absence of hazard zoning maps and vulnerability assessments; lack of a central database to manage disasters; inadequate risk transfer mechanisms; inadequate fire safety measures in public buildings; inadequate application of safe construction practices; lack of proper planning, design, and workmanship in construction works; non-establishment of Emergency Operation Centers, and inadequacies and inconsistencies in funding arrangements. These findings resonate in the Disaster Risk Management Strategy of Bhutan, which aligns with the Sendai Framework for Disaster Risk Reduction.
Bhutan’s development of hazard maps and a geospatial database of infrastructure assets are at nascent stages. Geospatial analytics and related multi-hazard mapping are key components for integrating DRM into the urban planning process, enhancing service delivery and ultimately informing the risk reduction and emergency preparedness strategies. Thimphu Thromde has started to map utility services with geospatial data, realizing that a spatial platform (with all its assets) is the foundation for better planning, development, and resilience. Being a new discipline, the in-country capacity is thin. There are gaps in reliable and comprehensive hazard information (geological, hydrological, meteorological) and limited technical expertise to identify vulnerabilities and assess risks, which hinders the planning of settlements. At present, hazard maps are prepared on an as-needed basis, which leads to duplication and wastes resources.

The Thromdes are facing increased pressure for expanded service delivery, especially in urban areas. Fast urbanization has increased the demand for clean drinking water and managing stormwater runoff, wastewater, sewage, and solid waste. One measure of urban resilience is the quality of and access to utility services delivery in shocks (weather, water, climate, and earthquakes). This requires designating resources for operations and maintenance (O&M); compromising on O&M can lead to faster depreciation of the investment and increase its vulnerability to disasters. Thus, integrating resilient infrastructure planning across sectors can help the Thromdes improve urban resilience.

The Royal Government of Bhutan can, based on the findings of this Urban Resilience Note, consider the following actions and activities to mitigate against disaster impacts and to help protect human lives, enhance economic livelihoods, and increase sectoral productivity:

- **Establish a strong geospatially tagged information base for resilience planning**, including a spatial analytics system, database management, hazard mapping, and risk assessment for decision-making.
- **Strengthen the capacity and processes for systematically integrating urban resilience into infrastructure development**, including into planning, design standards, financing options, and operations and maintenance practices.
- **Strengthen urban service delivery with improved data and infrastructure resilience**, through integration of resilient infrastructure planning across sectors.
- **Leverage sources of disaster risk finance** for timely emergency response and **harness the private sector** for enhancement of quality of infrastructure and services delivery.
- **Reinforce critical infrastructure for preparedness and emergency response**, **hydromet and early warning services**, and **green infrastructure for urban resilience**.
- **Enhance citizen engagement** by improving public awareness of and participation in disaster risk-related planning and mitigation.
- **Promote regional collaboration and learning** to draw on lessons and capacity in the region on technically challenging issues that have regional dimensions, such as weather and climate services.
I. Introduction

Bhutan is a small, landlocked country in the seismically active eastern portion of the Himalayan Arc, exposed to hydro-meteorological hazards. Flooding and landslides are common in monsoon season and cause recurrent damage to lives and assets. Extreme events cause significant losses to the economy. For example, 2016 floods affected the entire country and, in the South, caused major destruction (about 0.36 percent of 2016 gross domestic product). The floods destroyed critical infrastructure including roads, bridges, and buildings; affected about 100 households; and led to fuel and food shortages.

Bhutan is trending toward co-agglomeration of industrial and socio-economic activities and an intensification of centralized migration in urban areas, reflecting uneven and clustered geographical integration. This trend is similar to other early urbanizing countries. Thimphu Thromde, the capital city of Bhutan, in 2017, accounted for about 15 percent of the total population of 735,000. The 2017 Population and Housing Census notes that rural–to–urban migration accounts for 21.7 percent of the total population born in Bhutan and for 44.2 percent of the total migrant population.

Bhutan’s population is projected to urbanize at a rate of 56.8 percent by 2047, from 37.8 percent in 2017. Although urban areas are distributed over only around 1 percent of the total land area, the spatial integration of economies, connectivity, and access to utilities and markets and the proximity to socio-economic services drive the high rate of urbanization. These trends have increased population density in urban areas, necessitating a growth-focused urban resilience strategy. One that contributes to equitable and resilient development and to Bhutan’s goal of Gross National Happiness.

The country’s vulnerability to natural disasters and climate-related hazards warrants greater planning for fast-growing urban settlements and expanded urban services. Furthermore, clustered settlements with high density population are also at higher risk to fire disasters. The greater concentration of people and assets means that the impact of natural and man-made disasters and a changing climate can be devastating in terms of human lives lost, economic livelihoods destroyed, and losses in sectoral productivity. The poorer segments of the population are the most vulnerable.

Urban low-income groups may lack access to quality infrastructure coverage and affordable safe housing and also may lack access to services and social networks to help cope with or respond to shocks. Experiences from the South Asia Region show that new migrants tend to settle in areas closest to the jobs and services they need. The migrants settle even if the areas are hazardous or restricted from development (hillside slopes, flood-affected areas, subsiding land) because of the low costs.

Resilient urban growth rests on a geospatially tagged decision support system that comprises well-coordinated and fast-disseminating data, information, and analysis. Key elements include detailed hazard assessments and risk mapping of the built-up infrastructure; access to and use of such information in urban planning, building regulations, and urban expansion; improved preparedness of urban institutions

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113 In 2009, the total damages of Cyclone Aila and an earthquake were approx. 5.7 percent of 2009 gross domestic product (GDP); a 2011 earthquake resulted in damages of about 1.4 percent of 2011 GDP.

and communities; and, early warning systems based on solid risk information, forecasting capacity, and dissemination systems.

**Unplanned urbanization accrues vulnerabilities and requires risk-informed decision-making for redress.** Redressing Bhutan’s existing haphazard urbanization requires the development of two key datasets. First, a deeper understanding of the type and severity of risk profiles in different geographical zones, especially for major urban settlements, that result from the ongoing economic and socio-demographic shifts. Second, a strengthened hazard, exposure, vulnerability, and risk information base.

**Developing robust, reliable, and accessible geospatial information is critical.** This geospatial information needs to be accessible and in formats that are usable by urban planners, service providers, and investment planners for decision-making. The actors can use the information to improve planning, prioritize investments, and address critical infrastructure gaps. In turn, this work can reduce Bhutan’s exposure to property damage, household economic shocks, environmental degradation, and the incidence and spread of serious public health threats.

**Urban resilience generally refers to the ability of a city or urban system to withstand shocks and stresses.** Its preparedness and recovery capacity in the face of disasters depends on the appropriateness of policy decisions about investments in resilient urban infrastructure, technical upgrades, and the reach of early warning systems. Appropriate decision-making depends on solid risk information, forecasting capacity, and dissemination systems as well as on resilient buildings/land-use plans and mechanisms to enhance resilience (contingency plans) and transfer risk.

**Effectively managing the interplay of fast urbanization and disaster/climate-change risks is the crossroad Bhutan must now navigate.** A robust system to make informed decisions can protect development gains, adapt development to changing country trends/contexts, and prevent unsustainable development pathways, especially for urban areas. Specifically, informed decision-making can mitigate Bhutan’s susceptibility to increasingly intense and frequent urban shocks and stresses (as compared to service and infrastructure failure for lack of robust risk information). In the aftermath of a hazard event, informed decision-making also can support fluid recovery and reconstruction, better delivering services to the citizenry and especially to the poor and the vulnerable.

**This note provides an overview of the ongoing efforts of the Royal Government of Bhutan (RGOB), the challenges faced, and the proposed measures for strengthening urban resilience.** Critical areas for further attention include:

- **Establish a strong information base for resilience planning,** including a spatial analytics system, database management, hazard mapping, and risk assessment for decision-making.

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116 Spatial analytics provides an analysis of the city based on geospatial evidence. The purpose is to better understand the built environment and to identify gaps in access to infrastructure and services. These gaps can then be addressed through critical investments in service delivery such as solid waste, sewage, and water supply; management of critical assets; and inclusion of multi-hazard and flood-risk analysis, mapping of informal settlements, and other relevant aspects that impact urban planning, city growth, and development.
- Strengthen the capacity and processes for systematically integrating urban resilience into infrastructure development, including into planning, design standards, financing options, and operations and maintenance practices.
- Strengthen urban service delivery with improved data and infrastructure resilience, through integration of resilient infrastructure planning across sectors
- Leverage sources of disaster risk finance for timely emergency response and harness the private sector for enhancement of quality of infrastructure and services delivery.
- Reinforce critical infrastructure for preparedness and emergency response, hydromet and early warning services, and green infrastructure for urban resilience.
- Enhance citizen engagement by improving public awareness and participation in disaster risk-related planning and mitigation.
- Promote regional collaboration and learning to draw on regional lessons and capacity for technically challenging issues that have regional dimensions such as weather and climate services.

II. Status and Challenges

The RGoB recognizes the devastating impact that natural disasters and climate change are having and can have on Bhutan’s economy and vulnerable communities. It addresses these challenges and opportunities in the country’s main development plans. The 11th FYP for 2013–18\(^{117}\) and the upcoming 12th FYP for 2018–23\(^{118}\) clearly reflect the urgency to enhance and integrate disaster and climate resilience in their developmental activities as two of the National Key Result Areas. There are, however, challenges to implement the activities.

Policy and Legislative Framework

Bhutan has a strong policy and legislative framework but with relatively weak implementation. The country has a vision for developing a low-carbon path with enhanced resilience and has enacted strategies and guidelines as a roadmap. The novelty of the sector, however, means capacity needs to be built from the ground up. The Local Governments Act of Bhutan guides the governance of municipal governments, including on resilient service delivery and infrastructure. The 2013 Disaster Management Act of Bhutan (DM Act) ensures the safety and security of people, assets, and services by reducing and managing risks arising out of disasters, but it has implementation gaps.

The 2016 Performance Audit of Disaster Management provides insight on the effectiveness of the legislative, institutional, and governance mechanisms for disaster management, focusing on the DM Act. The report provides an overview of the non-compliance with the critical provisions of the DM Act, which impacts the resilience of urban settlements. These include ineffective coordination among agencies; absence of hazard zoning maps and vulnerability assessments; lack of a central database to manage disasters; inadequate risk transfer mechanisms; inadequate fire safety measures in public buildings; inadequate application of safe construction practices; lack of proper planning, design, and workmanship in construction works; non-establishment of Emergency Operation Centers; and inadequacies and inconsistencies in funding arrangements.

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\(^{117}\) (i) Carbon neutral/green and climate resilient development, (ii) Improved disaster resilience and management.

\(^{118}\) (i) Carbon neutral, climate, and disaster resilient development enhanced, (ii) Livability, safety, and sustainability of human settlements improved.
The Disaster Risk Management Strategy of Bhutan (2016) guides the implementation of disaster risk management (DRM) activities in line with national and international policies and priorities. It identifies key issues and gaps and recommends interventions (Box 1).

**Box 1. Disaster Risk Management Strategy of Bhutan**

Bhutan integrates global good practice into its policies and priorities. In formulating a vision statement for disaster risk management, the Department of Disaster Management (DDM) aligned Bhutan’s framework with the Sendai Framework for Disaster Risk Reduction 2015–30.

DDM’s Disaster Risk Management Strategy articulates government policies, principles, and expected results. The strategy also identifies priorities and focus areas to maximize the efficient allocation of limited financial and technical resources.

<table>
<thead>
<tr>
<th>Priority Actions</th>
<th>Key Issues and Gaps</th>
<th>Recommended Interventions</th>
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<tbody>
<tr>
<td><strong>Improving the understanding of disaster risks</strong></td>
<td>Lack of a multi-hazard atlas with improved coordination among responsible agencies.</td>
<td>Synthesize existing data on hazards and vulnerabilities in a usable format to inform decision-making, incorporating disaster risk management aspect. Enhance capacity of responsible agencies to improve data sets.</td>
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<tr>
<td><strong>Strengthening the risk governance system</strong></td>
<td>Absence of a policy framework that enables integration of DRM in developmental activities, although mandated in DM Act 2013 and highlighted as national key result areas in the 12th FYP.</td>
<td>Formulate clear mainstreaming guidelines with a suggested list of actions and make it available to all local governments and key sectors to enable integration of DRR into their annual and five-year development plans and programs.</td>
</tr>
<tr>
<td><strong>Investing in disaster risk reduction for resilience</strong></td>
<td>Reactive and fragmented funding mechanisms for DRR activities. Lack of tools to monitor integration of structural and non-structural disaster resilient features in construction of critical infrastructure. Lack of sustainable risk transfer mechanisms.</td>
<td>Establish financial modalities as mandated in DM Act 2013, including contingent financing in the aftermath of a major disaster. Allocate adequate budget to assure disaster resilient mechanisms. Establish risk transfer mechanisms for public and private properties.</td>
</tr>
<tr>
<td><strong>Strengthening disaster management capabilities</strong></td>
<td>Limited understanding of the linkage between and the importance of integrating climate change adaptation and DRR in developmental activities.</td>
<td>Conduct studies to understand the risks and to develop mainstreaming tools to be adopted in the annual and five-year plans.</td>
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</table>
As per provisions of the DM Act, the Thromdes are mandated to prepare Disaster Management and Contingency Plans (DMCPs) by the start of the 12th FYP. Thimphu and Phuentsholing Thromde have completed the exercise and the other two Thromdes are in the drafting process. While the Act clearly states the need to institute plans for continuity of critical services in the event of a disaster and to develop vulnerability maps with structural and non-structural measures, the initiatives are at an infancy and need further support. Both the Thromde and district DMCPs are based on inadequate information (visual observation, limited risk assessments, general community knowledge) and would require strengthening with reliable and geospatially defined risk information.

