81st Commission Session

Urban Transformation in Asia and the Pacific

FROM GROWTH TO RESILIENCE

ESCAP
Economic and Social Commission for Asia and the Pacific

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Urban Transformation in Asia and the Pacific

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Foreword

Urbanization is a 21st century megatrend with profound implications for Asia and the Pacific. The region is home to the full spectrum of human settlements, from the world's largest metropolises to ancient villages and every size of city and town in between. Where people in Asia and the Pacific live, work, study and play, and how they move around will ultimately determine the region's success in delivering on the ambitions of the Sustainable Development Goals. The road to the 2030 Agenda runs through cities and across the entirety of human settlements — provided that governments and stakeholders at all levels are empowered to achieve their full potential.

In light of the crucial role that urbanization plays in our shared development agenda, we have compiled a snapshot of the region's urban profile. Asia and the Pacific urbanized rapidly in the 20th century, but those rates are slowing down this century. Despite this trend, urban centres continue to be dynamic hubs of economic growth for the region. However, this growth is not equally distributed, highlighting an urgent need for resilient and inclusive solutions that empower urban youth, particularly in the climate-vulnerable small island developing States. Furthermore, growth needs to be balanced with sustainable land-use management to address issues of subsidence and unplanned urban expansion. The ageing population and declining birth rates in parts of urban Asia and the Pacific presents a particular challenge for redesigning public spaces, services and infrastructure.

This report, *Urban Transformation in Asia and the Pacific: From Growth to Resilience*, dives into analysing both the challenges and opportunities facing cities and towns across the region. It looks at the important role of comprehensive housing solutions to ensure that cities remain places of security and opportunity for all people, while also addressing efforts to upgrade and formalize significant informal settlements. Climate change is a paramount concern facing our dense urban population centres. The report analyses the role of cities in strengthening the efforts of countries to reduce carbon emissions and meet their climate goals, while recognizing how extreme shocks and stresses are acutely affecting people who live and work in cities.

Sufficient finance is one of the foundations to deliver urban change and this report describes different pathways for improving municipal financing systems in order to fund critical services that will enable cities to localize the global goals. To that end, the recommendations offered in this report cover important topics like enhancing regional cooperation, adopting national urban policies, strengthening local data systems, bolstering local development planning capability and pursuing innovative financing strategies. Taken together, this report and its recommendations focus on the goal of leaving no one and no place behind in Asia and the Pacific.

Armida Salsiah Alisjahbana
Under-Secretary-General of the United Nations
and Executive Secretary of ESCAP

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The task team was coordinated by Sangmin Nam, Director, Environment and Development Division; Curt Garrigan, Chief, Sustainable Urban Development Section and Omar Siddique, Economic Affairs Officer, Sustainable Urban Development Section. The report was compiled by Gregory Scruggs based on input and research prepared by the task team. The members of the task team and contributors include: Sergey Tulinov, Energy Division; Sanjeevani Singh and Alice Siragusa, Environment and Development Division, Madhurima Sarkar-Swaisgood, Information and Communications Technology and Disaster Risk Reduction Division; Alberto Isgut, Michal Podolski, Zheng Jian and Shuvojit Banerjee, Macroeconomic Policy and Financing for Development Division; Katinka Weinberger, Sabine Henning, Channe Lindstrøm Oguzhan and Citra Kumala, Social Development Division; Patricia Wong Bi Yi, Arman Bidardbakht and Krisana Boonpriroje, Statistics Division; Benjamin Mccarthy, Trade, Investment and Innovation Division; Madan Bandhu Regmi, Transport Division; Oliver Paddison, Office of the Executive Secretary; Andie Fong Toy, Subregional Office for the Pacific; Ganbold Baasanjav, Subregional Office for East and North-East Asia; Nikolay Pomoshchnikov, Subregional Office for North and Central Asia; Mikiko Tanaka, Subregional Office for South and South-West Asia; Ruhimat Soerakoesoemah, Subregional Office for South-East Asia; and Preeti Soni and Soumya Bhattacharya, Asian and Pacific Centre for Transfer of Technology (APCTT).