The principles to mainstream resilience are somewhat embedded in urban development plans, but lack of a legal framework hinders implementation. At present, the Ministry of Works and Human Settlement (MoWHS) prepares the urban development plans based on the Bhutan Building Regulations (BRR) 2018 (revised Bhutan Building Rules 2002), the National Human Settlement Strategy 2017, and the Spatial Planning Standards 2017. In response to the need for a legal framework to be able to enforce prepared plans and designs, the Department of Human Settlement (DHS) is drafting the Spatial Planning Act to improve spatially driven resilient urban planning. The National Human Settlement Policy, which is in the final stages of approval by the Cabinet, will support the preparation of this Act.

There are seismic building codes and a stringent approval processes for the designs and drawings of public and private buildings in urban areas, but compliance is a challenge. While some aspects of monitoring are in place in the Thromdes, a lack of technical and human capacity compromises monitoring and enforcement of building guidelines. The Building Code of Bhutan 2018 was formulated as a part of the BRR 2018. It sets out the importance of complying with the seismic building codes to ensure the safety of buildings against earthquake risks and the Green Building Design Guidelines 2013 to encourage adoption of green designs and sustainable technologies. The construction industry, however, has gaps in professionalism, quality assurance, and enforcing rules and regulations.

The increase in risks to fire hazards is recognized as one of the emerging challenges in urban areas. While the BRR provides fire-preventive measures for individual buildings, they are not systematically (and largely not) incorporated during implementation. The Department of Engineering Services is developing a guideline for fire safety in buildings, but the draft guideline requires deeper consultations. In parallel, the Fire Service Division under the Royal Bhutan Police, which is responsible for firefighting, is in the process of formulating a Fire Act. The draft of this Act has been submitted to the Ministry of Home and Cultural Affairs for its endorsement and further submission to the Cabinet.

The draft National Construction Industry Policy looks at enhancing professionalism, quality assurance, enforcement of rules and regulations in place, green growth, and monitoring and evaluation, which are critical aspects for integrating resilience in building construction. The MoWHS prepared the draft and the Gross National Happiness Commission is in the process of reviewing it.

The Ministry of Works and Human Settlement also is working on instituting a Council of Bhutanese Engineers. The purpose of the Council is to improve the service delivery of designs, drawings, and

construction of infrastructure through registration and certification of engineers and architects working in Bhutan. It includes a regulated code of conduct to ensure accountability.

**Agencies (including Thromdes) are mandated to maintain funds in their annual and five-year plans for mainstreaming disaster risk reduction (DRR) activities.** Most investments to improve disaster and climate resilience and enhance the information base for hydro-met services are dependent on grants. This leads to fragmented funding mechanisms and poses a challenge to investing strategically in DRR activities.

**Recovery and reconstruction activities require financial arrangements and risk transfer mechanisms to respond to disasters without affecting ongoing development plans.** The Operational Guidelines for Disaster Financing 2017, prepared based on the DM Act, facilitates agencies to access funds for three DM activities: (i) immediate disaster response and relief activities; (ii) immediate restoration of essential public infrastructure and service centers; and (iii) recovery and reconstruction activities. The Ministry of Finance keeps a contingency reserve fund for the first two activities. For the third, the options are to: (a) re-prioritize within the agency’s planned activities; (b) explore for additional resources from development partners or diversion of funds from other agency’s planned activities; or (c) wait till resources are mobilized.

**Information Base**

Geospatial analytics and related multi-hazard mapping are key components for integrating DRM into the urban planning process. Bhutan’s development of hazard maps and a geospatial database of infrastructure assets are at nascent stages. Next steps should include an evaluation of urban planning issues at the macro/meso level, including natural conditions (slopes, rivers, water bodies) and physical barriers (highway affecting slopes, water flow, runoff, fire suppressants), road networks, buildings, and opens spaces, among others. Then, more detailed analyses of hazards, exposure, vulnerability, and risks can be conducted. This will mitigate the exacerbation of existing urban risks.

Hazard mappings provide crucial information for siting infrastructure and for identifying the underlying vulnerabilities to map out potential risks. Lack of accurate and comprehensive hazard information (geological, hydrological, meteorological) and limited technical expertise to identify vulnerabilities and assess risks hinder the planning of settlements. At present, hazard maps are prepared on a need basis, which leads to duplication and wastes resources. A seismic risk assessment for Thimphu Thromde in 2013 outlined the need to improve data to enhance the quality of hazard maps and vulnerability assessments. Agencies, however, remain siloed and individually map hazards/implement hazard plans.

The first step for integrating resilience into urban planning is understanding the exposure of populations and infrastructure to hazards (earthquakes, flooding, landslides). Currently, Bhutan does not have urban hazard maps. Like the hazard maps, agencies do not have a broad perspective of the risks posed by different hazards and the underlying vulnerabilities; they carry out their own mappings without the validation of technical third parties. To redress this situation, the RGoB has prioritized a systemic understanding of urban disaster risks to better plan the development of urban activities and investments.

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Geospatial analysis plays a crucial role in identifying risks, enhancing service delivery, and ultimately informing the risk reduction and emergency preparedness strategies. While the development of infrastructure and utility services to meet public needs is a priority for the government, there has been no assessment of how resilient these assets are. There is no geospatial database of the service lines; this prohibits informed decision-making during emergencies. Only recently has Thimphu Thromde started to map utility services with geospatial data, realizing that a spatial platform (with all its assets) is the foundation for better planning, development, and resilience.

A consolidated data/information management system facilitates a systemic approach for managing infrastructure and sectoral activities while streamlining stakeholder coordination. Such a platform also supports an institutionalized system to assess risk, which is a priority for informed decision-making. The absence of a consolidated data/information management system impedes the development of resilient infrastructure.

Past practices to assess vulnerability were scattered and largely undocumented, which limits Bhutan’s ability to prioritize investments for resilience. Bhutan adopted seismic codes for reinforced concrete buildings from India as a part of its building codes in the late 1990s (1997/98). Buildings constructed prior to the adoption of seismic building codes are highly vulnerable to seismic risks. Non-engineered buildings are not covered in the seismic building codes. This calls for identifying and assessing the safety of non-engineered buildings and for providing guidance to strengthen them, including rebuilding or retrofitting.

Retrofitting is a fairly new concept in Bhutan. Preliminary retrofitting trainings have been conducted. The trainings are based on the Guidelines for Structural Vulnerability Assessments and Retrofitting of Load Bearing Structures. However, the country’s current field experience and engineering technical know-how are limited.

Bhutan still needs a street address system, even in urban areas. In 2015, Thimphu began developing a city address system to provide efficient door-to-door service delivery, but little progress has been made to date. Generally, visual landmarks are used to identify a location. This could pose huge challenges when responding to major disasters. Having a proper and easy-to-understand address system will not only increase the efficiency of service delivery but will enhance the effectiveness of emergency response.

Quality and Access of Urban Services

One measure of urban resilience is the quality of and access to utility services delivery in shocks (weather, water, climate, earthquakes). An increasing urban population and construction boom have increased water usage and placed greater demands on the management of sewage, wastewater, and solid waste. Lack of mapped information of the layout of water pipes and drainage systems is a challenge even during normal times to identify points of problem when there is disruption in their functionality. Identification of problematic locations and maintenance is highly dependent on an individual’s memory rather than institutional memory. Integrating resilient infrastructure planning across sectors, especially urban service delivery systems, should be of the highest priority. It helps protect development gains.

121 https://thebhutanese.bt/thimphu-thromde-comes-up-with-address-system-for-door-to-door-service-delivery/
The Thromdes face major challenges in managing drinking water, solid waste, wastewater and sewage, and storm water.

- **Drinking Water Management:** Bhutan has a high per capita availability of water. But the water supply in urban areas is inadequate, with 57 percent of the population having access to water less than 12 hours a day.\(^{122}\) Urban water supply issues include an inadequate and unreliable supply, aging infrastructure, flooding and landslides, inadequate water treatment, seasonal drying up of sources, and constrained resources for operations and maintenance.\(^{123}\) Furthermore, one of the major challenges facing water utilities in Bhutan is the high level of water loss in the distribution networks and storage tanks.

To date, designing new systems has been prioritized over managing and improving existing networks. It is imperative to better understand the cascading effect of poor operations and maintenance of the water system, such as non-revenue water (NRW) losses from inaccurate metering, illegal connections, and leakages.

Without resilience planning, including proper management of NRW, infrastructure could become unusable or damaged during its economic life. For instance, water extraction facilities that are installed near water sources can dry up and water pipes and related infrastructure can burst because of cold weather, causing water shortages. Incorporating weather risk information into infrastructure planning is a necessity.

- **Solid Waste Management:** The Bhutan State of the Environment Report 2016 by National Environment Commission (NEC) notes that the country is seeing an increase in the solid waste generated, with the two urban centers of Thimphu and Phuentsholing facing challenges in municipal waste disposal.

Thimphu Thromde produced about 50,000 kilograms of waste every day in 2009; by 2020, an estimated 81,000 kilograms of waste will be produced every day in the city.\(^{124}\) The existing waste management system in Thimphu Thromde is under-equipped and struggling to service the increased waste production. Solid waste from Thimphu is now dumped at Memelhakha landfill, which is an open waste disposal facility. Its location at an uphill of a tributary to the Thimphu River poses health risks to the local population with ground and surface water contamination from untreated leachate.

The composition of urban waste is shifting from biodegradable to non-biodegradable, which increases the dangers of contamination. Regulations and resources for infrastructure and capacity building, combined with enhanced awareness and participation by urban communities, are necessary to address the issues of solid waste management.

- **Wastewater and Sewage Management:** NEC surveys indicate that Bhutan’s water resources are healthy only at the macro level. The risk of pollution is a severe threat in cities such as Thimphu and

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\(^{122}\) Urban Water Supply – Status and Plan, Department of Engineering Services, MoWHS, 2014 (p. 8).

\(^{123}\) Urban Water Supply – Status and Plan, Department of Engineering Services, MoWHS, 2014 (p. 37).

\(^{124}\) https://www.chinadialogue.net/article/show/single/en/4322-Bhutan-s-modern-face
Phuentsholing, where the discharge of waste oil and other effluents is a major source of water pollution. Studies have found significant levels of Escherichia coli in Bhutanese rivers.\textsuperscript{125}

The current wastewater facility in Thimphu Thromde treats only about 17 percent of the wastewater generated and the rest of sewerage flows directly into the river. This flow of waste makes the river water unfit for human consumption. According to Thimphu Thromde, less than 15 percent of total households in the city are connected to the sewer system and the rest rely on individual septic tanks. Overflow of raw sewage from manholes has been exacerbated by lack of funds to resolve wastewater management problems.

Future urban resilience plans should consider new wastewater treatment plants as a priority to meet the shortfall in treatment capacity and to develop trained water and sanitation specialists to provide these critical urban services.

- \textit{Storm Water Management:} Under the Strategic Program for Climate Resilience, a report has been drafted on Climate Smart Human Settlement Planning and Development in Samdrupjongkhar Thromde. The draft report indicates that management of storm water is a key issue, as inadequate storm-water drains along roadsides can cause flooding.

\textbf{Some of the urban plans include provision for fire hydrants but many do not.} The lack of technical expertise on fire-fighting equipment among planners and local plan developers poses a challenge for incorporating fire safety measures into the urban plans. At this stage, there is very limited dialogue among relevant agencies on this issue such as the Department of Human Settlements and the Fire Service Division. Better coordination among these agencies can help strengthen fire safety measures at the planning level and eventually at the implementation level. This is critical given the Fire Service Department currently cannot meet the country’s need for fire-fighting trucks.