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Acronyms

ADB	Asian Development Bank
AI	artificial intelligence
ASEAN	Association of Southeast Asian Nations
CBD	central business district
C40	C40 Cities Climate Leadership Group, Inc
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
GDP	gross domestic product
GHG	greenhouse gas
GRPB	gender-responsive and participatory budgeting
ICLEI	International Council for Local Environmental Initiatives
ICT	information and communication technology
IOT	Internet of things
IPO	initial public offering
JFM	Japan's Finance Organization for Municipalities
NAPS	National Adaptation Plans
NDCS	Nationally Determined Contributions
NGO	non-governmental organization
OECD	Organisation for Economic Co-operation and Development
PFM	pooled financing mechanisms
RLDCS	Regionally and Locally Determined Contributions
SDGS	Sustainable Development Goals
SIDS	small island developing States
TOD	transit-oriented development
UCLG ASPAC	United Cities and Local Governments Asia-Pacific
UN-HABITAT	United Nations Human Settlements Programme
VLR	Voluntary Local Review
VNR	Voluntary National Review
VSR	Voluntary Subnational Review

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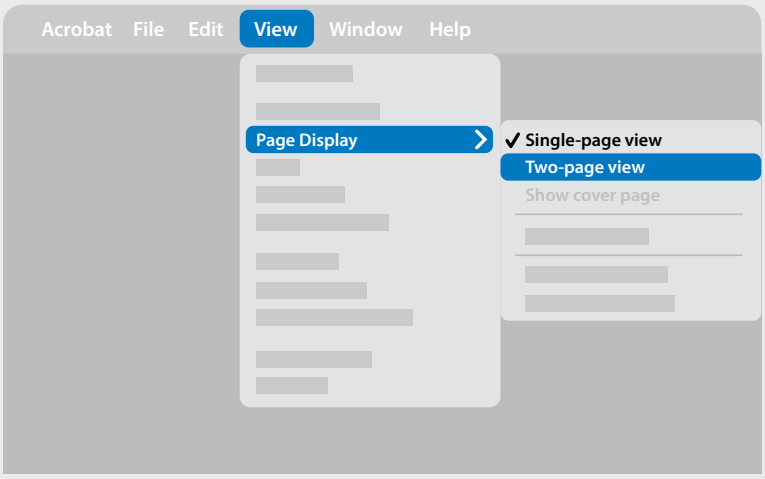

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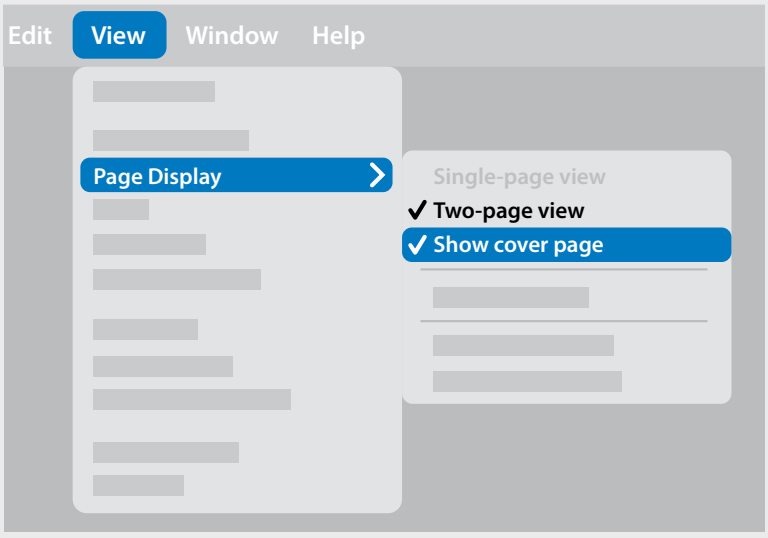

Executive summary

The evolving urban landscape: Why cities matter amid changing demographics in Asia and the Pacific

The path to sustainable development in Asia and the Pacific runs through its cities. In this majority-urban region on a majority-urban planet, the impact of urbanization, one of the megatrends of the twenty-first century, cannot be ignored. Getting cities right – and by extension, getting all human settlements along the urban-rural continuum right – is a challenge, but not an insurmountable one.