\textbf{Improved coordination among service providers is key to better planning and providing service lines in urban centers.} If the fiber optics, telecommunications, and electricity lines are laid in a duct system, the management and maintenance of assets is much more efficient. At present, the country installs utility lines only when it works on roads. Bhutan needs better coordination and planning among utility service providers.

\textbf{Operation and Maintenance (O&M) is essential for a developing country like Bhutan to sustain the effectiveness of its capital investments and service delivery.} However, this is a challenge in Bhutan with limited technical and financial resources for maintenance. Compromising on the O&M could lead to faster depreciation of the investment made and to increasing its vulnerability to disasters. Lack of O&M-related budgets are also a limiting factor in the choice of appropriate capital investments in hydromet observation and monitoring equipment.

\textbf{Recognizing the major role played by the private sector in developmental activities, there is a need to strengthen the role and capacity of private sector in the resilience agenda.} While all plans and

\textsuperscript{125} 2017, The Global Waterkeeper Alliance and Clean Bhutan.
policies are prepared by government agencies, the private sector develops the infrastructure, including important public buildings. The private sector has the option to use different kinds of construction materials and methodologies, and their choices can have significant bearing on the resilience of the infrastructure. National contractors do not have sufficient technical and personnel capacity to construct urban services that meet international standards. It is very important for the private sector to understand the resilience aspects of infrastructure and to build their capacity accordingly.

Critical Infrastructure

It is important to have critical infrastructure, such as Emergency Operation Centers, Search and Rescue facilities and adequate infrastructure for the National Center for Hydrology and Meteorology (NCHM), to host and sustain critical services for emergency preparedness training and capacity and for weather and climate information. The Department of Disaster Management has conducted several search and rescue trainings and invested in the procurement of search and rescue equipment. It is a challenge to sustain the built capacity, as there is no facility to consolidate the efforts. Similarly, it is a challenge to sustain the investments made in terms of data collection and storage without an enabling system to connect with data provider agencies, such as the NCHM. NCHM has become an autonomous body with the mandate to provide hydromet and climate services and early warning information that underpins alerts and advisories to main weather dependent sectors such as agriculture, tourism, aviation urban, hydropower and disaster risk management. NCHM is facing constraints in terms of its location and requires greater support for adequate infrastructure that meets its needs for a growing institution.

Capacity Building, Advocacy, and Knowledge Sharing

To meet the increased needs of urbanization, continuous capacity building is needed to improve the technical capacity of the Thromdes and the relevant technical agencies. This includes the Department of Engineering Services (DES), Department of Human Settlements (DHS), Department of Disaster Management (DDM), and National Center for Hydrology and Meteorology (NCHM). The technical agencies have invested in building capacity to carry out their day-to-day functions. However, the agencies rely on international consultancy services for specialized tasks such as risk assessments, structural vulnerability assessments, ground water studies, and integration of disaster risk reduction and climate resilience into urban development plans. Gaps in specialized technical capacity need to be assessed and investments need to be made to build essential technical capacities with sustainable management options.

While the integration of climate and disaster risk management in development planning is a cross-cutting priority for the RGoB, its implementation and monitoring are at a nascent stage. The national disaster risk management framework prioritizes investments to build resilience. Its aim is to finance structural and non-structural resilience measures as drivers of poverty reduction, job creation, and economic growth. The challenge lies in stakeholders’ readiness to integrate resilience. The long-term benefits of investing in resilience become obvious to stakeholders as they recognize the importance of integrating resilience in urban development when recurrent and even minor hazards can cause significant and repeated damages.

Collective citizen engagement can help maintain the built systems. Agencies such as the Department of Disaster Management and the Department of Geology and Mines recently started awareness programs through the Bhutan Broadcasting Services, the only national television channel, TV ads, and newspaper ads, among others. The messaging still needs to explain the probability of hazard events (flooding, landslides, epidemics from waste management, water management, and public infrastructure use) so that
the general public is not alarmed but better prepared for the events. For example, one of the main problems in Thimphu City is manholes are used to dispose of waste (household, plastic, and other wastes, which clogs the pipes), and the metal items from the manholes (the lids) are sold to scrap dealers.

**Strengthening the partnerships between technical agencies and the Royal University of Bhutan can deepen research and leverage developmental activities with emerging technologies.** One of the main constraints to assess the vulnerability of buildings is the lack of Bhutan-specific material properties. Similarly, studies on in-country construction technologies is highly limited. Effective partnerships between the engineering colleges and technical agencies (Department of Engineering Services) can expedite detailed research on construction material properties, construction technologies, and labor and material co-efficiencies for the Bhutan Schedule of Rates. This work supports the next phase of development: guidelines for resilient construction. Such partnerships are key to sustain and advance technical know-how, data, and knowledge transfer.

**Establishing partnerships with neighboring countries to increase capacities and access hydromet data and services would bring significant economies of scale to Bhutan as a small, landlocked country.** The climate and weather patterns facing Bhutan are transboundary and are best monitored, understood, and predicted by taking regional and global perspectives. Moreover, there is a demand for Bhutan-specific data from regional centers and a demand for regional products and information that the Bhutan National Center for Hydrology and Meteorology can use.

III. **Recommendations for Enhancing Urban Resilience**

This section explores opportunities to strengthen urban resilience in Bhutan. It encompasses policy directions and actions that may be tailored to address resilience-related priorities in different urban contexts. A summary of recommendations is provided in Box 3. A list of analytical works that the World Bank can potentially support to materialize some of the proposed recommendations is listed in Annex 1.

**Strengthening the Enabling Environment for Urban Resilience**

- **Strengthen Policies.** Acts and policies are in place and under preparation to support an enabling environment for urban resilience. Policies are needed to encourage institutional coordination, strengthen service delivery, and reassess the existing ones in terms of operationalization. Specific areas of attention include:
  - **Formulate a Resilience Information Policy** to help strengthen the information base for resilience by providing clarity and agreements on the collection, storage, and sharing of data and information and by creating a platform to update and share information organically. This will help improve disaster risk assessments and identify priorities to integrate disaster risk management in development activities.
  - **Formulate a Hydromet Services Delivery Policy** to help strengthen the linkages between the National Center for Hydrology and Meteorology (NCHM) and end users, by identifying priority

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sectors and their hydromet information needs. Currently, the NCHM has drafted a concept note for this policy and has sought support from the World Bank for the development of this policy.

- **Finalize and endorse Guideline for Fire Safety in Buildings** to help mitigate fire risks in clustered settlements with high population density. This will strengthen the incorporation of fire mitigation in individual buildings and local area plans as a whole.

- **Prepare Action Plans.** The draft National Human Settlement Policy and the draft National Construction Industry Policy for their operationalization need to have equally robust action plans. Implementation of these policies involves a variety of stakeholders, various levels of the government, and the private sector. It is, thus, critical to prepare an action plan to implement these policies, to build the capacity of relevant stakeholders, and to create awareness on policy implementation.

- **Strengthen Institutional Coordination between DDM, DHS, DES, NCHM, and the Thromdes.** While final expected outputs and outcomes are tagged to an individual agency, implementation of policies demands strong institutional coordination. Information flows that are coordinated and checks and balances that are institutionalized better-regulate policy implementation, across the different levels of government and in third-party engagement. Specific coordination for the implementation of action plans in the areas of urban resilience, geospatial data management, hydromet services, infrastructure planning, implementation, and monitoring are priorities for operationalization of the well-formulated polices and identified key national result areas.

- **Carry Out and Update Analyses and Technical Assessments.** An improved understanding of context-specific vulnerabilities and key issues is needed. Priority assessments include:
  - **Conduct vulnerability assessment of buildings, especially in the urban core areas.** This would provide guidance on strengthening unsafe buildings, targeting those constructed before the adoption of seismic building codes, and understanding the overall vulnerability of the settlements. Based on the findings, a policy note could be formulated on the use of mechanisms (such as government subsidies and tax waivers) to encourage home owners to retrofit or reconstruct their homes. Findings will also inform preparedness and emergency response mechanisms.
  - **Assess the challenges in enforcing approved drawings and building designs on an implementation level.** During construction, there is a strong need to assess the compliance with and monitoring of the Bhutan Building Rules and Designs. This will help uncover the constraints and gaps in enforcement of the approved drawings. While building regulations, scrutiny of plan drawings, and certain aspects of monitoring are in place in the four Thromdes, this could be developed as a comprehensive package from the design to implementation phase including monitoring to include resilience and urban development regulations.
  - **Put in place regulations to clarify accountability for maintaining the quality of construction and for complying with drawings and designs.** Adequate training, testing, and preparedness should be provided so that operators and regulators can acquire the right expertise, knowledge, and capacity. This will help to ensure that codes, standards, and best practices are followed with integrity to achieve the desired resilience. An initiative of the MoWHS aimed to strengthen the quality of monitoring and the implementation of construction works includes the proposal to establish an

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References can be taken from the initiative led by GSURR which is working to promote a new building policy and regulatory strategy for the World Bank Group. It specifically seeks to develop and promote a new stream of activities to increase regulatory capacity and promote a healthier and safer built environment.
Engineering Council and to coordinate with vocational training institutes as per the draft National Construction Industry Policy. A brief on the World Bank’s Building Regulation for Resilience Program which supports development of more efficient and effective building regulatory frameworks is provided in Annex 2.

➢ **Develop a Comprehensive Disaster Risk Management Financial Strategy.** It is important to put in place disaster risk retention tools that cover public and private properties. These tools should have the capacity to contain high-frequency, low-impact events and to establish disaster risk transfer mechanisms for high-impact, low-frequency events.

**Building the Information Base for Urban Resilience**

➢ **Databases and Coordination**

- *Establish a comprehensive geospatial data platform to effectively coordinate agencies.* This is fundamental to prepare multi-hazard maps and to carry out risk assessments, especially for a small country with limited resources and technical capacity. Networking stakeholder agencies strengthens coordination, clarifies responsibilities, and has a ripple effect. Networked agencies are better sequenced for developing hazard maps and vulnerability assessments with urban planners and for developing common policies to strengthen collection, storage, and data sharing. It is recommended to organize country-level workshops, integrating government departments in charge of DRM activities on risk awareness and analysis, highlighting the importance of inter-agency coordination, and jointly (DDM, DES, DGM, DHS, and others) developing risk assessment plans. Improving geospatial exposure data (population density, buildings, roads, service utilities) can help to mitigate the negative effects of disasters and to increase efficacy of urban resilience over the long term.

- *Establish a geospatial database of a Thromde’s infrastructure assets.* This is key to better planning, development, and enhanced resilience. There is a need to properly document existing service delivery facilities (water supply pipelines and other utility networks) in one data management center. This would facilitate the provision of services during normal periods and, more critically, augment responses during emergencies. A common methodology and database to record assets should be agreed upon and implemented in all Thromdes. Such an initiative should be extended to the urban centers of districts and at a later stage, to all settlements. That way, the database gradually covers the entire country.

- *Integrate multi-hazard risk assessments in disaster management and contingency plans.* Disaster management and contingency plans for Thromdes and districts can be improved with integration of risk information. To enhance preparedness at the community level, the community-based DRM and Early Warning approaches in these plans should be tested at regular intervals. Therefore, simulation exercise based on these plans and updating of these plans are recommended to be a part of the annual plans of Thromdes and districts.

- *Establish a geospatially tagged city address system.* This is critical for enhancing service delivery and effective communication during disasters. The Thimphu Thromde should revive its 2015 initiative. Other Thromdes should begin establishing an address system. Later, this can be expanded to the entire country.

- *Think through the resiliency of data management.* There is a need to understand and agree on the use of resilient data storage systems and to establish back-up plans. These plans must include
coordination with service providers (power and telecom agencies) to ensure minimal disruption to the access and use of data and information during emergencies.

- **Information-Driven Planning**
  Having the geo-located hazard maps, vulnerability assessments, and risk mapping in place are critical elements of urban resilience. They bring out the impacts on interconnected systems and the stress- or shock-absorbing capacity, behavior, and performance of the systems when subjected to disasters. Hence, alternate supply routes and critical operational planning can be adopted.
  - *Adopt information-driven planning systems that integrate resilience factors.* This can better identify the magnitude of risks and required preparations. Preparing multi-hazard maps and carrying out vulnerability assessments are urgently needed to comprehensively assess risk in urban areas at the local and national levels. A comprehensive assessment helps identify the risk reduction and emergency preparedness strategies that can be integrated into the urban planning and development process. Data-driven analyses can provide the basis to formulate effective urban resilience policies and strategies, with guidance based on population, land cover, and spatially-detailed accessibility information.
  - *Promote and adopt the use of data-driven analyses outputs for policy and financial planning.* Such planning is advantageously geared for enabling preparedness and faster emergency response. The benefits of such planning include reducing existing and/or potential risks in built-up areas; limiting the creation of new risks by directing urban development and expansion into areas that are safer and/or less vulnerable; and, improving the urban design and the efficient allocation of infrastructure for civic needs.

**Improving the Quality and Access of Urban Services for Enhancing Urban Resilience**

- **Management of drinking water supply, solid waste, sewage, and stormwater**
  - *Enhance effectiveness and efficiency of service delivery.* A better understanding of the wider issues, such as non-revenue water, is essential to plan for future network expansions. Furthermore, it is critical to look at how green infrastructure, such as using natural and constructed wetlands for secondary/tertiary treatment of storm water and wastewater, can be incorporated in settlement planning and implementation. Global evidence strongly shows that the use of natural and constructed wetlands can lower cost of and is a very effective instrument in treatment of storm/waste water. Currently, such water largely is left to flow untreated into the Bhutanese rivers, which increases the health risks for populations downstream and affects the ecological quality of rivers. Measures to conserve urban wetlands and support the use of natural and constructed wetlands can be vitally important not only to treat water but also as flood protection zones.

- **Incorporation of Fire Safety measures in local area plans**
  - *Enhance coordination and capacity for fire hazard management.* Close coordination among the Department of Human Settlement, Thromdes, Districts, and the Fire Service Division is essential to better plan for fire hazards. Understanding the functionalities of available equipment for fire management will facilitate streamlined plans for locating the equipment sets as a part of the overall development plan. Options to connect fire hydrants to the drinking water supply can be explored during the planning stage. In addition, regular drills and O&M of the fire hydrants are important to raise awareness among the community and to ensure the equipment sets are always operational.

- **Private Sector Services Delivery**
  - *Carry out an assessment to understand how an enabling environment can be created for the private sector to be more engaged in enhancing the resilience of infrastructure development.* The
government should provide opportunities for the private sector and other stakeholders to participate in the development of resilient cities. This would include mapping investment opportunities and market potentials and raising awareness on the importance of quality of infrastructure to enhance its resilience in the face of natural disasters.

> **Siting and Location**
> - Incorporate hydrometeorological risks in siting infrastructure and invest in building the capacity for related infrastructure. It is important to prepare masterplans to manage utilities and to identify the infrastructure required to meet the needs of a growing population (based on the projection of population growth). Past experience and needs indicate that innovative technologies to enhance the performance of infrastructures and the role of private sector in management of service delivery should be explored.

- Raise community awareness through utility management planning. An informed population can advocate for change, provide implementation oversight, and report any misgivings. This can help address the country’s challenges of an inadequate supply of drinking water and the management of solid waste and sewage.

> **Coordination for Sector Services**
> - Improve coordination among service providers to optimize the use of resources and the efficient delivery of utility services. Regular coordination meetings among service providers, such as the Bhutan Power Corporation and Bhutan Telecom, should be led by the Thromdes. The meetings should, to the extent possible, discuss work programs for coordinating the implementation of works on the ground for service delivery.

> **Operation and Maintenance**
> - Plan and budget for Operation and Maintenance (O&M). This has to be integral to the capital investments. O&M planning and budgeting can be done through different methods, such as using public-private partnerships with viability gap financing or other risk-sharing models.

**Critical Infrastructure and preparedness capacity**

> Establish and Operationalize the National Emergency Operation Center (NEOC). This needs to be established and made functional to fully benefit from other investments. The NEOC would allow stronger data and information sharing with other agencies and improve coordination with local and national agencies, especially during a disaster.

> Establish a Search and Rescue Center. This would facilitate the establishment of systematic capacity building and consolidate investments in the equipment for Search and Rescue.

> Establish a dedicated office building for NCHM. This would allow NCHM to expand its facilities and to build its capacity in terms of infrastructure and ICT facilities.

> Strengthen emergency communication network and equipment. In parallel to operationalizing emergency operation centers and search and rescue teams with enhanced alert and warning communications, there is a need to assess the reliability of existing communication networks during emergencies. Such an assessment should look at both equipment, system interoperability, communication networks, human resources and standard operating procedures to communicate between EOCs, early warning information providers, government authorities and public.
Capacity Building, Advocacy, and Knowledge Sharing

- **Conduct an assessment on the current capacity and gaps of the related agencies.** There is a strong need to invest in capacity building to advance the urban resilience agenda. In order to invest strategically in capacity building, an assessment needs to be conducted on the current capacity and gaps of the related agencies. Strategic discussions should be taken up by the relevant technical agencies with the Royal Civil Service Commission, Department of Adult and Higher Education under the Ministry of Education, and the Ministry of Labor and Human Resources. The discussions can plan for providing scholarships to pursue the required specializations and understanding job opportunities. Capacity building should also provide avenues for specialized training in geospatial tools, hazard vulnerability/catastrophe models, and shared data analysis and interpretation for technical staff from government departments.

- **Promote the knowledge of an eco-city concept, including Climate Smart Planning.** At the ground level, resilience is integrated into urban planning through eco city concept planning, keeping adequate buffers, and ensuring green multi-use spaces.
  - For example, construction is not allowed on slopes above 54 percent, allowing only one to two floors on slopes between 30-54 percent. Awareness programs are carried out based on hazard mapping for vulnerable settlements. Planning would factor these in to include the appropriate guidelines on building heights and setbacks and the appropriate designation of green areas, cultural heritage, and recreational spaces.
  - To minimize the impact of climate change in these highly vulnerable urban regions, urban planners also need to integrate climate-resilient re-design protocols and to formulate climate-smart land use plans (LUPs) for housing, public works, critical municipal infrastructure, and green spaces. They should adhere to the principles of compact and resource-efficient urban design.

- **Incorporate citizen-centered mechanisms in developing resilience strategies.** This can convene multiple community actors to build sustainable resilient policies and to act in the community. This highlights the need to engage the public in maintenance of service delivery infrastructure. It is also important to conduct regular drills involving the public to understand the preparedness level as well as to prepare for responding during a disaster.

- **Strengthen partnerships between technical agencies and the Royal University of Bhutan.** Partnership opportunities should be explored in research-deficient areas such as construction material properties and construction techniques that would feed into priority guidelines. As such, partnerships are at a nascent stage in Bhutan. It would be pivotal to have action plans developed and to pilot engagements carried out with coordination at both the policy-making and implementation levels.

- **Strengthen partnerships with its neighboring countries.** Bhutan should explore collaborations with regional and international organizations for regional and country-specific satellite data for hydromet and climate data and shifts in land formations. This data and information can significantly strengthen hazard mapping and risk analysis.

- **Explore opportunities to enhance regional collaboration through capacity building and knowledge sharing.** Bhutan is a member of the South Asia Hydromet Forum (SAHF) led by the World Bank, which is a mechanism for providing knowledge sharing, capacity development, and regional collaboration on Early Warning Systems and hydromet services. This is an important agenda in the context of urban resilience given the substantial hydrometeorological risk that Bhutan faces. The World Bank is also exploring opportunities to carry out analytical work to better understand the context of
individual countries in the region. At the same time, it is facilitating knowledge exchange, enhancing cooperation, and strengthening institutions in the countries to promote urban resilience. These are important platforms from which Bhutan can draw lessons learned and to which Bhutan can help build the knowledge base.
## Box 2. Summary of the Recommendations

For the purpose of this note, the areas for attention and support have been listed both in terms of Technical Assistance and Investment Opportunities.

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<tr>
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<th>INVESTMENT OPPORTUNITIES</th>
<th>Suggested Responsible Stakeholder</th>
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<td>- DDM with Ministry of Information and Communications</td>
<td>- Implement the key investment priorities identified through the policies and Action Plans</td>
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<td>- Formulate a Hydromet Services Delivery Policy</td>
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<td>- Prepare action plans to implement the National Human Settlement and National</td>
<td>- Ministry of Works and Human Settlements (DES and DHS)</td>
<td>- Put in place disaster risk retention tools that cover public and private properties</td>
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<td>Construction Industry Policies</td>
<td>- DES</td>
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<td>- Carrying out a vulnerability assessment of buildings, especially in the urban core</td>
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<td>- Design a geospatial data base and prepare an Action Plan for Multi-hazard risk assessment</td>
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<td>- Conduct multi-hazard risk assessments</td>
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<td>- Establish a common and comprehensive data platform and coordination mechanism for agencies relevant to risk assessment</td>
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<td>- Develop comprehensive geospatial data platform</td>
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<td>- Establish a geospatial database of Thromde-level infrastructure assets</td>
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<td>- Support the improvement of disaster management and contingency plans for Thromdes and districts with integrated risk information and test community-based DRM and Early Warning approaches</td>
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<td>- Establish a city addressing system</td>
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<td>- Adoption of information-driven planning systems and data driven analysis outputs for policy and financial planning</td>
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<td>- GNHC, MOF and all agencies</td>
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| **Improving the Quality and Access of Urban Services for Enhancing Urban Resilience** |
- Prepare master plans to develop service delivery infrastructure
- Carry out an assessment to understand how the role of private sector can be enhanced in resilient development
- Raise community awareness through utility management planning

- Invest in urban resilience actions such as smart urban development, green infrastructure, critical services delivery incorporating hydrometeorological risks in siting infrastructure, supporting community level investments for resilience
- Plan and budget for Operation and Maintenance

**Establishing Critical Infrastructure and Preparedness Capacity**

| - Support for preparedness capacity at national, district and community levels with community engagement (Institutional and CBDRM) | - DDM | - Design, Construction and Equipping of NEOC | - DDM |
| - DDM | - Establishment of Search and Rescue Center | - DDM |
| - NCHM infrastructure | - Emergency communication network and equipment | - NCHM |

**Build Capacity, Advocacy, and Knowledge Sharing**

- DDM with other relevant agencies
- Conduct an assessment on the current capacity and gaps of the related agencies to advance urban resilience
- Build capacity to advance the urban resilience agenda
- Strengthen partnerships between technical agencies and the Royal University of Bhutan
- Build partnerships with neighboring countries and absorb regional knowledge

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<th>- DDM</th>
<th>- MoWHS, Thromdes and DDM</th>
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<td>- Advocacy</td>
<td>- Capacity Building</td>
<td>- Incorporate citizen-centered mechanisms in resilience strategies</td>
<td>- Promote knowledge of the eco-city concept, including Climate Smart Planning</td>
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| - CSOs | - Individual agencies in coordination with CSOs | - Government agencies, CSOs, private sector | - Government agencies, CSOs, private sector |
Annex 1: Analytical Work the World Bank Group Can Potentially Support

1. *Review and assess the Thimphu Structure Plan (TSP).* The purpose of this review would be to drill down on particular topics to: (i) identify potential modalities and interventions for technical assistance and or systems upgrading; (ii) propose locations or screening criteria for civil works under the TSP and develop remaining local area plans (LAPs); and (iii) implement and maintain/manage arrangements for services or investments.

2. *Promote and invest in urban resilience in South Asian cities.* The overall objective of this activity is to promote urban resilience in selected South Asia Region cities through analytical work, knowledge development, and capacity building. The activity also will build capacity in prioritized areas and inform national governments, municipal authorities, and the World Bank on how to better target and finance potential urban resilience programs.

3. *Develop Action Plan for multi-hazard risk assessment and design of geospatial database for resilience.* This technical assistance (TA) will help improve disaster risk assessments and identify priorities to integrate disaster risk management in developmental activities. The purpose of this TA is to improve the understanding of disaster risks through improved coordination mechanisms and information sharing.

4. *Strengthen the resilience of the built up environment through the Building Regulation for Resilience Program.* This program supports promotion of effective building regulatory frameworks through three main areas of intervention: (i) supporting best practice national legislative frameworks, national institutions and incentives that promote safe building practices; (ii) assisting in modern and locally-appropriate building code development and maintenance; and (iii) improving local systems of building and land use regulation implementation.

5. *Strengthen disaster risk management and climate change adaptation policies in the South Asia Region.* The objective of this TA is to help selected South Asia Region countries, including Bhutan, to formulate and implement key policy and institutional actions for building resilience.
Annex 2: Building Regulation for Resilience Program

The World Bank’s Building Regulation for Resilience (BRR) Program provides technical assistance to support low- and middle-income countries to reduce their physical risks in the built environment through regulatory enhancements that both improve resilience to disasters and achieve economic development goals. Buildings are an essential component of societies and economies; if built and maintained effectively, they can provide safe, healthy, and sustainable environments for people to live and work. Well-designed building regulations can advance development agendas, including disaster and chronic risk reduction, climate change mitigation and adaptation, disability and inclusive urban development, cultural heritage, and reconstruction processes. The program is aligned with a shift from disaster response and recovery to ex-ante disaster risk reduction for buildings and infrastructure.