Urban contexts vary across the region, requiring solutions that are tailored to diverse development circumstances and capacities. Although Asia and the Pacific was once one of the fastest urbanizing regions, the pace has slowed down. Over the period 2018–2030, urbanization rates are expected to remain in the 1–3 per cent range for most major cities. Several urban areas in South and South-West Asia and in South-East Asia are growing at 3–5 per cent, although East and North-East Asia and North and Central Asia show much slower rates of less than 1 per cent (UN DESA, n.d.). Urban realities differ across the region. Pacific small island developing States, for example, despite having considerably smaller populations and being the world's least urban countries, face complex urbanization challenges and have limited capacities for planning adequately for urban growth, which has resulted in large informal settlements and infrastructure shortfalls. Many cities and towns in the Pacific are located in low-lying areas and are therefore also at the forefront of the climate crisis, making adaptation pathways critical.

Asia-Pacific cities are facing profound demographic changes. The region is home to over 2.2 billion city dwellers and many of the planet's megacities (over half of the 30 largest urban areas in the world are in Asia and the Pacific). By 2050, the region's urban population is expected to grow by 50 per cent, adding 1.2 billion people (UN DESA, n.d.).

Traditionally, young people have moved from rural areas to cities in search of economic opportunities. As the number of young people declines, so will the number of rural-to-urban migrants. The number of older persons, however, is expected to double, from 722 million in 2024 to 1.3 billion in 2050 (ESCAP, 2024b). Increasing numbers of older persons will remain in cities, often living alone owing to smaller family sizes, stimulating a growing need for age friendly housing, transport and other infrastructure. Since there is also a higher risk of disability among older persons, age- and disability-friendly housing will be needed. Older persons also have additional medical needs, including to address more acute heat-related risks as temperatures rise, which may lead to increased demand for healthcare facilities. In this context of ageing populations, low birth rates and slowing rates of urbanization, a relatively new phenomenon has emerged in the region: shrinking cities. Cities in East and North-East Asia are at the forefront of this trend (Xu and others, 2024).

Urbanization and economic growth: Challenges and opportunities

Some 80 per cent of the region's gross domestic product (GDP) is generated in urban areas (UNEP, 2024). While urbanization has produced tremendous wealth in Asia and the Pacific, that wealth has remained concentrated in cities. Economic reforms are urgently needed so that subnational governments can mobilize revenue and finance public services.

When housing becomes a commodity, rather than a place to live, it creates systemic risks for urban economies, and by extension national and even global economies. Vulnerabilities can emerge for cities when unchecked residential construction is coupled with loose monetary policies and lax lending standards. The global financial crisis that began in 2008 was triggered by the bursting of housing market bubbles at a time

when lenders were holding too many risky mortgages. Real estate speculation was also a contributing factor to the 1997 Asian financial crisis.

Moreover, informality is prevalent in urban areas where infrastructure and services are inadequate. Asia and the Pacific has the largest number of people living in informal settlements and more than 65 per cent of its total urban population is also engaged in the informal economy. The percentage of informal employment as a share of total employment varies across the region, standing at 87 per cent in South Asia, 70 per cent in South-East Asia and 47 per cent in East Asia (ILO, 2024).