The BRR Program aims to contribute to the reduction of human and economic losses by developing more efficient and effective building regulatory frameworks. BRR supports governments to strengthen technical standards in formal and informal settlements; lay secure foundation for public and foreign investment through protection of physical assets; and develop more efficient land management and mapping tools. BRR engagements provide technical assistance to help governments integrate and implement building regulatory components into World Bank Group supported operations.

Through its framework, BRR promotes effective building regulatory frameworks through three main areas of intervention: (i) supporting best practice national legislative frameworks, national institutions, and incentives that promote safe building practices; (ii) assisting in modern and locally-appropriate building code development and maintenance; and (iii) improving local systems of implementation of appropriate standards of land use and construction. BRR engagements are adapted to country-specific needs, ensuring that a wide range of relevant partners are included in the process, including the public sector, private sector, academia, and civil society. This approach ensures determining comparative strengths and experiences in local building sectors.

The Building Regulatory Capacity Assessment (BRCA) is a baseline assessment methodology developed by the BRR Program. It identifies concrete priority actions to advance the resilience of the built environment in each specific country context.
Acknowledgements

The note is the result of collaborative effort between the Royal Government of Bhutan (RGoB) and the World Bank Group (World Bank). The South Asia Region Disaster Risk Management and Climate Change team prepared the note. The stakeholders include: the Department of Engineering Services, Department of Human Settlement, Department of Roads, and Division of Policy and Planning of the Ministry of Works and Human Settlement; Department of Disaster Management of the Ministry of Home and Cultural Affairs; National Center for Hydrology and Meteorology; Ministry of Finance and Thimphu Thromde.

The note presents the emerging challenges in the context of increasing urbanization and vulnerability to weather, water, and climate hazards. It is intended to guide the RGoB in the prioritization of its investments and the Bank in future analytical and investment support on urban- and resilience-related challenges.

The authors wish to extend their appreciation to the above agencies and in particular the Ministry of Works and Human Settlement in spearheading this task. We are especially grateful to Mr. Mahesh Pradhan, Project Manager of BUDP2; Mr. Tshering Dorji, Deputy Chief Planning Officer, MoWHS; Mr. Karma Dupchuk, Director of Engineering Services, MoWHS; Mr. Sonam Yangdhen, Executive Engineer, Engineering Adaptation and Risk Reduction Division, DES; Mr. Dechen Norbu, Chief Engineer, Engineering Services Division, DES; Mr. Namgyel Wangchuk, ESD, DES; Ms. Tshering Pelden, Engineer, ESD, DES; Ms. Kunzang Choden, Deputy Executive Engineer, Flood Engineering and Management Division, DES; Mr. Karma Sonam, Director of Human Settlement, MoWHS; Mr. Tashi Penjor, Chief Urban Planner, DHS; Ms. Bhawana Chhetri, Deputy Chief Planner, DHS; Ms. Thinley Choden, Principal Engineer, Water and Sanitation Division, DES; Mr. Dhan Raj Chhetri, Engineer, Department of Roads, MoWHS; Mr. Tshering Wangchuk, Program Officer, Department of Disaster Management, Ministry of Home and Cultural Affairs; Mr. Tayba Buddha Tamang, Executive Engineer, National Center for Hydrology and Meteorology; Mr. Bikash Pradhan, Deputy Executive Engineer, NCHM; Mr. Sonam Penjor, Chief Planning Officer, Ministry of Finance; Mr. Tshering Tashi, Deputy Chief Planning Officer, MoF; and Mr. Karma Jamtsho, Chief Engineer, Thimphu Thromde.

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The World Bank team that prepared this note includes Dechen Tshering, Disaster Risk Management Specialist, and Arati Belle, Disaster Risk Management Specialist. The team is grateful to the following for their inputs and comments: Tenzin Lhaden, Operations Officer; Keiko Sakoda, Disaster Risk Management Specialist; Zahed H. Khan, Senior Urban Specialist; Balakrishna Menon Parameswaran, Lead Urban Specialist; David Ryan Mason, Urban Development Specialist; and Marc S. Forni, Lead Disaster Risk Management Specialist.

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Bhutan Urban Policy Notes
Affordable Housing Policy

This paper is part of a series of four Urban Policy Notes that provide a critical review on emergent challenges to Bhutan’s increasing urbanization and its ramifications for growth, livability and sustainability in line with the directives of the 12th Five-Year Plan (FYP) and the Vision 2020. The four notes are: (a) Regional Development, (b) Municipal Governance and Finance, (c) Affordable Housing and (d) Urban Resilience. These notes build on the long engagement between the Royal Government of Bhutan (RGoB) and the World Bank on urban issues as well as the experiences of urban operations under Bhutan Urban Development Projects I (1999-2006) and II (2010-2019) and are intended to support the RGoB on key and emerging urban topics and guide Bank’s future analytical and investment support in the urban sector.

Executive Summary

Bhutan’s demographic shifts underline the need for increasing access to quality affordable housing. The country has experienced the fastest rate of rural-urban migration in the region. Accompanying rapid economic growth of around 6 percent between 2012 to 2017, Thimphu District’s population increased by 40 percent, Sarpang’s by 19 percent and Chuka’s by 15 percent. This influx of people has greatly increased the demand for quality affordable housing in urban areas. Urban populations have housing needs that are different from rural populations, based on income and consumption characteristics, household formation rates, and demand for greater diversity of housing preferences at different life stages in terms of housing unit types, sizes and locations, and tenure.

Housing is an important source of household wealth and intergenerational mobility. Homes are often the most expensive purchase that a household will ever make. Evidence also shows that housing quality has an important impact on household health outcomes (in particular respiratory and digestive health) and children’s school attendance among others, which has long term positive implications for public health conditions and for local labor markets. Housing is also a key driver of national economies (contributing up to around 20 percent of GDP in higher income countries) through investment and employment in construction, materials, financing and related services.

The 2002 National Housing Policy lays out the general policy framework for housing. The Policy sets a goal of providing “safe, basic and affordable housing, promote homeownership and create a transparent and well-functioning housing market.” However, the Policy does not clearly define questions of affordability or housing need, especially for low income or vulnerable groups. A related law, the 2004 Tenancy Act, details protections for tenants and landlords and charges the Ministry of Works and Human Settlements (MoWHS) with regulatory and administrative purview of the housing sector. The Royal Government of Bhutan (RGoB) also provides indirect subsidies for public sector workers in the form of below market rental rates on public housing and below market interest rates on home loans. It is not clear, however, if these subsidies are targeted to and benefiting people that could otherwise not afford quality housing.

Overall, most citizens have access to serviced housing units as estimates suggest that the quantitative housing deficit is low and will likely stabilize as the population growth rate declines in the coming decades. However, there are a several important qualifications. First, housing in rural areas is largely self-built, owner-occupied and more likely to have quality deficits (in terms of construction material and basic service
connections) than are urban housing units. Owner-occupied housing is around 78 percent in rural areas but only 16 percent in urban areas. Urban areas consist primarily of rental housing and a few informal settlements which lack decent services and have substandard and impermanent dwelling units. Data on expenditures and rental rate increases suggest that urban housing is unaffordable for the median income household, meaning that middle and lower income quintiles would spend more than one third of their incomes on housing costs. Globally, a basic housing affordability standard are housing expenditures no more than 25-30 percent of household income.

Critical bottlenecks in the delivery of affordable and quality housing are best understood through supply and demand value chains. On the supply side, key issues include land administration, planning standards and regulations, infrastructure provision, construction labor and materials. On the demand side, limited access to finance instruments such as loans and mortgages that meet consumers’ ability to pay are key. This note finds the following critical constraints which impact the cost of housing provision:

**Supply Side:**
- Land administration and infrastructure planning encourage peri-urban expansion. With the exception of select instances of land pooling, other land value capture instruments, such as property taxation or betterment fees, which can be used by municipal governments as incentives to control and manage urban expansion and facilitate new affordable housing, are largely absent from urban areas. Developers are also constrained by the inability collateralize land for construction finance, which raises the costs and risks to develop land for housing or other purposes.

- The construction industry lacks the capacity deliver housing at consistent quality standards. This is due in part to the cost of importing materials, the lack of a skilled labor force experienced with new and alternative materials and equipment and the uneven application of build material standards quality assurance and building code compliance.

**Demand Side:**
- Formal participation in banks and savings institutions is low. As a result, mortgage finance for housing is uncommon, expensive and a small fraction of consumer finance. Even if incomes and savings rates increase and banks offer more competitive mortgages, it is unlikely such products will reach far beyond upper middle-income groups. There is a lack of alternative products, such as housing microfinance, which could reach low and middle-income groups with limited credit history. Such loans can also complement the incremental and savings-based approaches to home expansion and improvement which is already common throughout the country.

Across board, data on housing markets, prices and trends in Bhutan is limited. Limited information on current housing stock, public and private actors, market trends, institutional capacities of key stakeholders, affordability and housing finance availability limits the ability of policymakers to prioritize policy responses and target public interventions to meet the needs of the neediest groups.

While Bhutan does not face a major quantitative housing gap, improvements to housing markets can expand access to low income groups and improve quality of housing. Revisions or updates to the 2002 National Housing Policy need to consider how the government can better enable the private provision of housing to meet demands of different income groups. Based on global experience, key areas that merit the attention of policymakers are summarized below.
Clarifying the role of government in housing: In the context of Bhutan, both national and local governments have an important role to play in enabling housing markets and ensuring equitable provision of housing. On the supply side, this includes the establishment and maintenance of a land cadaster and registry system; the application and enforcement of appropriate building, zoning and development standards; providing infrastructure and utilities, and ensuring training and quality control standards for construction labor, materials and methods. On the demand side, the central government has a key role in adopting policies and implementing regulations that encourage savings deposits which enable financial institutions to reduce risk and access capital markets, offer a greater number of consumer and developer finance instruments and support the development and sharing of information and data base systems tracking creditworthiness, property market activity and so forth.

Enabling more housing finance options for developers and low-income groups: On the finance side, assessing the viability of land collateralization could lead to reforms that allow developers to leverage the value of land they wish to build on to secure construction finance. Additionally, an enabling policy framework for alternative types of lending for commercial banks, such as housing microfinance, would allow banks to experiment with these instruments for middle and lower middle-income borrowers for incremental upgrades and improvements.

Strengthening housing subsidy system: Currently RGoB subsidizes both the supply and demand sides of housing for public employees by building and managing housing and by subsidizing rents or consumer finance. If housing subsidies are not well targeted, based on income or location criteria, they can crowd out private sector finance and construction and/or they may be channeled to groups that could otherwise afford market-rate housing without subsidies. A comprehensive review of housing subsidies needs to be conducted to identify actions to ensure subsidies are better targeted and leveraged.

Enabling access to serviced land: Larger cities like Thimphu and Phuentsholing can strengthen land administration, including zoning and development standards to encourage higher density and mixed uses. This can build on the success of land pooling to include other types of land value capture instruments such as density bonuses and housing set asides. Planning and standards should also reflect principles of urban resiliency, both in the types of materials and construction and in how climate and hazard mitigation are integrated into development plans. Finally, the supply of affordable rental housing can be enhanced through incentives to landlords and or directed subsidies to eligible tenants.

Reviewing building codes and construction standards: A review of the construction standards and materials sector should be undertaken to enable a wider range of acceptable construction materials and techniques that meet basic safety standards in greater options for builders and to reduce costs to consumers. Training and certification programs for builders and workers can strengthen professional standards and quality across the industry. Improved building codes would ensure principles of urban resiliency to respond to natural hazard and climate change risks in addition to principles of energy and water efficiency.

Establishing housing related data systems and indicators: Publicly available data systems and market observatories are needed as a foundation for sharpening housing policy and enabling markets. These systems can be used to document and track land, rental and property markets (prices, locations, volumes) can be used to help developers and consumers better calibrate decisions to build, rent or purchase and resolve legal disputes. Credit reporting systems linked to national ID cards can help lenders better assess creditworthiness of informal or unbanked potential borrowers. All of these systems can also be used to develop and calibrate housing subsidy targeting to reach low income groups.
I. Introduction to Affordable Housing

The government has identified housing affordability as an important and emergent issue impacting Bhutan’s urban future. This policy note responds to the need to deepen the policy dialogue on the issue and potential way forward. The note briefly reviews the current context of urbanization and housing in the country, identifies critical gaps and challenges in the sector and proposes next steps to address some of these challenges drawing on a review of secondary data and providing an analysis focusing on different aspects of the housing value chain (annex 1).

II. Main Trends and Key Findings

Bhutan is a small mountainous landlocked country at the crossroads of an urban transition. Sharing borders with two of the world’s largest economies, China and India, Bhutan is less than one percent the size of each and with approximately 727,000 people. Over the last 15 years, per capita GDP has doubled to USD $2,751 as the economy moves away from a reliance on agriculture toward a services and manufacturing base. It has also experienced the fastest rural-urban migration rate in the South Asia region for the period 2000-2010 with an annual growth rate of 5 percent, with the capital and main city, Thimphu, now home to about 15 percent of the total population. In 2017, 37.9 percent of the total population lived in urban areas.

In 2017, 37.9 percent of the total population lived in urban areas.

Accompanying rapid economic growth of around six percent from 2012 to 2017, the population of Thimphu Dzonkhag increased by 40 percent, Sarpang by 19 percent and Chuka by 15 percent. This influx has greatly increased the demand for quality affordable housing in urban areas such as Thimphu and Phuntsholing.

Bhutan is experiencing serious demographic changes, which show a growing contrast between urban and rural areas and the underlying housing needs. Urban migrants often tend to be young and single, with a lower dependency ratio than rural areas. In 2017, the mean age of male household heads in urban areas was 3 years less than their rural counterparts; for females, 4 years. Urban households are also smaller than rural households (3.97 versus 4.36 average members). More than half of the elderly population lives in urban areas and the share of the elderly as a portion of the total population is expected to quadruple by 2040. These demographic trends will determine the future housing need, including household formation rates, and a greater diversity of housing preferences at different life stages in terms of housing unit types, sizes and locations, and tenure (rentals versus ownership). As rural-urban migration continues

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128 Housing “affordability” refers to how much a household pays for shelter. There is some debate about how this amount varies in different places, but a common standard of housing affordability is no more than 25-30 percent of total monthly expenses for rental, mortgage or maintenance. For housing purchase, a house is typically affordable if it is worth between 3 and 5 times the total annual household income. Housing units are not inherently “affordable” or “unaffordable” – rather affordability is part of a series of market and policy interactions that effect the ability of different households to pay a reasonable amount for housing.

129 Key planning and urban policy documents, including the Vision 2020, National Urban Strategy and Human Settlement Strategy detail the need to address housing issues.

130 Population and Housing Census of Bhutan (PHCB) 2017.

131 2017 BLSS, 2012 BLSS

132 Dependency ratio refers to the share of household members of working age compared to those who are children or elderly. A higher dependency ratio indicates more household members depend on the earnings of working members.

133 Royal Society for Senior Citizens, 2012; Population Perspective Plan 2010
and may even increase, it is even more important to understand how the housing sector functions and to address critical bottlenecks to avoid future problems. Housing scarcity - particularly for low income groups and recent rural migrants – can encourage the growth of slums and informal settlements. Slums tend to emerge in areas where land may otherwise undesirable due to environmental contamination, or natural hazard risks such as flooding or landslides which raise the costs of upgrading and servicing these settlements. These factors, along with the likelihood of high levels of social exclusion and the concentration of poverty in slums contributes to poor quality of life, acute public health risks and a lack of opportunities for upward economic and social mobility.

**Housing Stock and Quality**

**Available data limit a detailed assessment of housing needs and an estimation of the quantitative housing gap.** A 2002 Asian Development Bank (ADB) study estimated that Thimphu would need to produce 600 units per year to accommodate demand, and an earlier 1999 study estimated an annual need of 780; suggesting a relatively modest absolute housing gap, even during a period of increasing urbanization, though the current estimated gap is not clear. More recent data on the total housing stock, however, are scarce. The 2017 Census and 2017 Living Standards Survey do not include details on the number and condition of dwelling units. Rather, they cover households, which are not coterminous with dwelling units. It is difficult to assess how many units are vacant and how many units accommodate more than one household. For example, according to the 2017 Census, the number of households increased from 126,115 to 163,001 in the intercensal period, a total of 29.2 percent or an average rate of 2.4 percent per year. From this trend however, it is difficult to estimate the share of new unit construction, changes in vacancy rates or how many of these households share existing units.

**Overall, evidence suggests that future housing demand will slow as the population ages and the growth rate declines.** The average annual population growth rate for the intercensal period was a modest 1.3 percent, a number that officials anticipate will continue to decline to a negative next seven years. UN population projections estimate that the country’s overall population growth rate will slow to a negative growth rate by 2050, with the urban population growth rate beginning to decline by 2020. In rural areas, housing supply is not constrained nor as costly for consumers as it is in cities but a greater share of the stock lacks basic infrastructure like improved water or sewerage connections.

**Housing quality is the main challenge in rural areas.** There are few data assessing the current state of the overall housing stock, yet there are some differences between urban and rural areas in terms of connection to basic infrastructure and construction materials. For example, 73 percent of rural households have piped water to their dwelling, compared with 99 percent of urban units; a difference nearly identical

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136 ADB 2002; Bajaj, M. 2014. “Thimphu’s Growing Pains: Challenges of Implementing the City Plan” The Centre for Bhutan Studies and GNH Research

137 A household is defined as “consisting of one or more individuals irrespective of relationship occupying the same living accommodation, have common arrangements for food and consume certain goods and services collectively.”

138 For example, Gelay (2016) uses GIS analysis to calculate the total number of private buildings in Thimphu as 6,656. Yet given that many of these buildings are multistory apartments, the actual number of dwelling units is not known, but likely much higher.

139 Ghalley, B. “Bhutan population increased 16 percent in the last 12 years” The Bhutan Times. July 1, 2018

140 Estimates suggest an overall population growth rate for the period 2015-2020 of 6.5 percent and 17 percent for urban areas. UN Department of Economic and Social Affairs, Population Division. World Urbanization Prospects: The 2009 Revision. New York: United Nations
for access to improved sanitation facilities. Housing typologies range from single story self-built units using wood, mudbricks, bricks, bamboo/timber panels (ekra) in rural areas to multi story, multi-family buildings of up to six stories constructed with concrete blocks and reinforced masonry in urban settlements.

**Formal housing provision is dominated by the private sector, but there has been some government involvement on both the supply and finance side.** In rural areas, housing is largely financed through savings and constructed by occupants or petty builders, with ownership comprising 82.9 percent of the tenure share. By contrast, in urban Bhutan 63 percent of households rent, and 19 percent own. Both urban and rural housing markets are dominated by the private sector; in Thimphu for example approximately 75 percent of all units are provided by the private sector, slightly less than the national figure of 83.3 due to the concentration of housing for public sector workers. Yet, the share of publicly-owned housing is still significantly high compared to developed countries, such as the United States and much of Western Europe, where this share is typically less than 10 or 15 percent. The remaining stock of formal housing is supplied by a number of public sector entities, such as the Bhutan Housing Development Corporation, the Armed Forces, Ministry of Health, Bhutan Power Corporation and others also build and manage housing for their employees, often at subsidized rents. The country also has a housing provident fund (National Provident and Pension Fund, NPPF) which provides both subsidized rental units and housing loans to government workers that make payroll contributions to the fund.

**Informal housing in urban areas appears to be limited but is not well understood.** Recent migrants with limited resources that are priced out of formal markets are more likely to establish and settle in informal settlements along the urban fringe of larger cities like Thimphu and Phuntsholing. Informal settlements around Thimphu function as labor or workforce camps and house informal sector and low-wage public sector workers. There are limited data on the size and population of these settlements which typically occupy government land, though dwelling units are substandard and made from impermanent materials and lack improved heating or indoor plumbing. In 2002 around 10 percent of Thimphu’s population lived in squatter settlements. Investments in settlement upgrading has reduced this number substantially and the population living slums and hutments is likely now a few hundred households or less than 2 percent. This is due at least in part to the successful implementation of a series of land pooling projects in the southern and northern areas of the municipality that enabled the subdivision of land to increase the supply of private housing while also allowing space for trunk infrastructure connections to these new units.

**Policies and Institutional Framework**

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141 BLSS

142 2012 BLSS, page. 47.

143 The overall homeownership rate in Bhutan is 62 percent.

144 Gelay, K. 2016. “Low Income Housing Analysis: Final Report” Mimeo. Pg. 21. For the national figure, the estimate is derived from the 2017 BLSS by computing the total share of private homeowners and renters from private landlords.

145 The Netherlands and Austria are exceptions to this. Japan, Germany, Canada and Eastern Europeans have little to no public-owned housing stock. Source: OECD. 2016. “Social Rental Housing Stock.”


147 ADB 2002. Technical Assistance to the Kingdom of Bhutan for Housing Sector Reform. TAR BHU 32375

148 This estimate is based on 2017 PHCB data detailing the share of households with units that have impermanent walls and roofs and which do not have electricity.

105
Bhutan’s 2002 National Housing Policy lays out the general policy framework for housing. The policy sets a goal of providing “safe, basic and affordable housing, promote homeownership and create a transparent and well-functioning housing market.” However, the policy does not clearly establish definitions of affordability or need, especially for low income or vulnerable groups. A related law, the 2004 Tenancy Act of the Kingdom of Bhutan, details protections for tenants and landlords and charges Ministry of Works and Human Settlement (MoWHS) with regulatory and administrative purview. It also caps rental increases for institutionally-provided housing units. However, urban growth has increased rapidly in the time since these laws were passed and they may not adequately address current urban housing challenges.

The 2019 Revised National Housing Policy identifies affordability and homeownership as key goals. The policy recognizes the importance of housing and the urgency of addressing increasing unaffordability, safety and supply constraints. It also aims to “regulate the housing stock and corresponding housing market to ensure that rental costs do not exceed 30 percent of income” and the government “shall provide public housing to low-and middle income households.” The policy also defines the roles of different institutions in facilitating these objectives, including the National Land Commission for the improvement of land assembly mechanisms for housing, the Royal Monetary Authority to explore the creation of a separate housing finance entity and the National Housing and Development Corporation (NHDCL) as the main developer and operator of affordable units.

There are few channels for coordinating public and private sector involvement in the housing sector. Apart from the involvement of the MoWHS, there is no central coordinating entity that monitors the housing sector, including the involvement in housing provision and subsidies by various government agencies and parastatals. At the local level, municipalities are charged with implementing structural plans, but these land use and infrastructure plans have limited emphasis on housing and allow municipalities little if any control over public lands (which falls under the National Land Commission). Local governments also have few tools to link infrastructure investments with private sector development in housing, including instruments for land value capture or public-private partnerships (PPPs).

Public entities provide housing subsidies on both the supply and demand sides. The NHDCL is the largest public provider and operator of housing units (a total of 2,050), which are allocated on a first-come, first-serve basis. Rents are capped according to unit size and type. A sample rate of Nu 3.45 per ft² (US$0.04) in NHDCL units is quite low, because rates are assessed uniformly they are not linked to ability to pay or reflective of the local market conditions, where the implicit subsidy (the difference between the set rates and the corresponding market rates) could be very high. The NPPF also provides rent-controlled units to members; a two-bedroom apartment in Thimphu averages around Nu 3,500 a month (US$48.50) compared to a similar unit at market rate prices that may cost upwards of Nu 6,000 a month (US$83). The NPPF has also subsidized the interest rates of mortgage loans for members. In 2002 they offered 10 percent interest rates versus 12 percent offered by private lenders) for tenors of 20 years. However, their market share is very low; the 2016 Annual Report lists 41 housing loans in the portfolio.

Demand side subsidies are not clearly targeted beneficiary groups that are most in need of quality housing. The NPPF rents units to waitlisted applicants at below market rates and provides mortgages at below market rates to eligible civil servants, which are effectively subsidies for housing consumption. It is

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149 MoWHS. National Housing Policy (Revised) 2019. Pg. 10
150 NHDCL operates 1,128 units in Thimphu, with another 500 units under phased construction in Phuentsholing
152 Page. 23
not clear how well these subsidies are reaching those who may otherwise not be able to afford housing. For example, government workers that live in small informal settlements documented in Thimphu either do not have access to the same type of housing subsidies available to other public sector workers or are unable to find affordable units. Subsidized loans for housing under the NPPF also appear to serve a very small population, suggesting that the demand for such support is small and could potentially be served by alternative market rate products.

**Land pooling approaches, such as those recently managed by Thimphu Thromde, are a notable and successful example of making efficient use of urban land to provide housing** (see Box 1). Land assembly is a major cost factor in affordable housing provision in urban areas. To address rapid urban population growth and use scarce available land efficiently, Thimphu Thromde piloted a land pooling scheme in four locations, beginning public consultations in 2004. With assistance from the ADB and the World Bank, the approach was expanded to 14 neighborhoods across the city.