Climate change adaptation and mitigation is a paramount challenge for Asia and the Pacific, which must grapple with vulnerabilities like extreme temperatures, water scarcity, food insecurity and natural disasters. Asia-Pacific countries are among those most severely affected by extreme weather events such as storms, floods and heatwaves (Germanwatch, n.d.). At the urban level, new research predicts that 8 million climate migrants will arrive in 10 cities of the global South by 2050 if the world warms by more than 1.5°C above pre-industrial levels. Of those 10 cities, the two located in the Asia-Pacific region are projected to receive the most extreme influx of climate-induced migration: 3.07 million additional people in Dhaka and 2.4 million additional people in Karachi, Pakistan (C40 Cities Climate Leadership Group, 2024).

2024 was the warmest year on record, with little relief for urban dwellers across Asia and the Pacific, resulting in cities across Bangladesh, Cambodia, India, the Lao People's Democratic Republic, Myanmar, the Philippines and Thailand to experience record or near-record high temperatures (WMO, 2025). Extreme heat exposes vulnerabilities in human settlements in several ways. People of all ages, but especially the very young and older persons, face an increased risk of heat-related illness. A study indicates that between 2000–2019, there were around 489,000 heat-related deaths globally each year, 46 per cent of which occurred in Asia and the Pacific, largely shared by South Asia (Zhao and others, 2021).

In the longer term, as the climate crisis accelerates, cities and towns must provide critical adaptation support for those most severely affected by climate-induced migration, which is already becoming evident in some low-lying areas.

Cities are particularly vulnerable to extreme heat because of the urban heat island effect. The tendency for buildings and paved surfaces to absorb heat can make urban areas hotter than their surroundings, further exacerbating the impacts of heatwaves. According to research conducted on cities in East and South-East Asia from 2016 to 2020, urban areas were on average 1.6°C warmer than rural areas 2 kilometres away and 2.0°C warmer than rural areas 10 kilometres away (Roberts and others, 2023).

The urban population growth in Asia and the Pacific has led to increased demand for water and groundwater exploitation, thereby straining the region's water resources. At the same time, wasteful consumption and inadequate water management infrastructure have inhibited the ability of the region to do more with less. Water shortages also fuel competition between the needs of the agricultural sector and those of urban consumers of municipal drinking water and water for industrial uses, among others.

Extensive groundwater extraction and the loss of natural buffers have increased the risk of land subsidence. While the threat is most visible in megacities such as Bangkok, Dhaka, Ho Chi Minh City, Jakarta, Karachi, Manila, Mumbai, Shanghai and Tianjin, similar conditions are affecting secondary and other cities such as Chittagong in Bangladesh and Semarang in Indonesia. A 2022 study found that the most rapid pace of land subsidence was occurring in South, South-East and East Asia, at a rate faster than that of sea level rise, creating even greater urgency to build urban resilience in these centres (Tay and others, 2022).

According to data from the ambient air quality database maintained by the World Health Organization, 99 per cent of the world's population breathes unhealthy air. Various studies estimate that, globally, air pollution is responsible for 6.5 million deaths annually, with 70 per cent concentrated in the region (Fuller and others, 2022). Some of the top contributors to poor air quality in cities are vehicle and building emissions. Emissions from privately owned vehicles, which briefly dipped in 2020 and 2021, are projected to increase in the long term. By 2030, the level of vehicle ownership in Asia and the Pacific is expected to rise to 1.6 billion vehicles, causing a significant increase in emissions unless remedial actions are taken (Gota, and Huizenga, 2022). Between 2010 and 2021, the region saw a 34 per cent rise in transport-related emissions, a trend that threatens to worsen without intervention (ESCAP, 2024a).

Buildings, which are ubiquitous and account for between 14 and 33 per cent of direct and indirect carbon dioxide emissions in Asia and the Pacific, represent one of the most difficult aspects of the global economy to decarbonize. According to International Energy Agency estimates, 65 per cent of new floor area to be constructed between 2017 and 2050, or about 70 billion square metres, will be in countries in South-East Asia, South Asia and East Asia, driving the future demand for energy and resources in the region (Zhou, Lee and Tian, 2023).

Nationally determined contributions under the Paris Agreement play a pivotal role in the attainment of climate-related goals. Moreover, the urban content of nationally determined contributions is key for climate-sensitive urban development as urban areas are where emissions and populations are concentrated. As of 2024, the nationally determined contributions of 16 countries in Asia and the Pacific have little or no urban content, 19 have moderate urban content and 14 have strong urban content (ESCAP/CED(8)/3).

Urban fault lines: Migration, inequality and social justice in Asia and the Pacific

Social issues like migration, housing accessibility and wealth inequality challenge the social cohesion of cities in Asia and the Pacific. Today, one-third of all migrants come from Asia and the Pacific, while the region is home to 24 per cent of the world's migrants, some 66.6 million people (ESCAP and others, 2024). Remittances are a significant source of financing for Asia and the Pacific. In 2023, four of the top five low- and middle-income recipient countries of remittances were India ($120 billion), China ($50 billion), the Philippines ($39 billion) and Pakistan ($27 billion) (World Bank Group, 2024).

These flows of people and money have profound implications for the region's cities, from exposing vulnerabilities to creating more prosperity. The movement of educated workers can cause brain drains in origin cities but add knowledge capital to host cities. Large influxes of migrants in a short period of time can lead to overcrowded housing stock in host cities and depopulation in origin cities. But migration can also revitalize decaying urban neighbourhoods in host cities, and remittances can shore up local economies in origin cities. Given the potentially varied effects, addressing migration requires coordinated action between national and local governments.

In terms of housing, the continued growth of informal settlements presents another issue. Projections for Central Asia and Southern Asia show the population living in informal settlements is forecast to increase from less than 500 million in 2020 to 1.52 billion in 2050, while Eastern and South-Eastern Asia will see a more modest rise, from approximately 350 million to 465.4 million (UN-Habitat and others, n.d.). In many cities, the ratio of median home price relative to median annual household income is 5 to 1, the level that many economists consider the maximum healthy amount for buyers to afford homeownership, according to the 2024 *ULI Asia Pacific Home Attainability Index* published by the Urban Land Institute.

Meanwhile, South and South-West Asia and South-East Asia are the subregions with the highest concentration of informal settlements in Asia and the Pacific. Almost 43 per cent of the urban population in South and South West Asia and 25 per cent of that in South-East Asia live in informal settlements (Our World in Data, 2024). While these percentages – which have been steadily declining in both subregions, despite a slight uptick in South-East Asia in 2022 – are below those for sub-Saharan Africa, they are still above those for the rest of the world. Moreover, Asia and the Pacific is home to nearly 60 per cent of people living in informal settlements globally, equal to almost 600 million people (UN DESA, Statistic Division, 2024).

Financing the future: Innovative solutions for urban investment

Financing is crucial for realizing sustainable urban transformations, yet local governments face challenges in revenue mobilization. Keeping up with infrastructure investment needs is perhaps the greatest financial challenge facing cities. It has been estimated that developing countries will require 2.8 per cent of GDP per year for new infrastructure investment in urban areas, and an additional 2 per cent of GDP for maintenance (Bahl, 2018, p. 26). Cities in East Asia and the Pacific will require an annual investment of $1 trillion for climate mitigation during the period to 2030 (Press-Williams and others, 2024). These projected investment levels are well beyond the reach of most developing countries, where public resources are limited. To that end, it is vital for national and local governments to strike the right balance of long-term financing mechanisms, like intergovernmental transfers and municipal taxation, and newer, more innovative financing mechanisms, like land value capture and public-private partnerships. All are important tools for supporting ambitious urban development projects.