<table>
<thead>
<tr>
<th>Box 1. Land Pooling for Housing Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land pooling is a means to assemble land and provide basic infrastructure and increase the supply of housing. Project sites, residents on agricultural land agreed to give up between 15 and 30 percent of their land in exchange for a smaller plot with trunk road, water and sanitation infrastructure connections and public space amenities. The increased value of the improved plots allowed property owners to building rental housing units and increase population density.</td>
</tr>
<tr>
<td>In 2000, prior to land pooling, Lungtenphu a Thimphu neighborhood of 243 HA was home to 1,571 people in 91 dwelling units. Following a USD $4.2 million investment land pooling, road, water and sewer network extensions, the 2008 Thimphu Development Strategy, the area will be able to accommodate a total of 19,471 residents (more than a 12-fold increase) from land conversion to more compact, multi-family residential uses.</td>
</tr>
<tr>
<td>Land pooling required extensive community consultation and discussion to achieve consensus on land contributions, land planning and compensation amounts. However, this approach reduced the potential for conflict or resettlement, provided benefits to land owners in terms of improved property and the potential for additional cash flow from rentals, while at the same time improving density and housing provision.</td>
</tr>
</tbody>
</table>

### III. Critical Issues in the Housing Sector

**Housing Finance**

*Participation in commercial savings and financial institutions is low.* Only 34 percent of the population has an account at a bank. This is low compared to the mean for lower middle-income countries of 41

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153 Gelay, 2016. Gaps in access to provident funds are also found in other countries where low income public sector workers pay into provident funds over their careers but may not be able to access benefits such as subsidized mortgages due to affordability constraints.

154 World Bank Global Findex 2014, [http://datatopics.worldbank.org/g20fidata/country/bhutan](http://datatopics.worldbank.org/g20fidata/country/bhutan). However as of 2017, the National Financial Inclusion Strategy reports that 64 percent of adults have a savings account (pg. 7)
percent.\textsuperscript{155} The lack of penetration of formal savings both reduces the amount of deposits for commercial lenders, but also represents a large portion of the population that has little or no credit history. Low and middle-income households may well be able to borrow long term for housing purchase or afford a smaller loan for housing improvement or expansion, but because they do not have savings history or credit scoring, banks would be reluctant to extend credit to these borrowers.

**Formal housing finance for consumers is uncommon and concentrated to high income borrowers.** Mortgage finance is available from a number of banks, including the Bhutan National Bank, Bank of Bhutan and Bhutan Development Bank Limited, among others. Typical terms are 10-20 years at an interest rate of between 8 and 13 percent, which is rather high and suggests that, despite a wide number of lenders, there are liquidity and potentially other constraints for offering more competitive mortgages.\textsuperscript{156} The mortgage penetration rate (the share of people with mortgages) of 5.7 (2014) percent is competitive compared to countries at a similar income level.\textsuperscript{157} Restrictions on lending by the Royal Monetary Authority (RMA) have capped commercial bank portfolios in mortgage lending to around 20-30 percent of total assets. The RMA has also periodically suspended loans for housing (from 2012 -2014 for example) due to currency fluctuations related to the ngultrum being pegged to the Indian rupee.\textsuperscript{158} There appear to be no other formal housing finance products that could suit middle and lower middle-income borrower groups, such as micro-mortgages or housing microfinance loans. For the low income and informal sector, housing is most likely purchased or improved incrementally through savings, informal borrowing or the use of consumer or microcredit loans (see Box 2).

\textsuperscript{155} World Bank Global Findex 2014

\textsuperscript{156} Royal Monetary of Bhutan, Annual Report 2016/17

\textsuperscript{157} c.f. Mongolia 4.4 percent, Nicaragua 0.8 percent, Sri Lanka 4.2 percent (2011) from Badev et. al 2014 “Housing Finance Across Countries: New Data and Analysis” World Bank Policy Research Group Working Paper 6756

\textsuperscript{158} ADB 2016. “An assessment of the financial sector development in Bhutan” No. 44
There is limited scope for expanding mortgage lending beyond middle and upper income groups. A more detailed study of the housing sector is required to better understand housing finance for different income groups with different housing needs, but it is clear that the commercial mortgage market is small. There are alternatives to mortgage finance that may be more suitable to incremental improvements to housing quality for lower income and rural homeowners. See Box 3 in the Annex for an example of non-mortgage housing finance.

Construction Sector

The construction sector is important to the economy, but growth is limited by high costs of materials and in inconsistent application building techniques and the application of standards. The construction and building materials sector has the potential to attract investment and skilled labor. For example, in 2011 the construction industry alone contributed 16.3 percent to Bhutan’s nominal GDP, with building and construction loans constituting 26 percent of all total investment by private banks. However, finished materials and pre-fabricated housing components, where available, are imported and costly. The lack of materials testing standards and facilities also encourages the use of substandard materials and non-uniform techniques in construction to save on costs. Training and capacity building for the building trades and materials industry to provide these materials and specializations locally could reduce costs and stimulate growth.

Box 2. Strengthening Access to Housing Finance for Lower Income Groups

In many countries, only small share of homeowners have access to commercial mortgages. In recent decades, new tools for providing smaller loans to low and middle-income borrowers with little credit history have increased in a number of countries. Housing microfinance loans are a non-collateral loan with amounts and tenors slightly greater than typical small and medium enterprise (SME) microfinance loans, but smaller than traditional mortgages.

In Afghanistan, the IFC and development partners piloted the development of a housing microfinance product with the local commercial bank First Microfinance Bank of Afghanistan (FMFB-A) in 2008, with primary service to the capital city of Kabul. Loan amounts range from between US$1,000 and 4,000 with a repayment period of up to two years. By 2012, the bank had a total of nearly 11,000 borrowers with a portfolio of over US$12 million, with less than 5 percent at risk. The success of the product has attracted the interest of other lenders and increased demand to roll out housing microfinance loans to markets in other cities across the country.

Habitat for Humanity’s Micro Build Fund has also begun to provide technical assistance to commercial lenders in Bolivia, Kazakhstan, India and Cambodia, among other countries to explore ways of alternative credit assessments for borrowers with little or no credit history, but who would likely be able to afford a housing microfinance loan. They also work with commercial lenders to design and pilot housing microfinance products to identify new markets, train loan officers and improve collection.


159 It should also be noted that this figure includes hydropower, a major economic driver. Source: National Construction Industry Policy; “An assessment of the financial sector development in Bhutan” No. 44


161 National Construction Industry Policy
employment. The government has been involved in strengthening training and capacity for the construction sector through the Construction Development Corporation Limited (CDLC) and the Wood Craft Center, efforts that can be consolidated and expanded.

**These efforts to improve sector performance are supported in the draft Construction Industry Policy, which proposes a framework for improving the safety and consistent application of standards.** The Construction Policy integrates parallel strategies aimed at addressing green building technologies, disaster and climate resilience and standards for accommodating differently-abled people. Further attention needs to be given to determine how to leverage private investment to support local specialization in quality building techniques and materials; in particular energy and water efficient approaches to housing design (such as passive heating and cooling designs, rainwater harvesting, solar panels and so forth).

**Land Administration, Planning and Standards**

**Land administration and infrastructure planning encourage peri-urban expansion.** Most land is owned by the central government. Yet while municipal governments are charged with implementing Local Area Plans, they have limited control over when or where land can be released for development. The lack of a strategic and sequenced release of land for housing development, that are coordinated and timed in parallel with basic infrastructure investments reduces the private sector incentives for development. This discourages the efficient use of urban land to promote compact, mixed use development that would curtail urban expansion and alleviate traffic congestion. For example, tools such as property taxes or vacant land taxes could be used to raise the opportunity cost of not developing land as is done in Korea, Colombia and the Philippines. Depending on their design, they can be used as a source of mobilizing revenues and encouraging infill investment to maximize the potential uses of vacant or underutilized land in built up areas.

The property tax administration system is improving but could be strengthened to promote more efficient use of urban land. The current system provides an indirect tax subsidy to owners of multiple residential (rather than individual) properties, which likely reinforces the concentration of property ownership rather than encourage the expansion of homeownership. Developers are also cannot collateralizing land to borrow for financing development. This increases the risks for formal developers, which discourages competition and growth in the sector and, due to the high costs of land in the CBD, likely drives developers to acquire land on the urban periphery, where it is less costly. Under the Bhutan Urban Development Project II, Thimphu and Phuntsholing have improved their capacity for property tax collection. However, as noted in the Municipal Governance and Finance Note, the tax base can be enhanced by developing an updateable GIS-based property registry, and exploring more sophisticated property valuation models that may be able to more accurately reflect land and property values.

**Planning and building standards increase costs and uncertainty for housing developers.** While permitting costs and timelines are more efficient than other countries in the region, new construction requires up to 21 approvals and takes an average of 177 days to obtain.162 There are a number of planning, regulatory and zoning tools that can be used to reduce the costs of housing development, usually with the agreement that developers will set aside some portion for the public benefit (such as public spaces, affordable units and so forth) in exchange. Such tools include certain tax abatements or holidays, fee waivers, expedited processing, or permission for the project include additional market rate units to offset

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162 Doing Business 2018
costs. These are common approaches in the United States, Canada and Western Europe. A regulatory review could identify ways to incorporate local materials and techniques as well as provide flexible standards for incremental housing improvements in rural and informal settlements. In cities like Thimphu and Phuntsholing, there is a case for greater but targeted public role in easing supply side factors, especially in ensuring the availability of affordable and serviced land for housing development, planning standards and building regulations are appropriate (neither too high nor too low), permits and clearances are timely and cost effective, and various housing actors are assembled together to allow the market to work effectively.

**Housing Market and Affordability**

**Urban housing is unaffordable for low income groups in larger cities.** Available data on housing prices and rents suggests that affordability is a concern in cities. In Thimphu for example, a three bedroom apartment for purchase can cost between Nu 3.5 and 4.5 million nu (US$48,447- $62,289) or about 14 times the median urban annual household income of Nu 150,000 (US$2,076) in 2012. Mean rents in major cities can range from Nu 4,000-7,000 per month (US$55-97), which fall on the edge of affordability for the median household. However such prices pose significant household expenses for those at the bottom half of the income distribution. Figure 1 below presents a summary of housing affordability by income quintile using median expenditures. It shows that within the bottom three quintiles, urban rental housing likely poses a significant expenditure burden. Data using mean household expenditure data from 2017 find a similar trend; the lowest sixty percent of the urban population pay an average of less than Nu 3,898 (USD$54) for rental expenditures, though the quality or size of rental units they pay for is not clear.

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164 Current data on housing costs and income are scarce across the country, yet necessary for a more detailed housing affordability assessment for low income groups. The affordability estimates here are based on median household income and reported mean monthly rental rates.

165 Gelay 2017 and BLSS 2012

166 US$1 = 72 ngultrum

167 Assuming no more than 30 percent of monthly income or Nu 4,100 is spent on housing

168 BLSS 2012

169 BLSS 2017
The constraint of affordability is reflected in the frequency of rent increases. In 2012, 32 percent of urban households reported rent increases of at least once per year, with one quarter of those households having their rents raised twice per year. The Consumer Price Index shows that since 2012, rental costs have increased 39 percent, or the sixth highest of twenty-one non-food items. This suggests urban rental markets have supply constraints that create persistent upward pressure on rents. Finally, about 25 percent of urban renters reported renting “part of a house,” suggesting constraints in the availability of the supply of affordable apartments units. However, this practice (called “co-living”) of renting a room or portion of a house, provided that tenants retain legal protections and conditions are acceptable, should be encouraged as it provides greater choice and flexibility to consumers. Rental vouchers, a portable subsidy for offsetting the costs of rentals are increasingly common in a growing number of countries (see Box 3).

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170 Expenditure limits are estimated by taking the monthly household income levels per quintile and budgeting 30 percent for housing costs.

IV. Conclusions and Way Forward

The housing is a critical contributor to national economic growth and an important means to reduce poverty. Investments and labor in housing, construction and complementary services provide substantial economic benefits at the national level. At the same time, the quality and location of housing has direct consequences for health, education and employment outcomes. Housing that lacks infrastructure or services, is of poor quality or is too expensive for middle and low-income groups presents long term negative consequences for human development and income generation (see Box 2). The government has an important role in enabling and strengthening housing markets to provide a wide array of housing options for different populations. Global experience also suggests that housing consumption follows an “S”-shaped curve, where housing consumption is the highest in countries with per-capita GDP levels of US$3,000 and US$36,000, a space that Bhutan’s economy will soon enter and signal an increase in demand.172

The 2019 National Housing Policy identifies important and relevant challenges to the housing sector, however there will be several challenges to its successful implementation. For example, the policy aims

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to increase homeownership, something that is not common among urban households. However, as previously discussed, increasing homeownership will require several interventions to the entire housing delivery system, in particular the function of private developers and the financial sector in identifying and responding to market demands. On the finance side for example, the current mortgage market is constrained by lending and collateral restrictions imposed on banks. Banks also lack short-term deposits and savings that can be leveraged to create long tenor mortgage loans or large ticket developer loans. Lenders will also need improvements to the efficiency of borrow creditworthiness assessment systems, loan underwriting and payment servicing procedures as well as the potential for different types of insurance systems for both homes and mortgages. Each of these mechanisms would serve to reduce the risks faced by banks in lending to middle and lower income borrowers.

**The policy could be strengthened with a more detailed and substantive affordability assessment.** The assessment would help policy makers understand the scale of the affordability gap in urban housing markets, the number people burdened by expenditures on housing and provide guidance on how to align existing subsidy programs to target those with the greatest needs. The policy’s goal of ensuring households pay no more than 30 percent of incomes may be difficult for regulators to meaningfully enforce in privately-built housing. Similarly, the proposal to allocate public lands for housing production should be carefully reviewed. In many countries, the allocation of public land or similar incentives are used to reduce development and construction costs for new housing but these lands are often located far from jobs, amenities and services. This may reduce costs for builders in the short term, but over the longer term residents would face additional time and cost burdens for commuting, which would in turn reduce the desirability and market value of these units.
In order to address implementation challenges of the policy, a more detailed assessment of the housing sector is necessary. Data on housing markets, prices and trends in Bhutan is limited, but a detailed study on public and private actors, market trends, legal and institutional capacities, affordability, urban planning and housing finance is crucial for prioritizing policy responses. These include data on housing on the overall stock quantity, tracking of housing market activity and a more detailed housing affordability assessment to better understand the dimensions of affordability and the dynamics of the housing market. The assessment would aim to provide reform guidance on relevant high-level policy documents including the revised National Housing Policy, Construction and Building Policy and Human Settlements Strategy. One potential path forward would be the preparation of a Housing Strategy or Master Plan that clearly articulates a vision, goals, implementation, monitoring and coordination arrangements for different stakeholders based on discussion and reflection on these knowledge and learning inputs.

The government has an important role in enabling markets to function for housing provision. Across both the supply and demand sides of the value chains, the government (at different levels) plays an important role in facilitating markets for labor, land and materials for housing assembly, ensuring standards and quality of housing and overseeing the housing finance sector. Figure 2 below provides a summary of this approach to understanding the function of the housing sector. Annex 1 extends this discussion further.

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**Box 2. Why Housing Matters**

Housing is an important source of household wealth and intergenerational mobility. Houses are often the most expensive purchase that a household will ever make. A house is an investment that often appreciates in value over time, can be used as collateral for borrowing and through inheritance practices, can be an important component of intergenerational wealth transfer. Evidence also shows that housing quality has an important impact on household health outcomes (in particular respiratory and digestive health) and children’s school attendance among others, which has long term positive implications for public health conditions and for local labor markets.¹

Access to quality housing forms is critical component of urban livability. Given the benefits that housing provides consumers, it is not surprising that cities with quality housing attract employers and private investment. These factors can also aggravate income inequality within cities as the costs of living (such as housing and transportation) are much higher than in rural areas. Migrants with limited skills or little savings may find few options for quality housing in proximity to jobs and services. In this way, the location of housing in cities also has an important bearing on accessibility to jobs and services as well as the potential to either continue or disrupt spatial disparities in access and social inclusion.² Housing can also influence the form and shape of the built up urban environment, which in turn effects the ability of local governments to provide adequate infrastructure and services.

Global experience demonstrates that housing is an important driver of the national economies. The housing sector draws material and service inputs from a range of industries and specializations. Such contributions include, for example, the production of various types of building materials and furnishings, construction tools and labor, housing finance, real estate, property management and legal services, and so forth.³ In India, the GDP contribution of the housing sector in 2009 was approximately 19.6 percent, 8 percent of which was from the construction industry alone, the balance from associated finance, management and services. Similarly, housing in the United States contributes around 15-18 percent of total GDP, with a similar breakdown activity contribution.⁴

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³ For example, a value chain analysis conducted under the Indian government’s Economic Survey of 2002-2003 found that 269 industries provided direct or indirect contributions to the housing sector.

⁴ Source of data on GDP contribution to India and US housing sector from World Bank data.
- On the supply side, this includes the establishment and maintenance of a land cadaster and registry system which can be used to document tenure, allow collateralization, and ease of transfer. It also includes the application and enforcement of appropriate building, zoning and development standards for the location of quality housing units. The government also has a central role in providing basic infrastructure and utilities, which improve both the livability conditions as well as the market value of housing units. Finally, governments have a role in overseeing training and quality control standards for construction labor, materials and methods, in addition to adequate customs and tax policies for imported construction materials and technology.

- On the demand side, governments should adopt policies and implement regulations that encourage savings deposits which enable financial institutions to reduce risk and access capital markets, offer a greater number of consumer and developer finance instruments and support the development and sharing of information and data base systems tracking creditworthiness, property market activity and so forth.
Based on this initial review and the approach outlined in Figure 2, there are several areas worthy of more attention for policy makers:

Establish data systems and indicators for developing housing policy and enabling markets. These include improving access to data on land and property ownership particularly in urban areas with active markets, to improve transparency of property rights, relieve legal disputes and enable the assessment of property taxes or fees on owners. In the short term, a housing and property data observatory that tracks local level data on the types, volumes and amounts of sales and rents (in addition to income or expenditure proxies) would be an important resource both for developers and lenders, but also for policymakers that want to assess and calibrate potential subsidy tools to reach groups that are priced out of the market (Box 4). Credit
reporting and assessment systems that have been linked to residents’ national identification numbers can be enhanced to establish and track creditworthiness to borrowers for home loans and mortgages (including those working informally but who may be creditworthy), but also allow housing subsidy programs to better target desired income groups. Shared indicators and metrics as in addition to collection and reporting should be coordinated between local and national authorities.

Box 4. Housing Observatory: Mexico’s RUV

Mexico’s Central Housing Registry (Registro Único de Vivienda, RUV) was created in 2004 as an independent housing database established through a collaboration between the National Housing Council (CONAVI, the main housing subsidy entity) and private sector IT entities with the purpose of regularizing data on the location, size and sales price of homes. It produces geo-referenced maps, documents land reserves, tracks housing supply data and publishes monthly housing reports. Since 2006, there have been 4.6 million housing units added to the RUV.

It has provided several clear benefits to different stakeholders in the housing sector:

1. For lenders and developers: The database allows developers, lenders and real estate firms to more accurately track and gauge housing markets across the country, providing better information for investment and sales decisions.

2. For homeowners/buyers: The database enables the public to access accurate data on housing prices and trends in their cities so that they have better information on market trends and fair prices for the types of housing units they are looking for (new or used).

3. For the government: Mexico has multibillion dollar mortgage subsidy programs that encourage developers to build housing for low income populations by subsidizing down payment costs. The RUV improves transparency and improves targeting. In order to use the subsidy, the house must be registered to the RUV, meeting the required regulations and standards. Homebuilders then have an incentive to either retrofit existing housing or build new housing and add it to the RUV database in order to make the unit eligible for purchase under the subsidy program.

Review building code and design and construction standards. A review of the construction standards and materials sector should be undertaken to enable a wider range of acceptable construction materials and techniques that meet basic safety standards in greater options for builders and to reduce costs to consumers. Training and certification programs for builders and workers in the sector are also needed to encourage convergence in professional standards and quality across the industry. Building codes should also ensure principles of urban resiliency to respond to natural hazard and climate change risks in addition to principles of energy and water efficiency. This should also align with the forthcoming draft Construction Industry Policy, in particular the adoption and regular use of global standards in materials testing and inspection practices.
Assess land administration tools and explore the potential for urban land value capture. Land administration tools can also be used to stimulate supply, particularly in growing urban areas with high demand for housing. This can be done by the National Land Commission assessing the potential for more flexible land use regulations and zoning for Thromdes that can accommodate compact, mixed income and mixed-use development. For example, taxes or fees imposed on vacant or underutilized urban land can be used to encourage sale or development of properties for housing and other purposes, especially if it is aligned with zoning and land use regulations that are favorable to housing market conditions. It is not clear if Thromde fiscal systems have had direct impacts on housing supply in this way. However, Thimphu’s successful experience with land pooling could be a model for other growing cities to effectively manage housing and development. Property tax systems should also be non-distortionary to encourage a more efficient market circulation and development of land for priority needs, rather than provide incentives for the consolidation of land and property under only a few owners.

Enable a greater diversity of housing finance options for developers and low-income groups. On the finance side, assessing the viability of land collateralization could lead to reforms that allow developers to leverage the value of land they wish to build on to secure construction finance. Additionally, an enabling policy framework for alternative types of lending for commercial banks, such as housing microfinance, would allow banks to experiment with these instruments for middle and lower middle-income borrowers for incremental upgrades and improvements.

In urban settlements such as Thimphu, Phuntsholing, Gelephu and Samdrup Jongkhar, where urban expansion and housing affordability are key concerns, priorities for policymakers should be:

- Review land administration standards to unlock urban land for housing: Land use planning should enable greater density and diversity of land uses that would allow for the close proximity to jobs and housing. Options would include duplicating land pooling approaches in newly growing urban districts. MoWHS and Thromdes could build on this by exploring the use of density bonus or set-asides as part of zoning and building review approvals in new construction, whereby developers would be able to build more units than otherwise allowed in exchange for agreeing to provide some units at a below market rate.

- Integrate principles of urban resilience in planning and building standards: Local governments can also adopt principles of resilience in planning and development. This would include a proper assessment of potential areas of urban expansion to minimize exposure to the risks of flooding, landslides, forest fires and earthquakes. Revised planning and design standards could improve the siting, built form and materials used in order to make structures safer and more resource efficient in operation.

- Incentivize the development of a robust rental market: Further attention could be given to strengthening the urban rental sector to ensure consistent quality of rental units and to be able to monitor changes in rents. A rental or revised tenancy policy could articulate the rights, obligations and dispute resolution procedures for landlords and tenants. Supply side incentives, such as small grants, tax discounts or similar could be considered to encourage landlords to improve or expand
rental housing stock or enable other opportunities for co-living. Examples of these approaches are found in the United States and South Africa, where homeowners are encouraged to build and let backyard rental units. The policy should be sure to include adequate and reasonable protections to the rights and obligations of both landlords and tenants.

**Improve the quality of informal and rural housing through supporting a broader and more flexible set of construction guidelines and alternative finance instruments.** In rural areas, where housing is largely self-constructed, attention should focus on developing a general set of guidelines and safety standards that allow for a wide range of construction materials and techniques. These guidelines and practices should provide a basic level of safety, but flexible enough to encompass different building materials, techniques and design styles such as traditional or vernacular construction as well as newer resource and energy efficient materials and construction. This should be coupled with support for non-collateralized, smaller loans for home improvements and construction, such as housing microfinance.
Annex 1. A Value Chain Approach to Housing

Housing is delivered through a series of value chains that provide supply and demand-site services and inputs. Each of these value chains depend on markets to coordinate labor, resources, information and finance to site, construct and off-load housing. In this way, housing should be considered the end product of a series of overlapping market and information exchanges involving a range of stakeholders, including the private and non-profit sectors that may be involved in finance and construction of housing, and the public sector, which has a role to play in shaping, regulating and incentivizing the activities within the housing sector value chains.

Differences in the depth, function and coordination of these value chains direct impacts the quality and affordability of housing. For example, weak land tenure rights or limited supply of desirable land for construction can drive up the costs of housing development. It may also encourage squatting or peripheral development where land is more easily acquired by the urban poor. Building standards that add unnecessary cost burdens can either reduce incentives to build or encourage construction of unsafe or substandard units. A lack of skilled, large scale construction firms, or a reliance on imported, rather than locally-sourced building materials, also adds to costs for consumers. A scarcity of commercial and non-profit lenders limits the sources of finance available for construction or purchase of housing; often households may rely on accumulated savings, borrowing or gifts from friends and family to buy or improve a unit incrementally. While this practice is common throughout the world, it can be an inefficient means to create a housing stock that meets the demands of rapidly growing cities and diverse populations with a variety of housing needs.

In the global experience, the composition and function of value chains should be considered in terms of a spectrum. On one end housing tends to be informally produced - often incrementally over time - of varying levels of quality, levels of tenure security and uneven infrastructure access. For example, housing informality can be described as how people adapt to weaknesses in certain segments of the value chains. Where land for development is scarce, expensive or has unclear property rights, poor residents may squat and build their housing incrementally with savings. Conversely, ‘formal’ housing delivery value chains assume tight coordination between various inputs, including clear, documented and transferable land rights, appropriate and enforced regulations and standards, a skilled and financed construction and development sector and so forth. Figure 2 shows the stylized value chain linkages for the demand and supply sides for the delivery of formal housing. It also demonstrates areas of overlap, where processes or ‘steps’ of both the supply and demand sides require mutual coordination, such as the link between the regulatory framework for housing and urban development and the system of land administration that can unlock land and secure tenure for housing.