Transfers from the central government are still the most important source of funds for local governments in many countries, particularly low income and lower-middle-income countries. Municipal taxation is another key revenue source. Property tax is widely regarded as the most appropriate principal subnational government tax. In countries members of the Organisation for Economic Co-operation and Development, property tax contributes on average 2 per cent of GDP and is believed to create greater accountability of subnational government spending. Debt financing through municipal bonds is a powerful but complex municipal finance tool. Municipalities in developing countries, in particular large cities, must meet certain prerequisites for obtaining access to capital markets, including having the relevant legal authority and creditworthiness. Furthermore, land value capture tools, such as land pooling, can significantly ease the

pressure on governments for infrastructure financing, allowing them to leverage the future value of land based on the expected increase from urban growth and development.

Leaving no one and no place behind

Fostering inclusive communities is vital for addressing social disparities in urban areas. Nearly every facet of urban life has a social inclusion dimension, including access to basic services, economic empowerment and employment, and adequate housing and land rights. Women, in particular those in low-income households, depend heavily on accessible healthcare, education, sanitation and childcare services. Inadequate access to these services in cities affects women disproportionately, with impacts on their health, economic stability and ability to engage in work. Women often work in the informal, low-wage and care sectors, without sufficient protections or benefits. Likewise, making urban services accessible for persons with disabilities through the application of universal design principles would help to ensure that no one is left behind.

Sustainable urban development must include policies and infrastructure that create economic opportunities, for example by providing support for women entrepreneurs, skill-building programmes and spaces that support work-life balance, such as affordable childcare facilities and flexible workspaces. Lower-income residents benefit from affordable housing and transport, women benefit from safer cities and persons with disabilities benefit from accessible infrastructure.

Localizing the global goals: Turning ideas into action

Achieving the 2030 Agenda for Sustainable Development and meeting the obligations under the Paris Agreement both require steadfast commitment at the local level. If cities do not deliver on these global goals, then countries will also fail to do so. Just as national Governments track and report on the progress made towards achieving these critical global agreements, through defined mechanisms, local and regional governments can do the same. Indeed, coherent coordination between different levels of government – whereby evidence-based reporting at the local level informs enabling policy measures at the national level – is the most logical method for getting a clear picture of what is happening on the ground in a given country.

Ensuring that Asia-Pacific cities are able not only to grow but also to build resilience requires action from policymakers at all levels of government. That means turning ideas into public policies, scalable programmes and other initiatives that can generate tangible impacts on the lives of people across the diversity of urban contexts in Asia and the Pacific. Examples include housing and budgeting policy experimentation, strengthened urban and territorial planning regimes and subnational data collection methods.

Recommendations

Five policy recommendations are set out below for Governments in Asia and the Pacific and their partners to promote sustainable urbanization for the benefit of people, planet, prosperity, peace and partnerships.

1 Enhance regional cooperation for resilient and sustainable urban development

Governments should enhance regional cooperation to effectively and jointly respond to environmental and socioeconomic vulnerabilities by developing collaborative urban networks that facilitate the sharing of knowledge and best practices among cities, thus enabling them to act as catalysts for regional leadership for the attainment of the Sustainable Development Goals and the objectives of the Paris Agreement. This can be achieved by: (a) supporting and contributing to peer-to-peer platforms for cities to exchange innovative solutions and experiences; (b) promoting joint initiatives that translate regional urban visions into actionable investments; and (c) fostering partnerships between national and local governments to ensure that local priorities align with national strategies, including through the use of innovative tools, such as voluntary local review reports. Cooperation can also be enhanced by organizing regular regional and subregional urban forums and integrating urbanization issues into existing intergovernmental and multi-stakeholder processes and institutions. By working together, Asia-Pacific cities can leverage their collective strengths to tackle common challenges, enhance their resilience and drive sustainable development across the region.

2 Adopt integrated national urban policies to bolster multilevel governance

Governments should adopt national urban policies as a tool to enhance multilevel governance, ensuring that urban development aligns with national economic, social and environmental goals. National urban policies focus the Government's attention on integrated urban development to promote climate action, disaster risk reduction and inclusive growth by establishing a clear vision grounded in stakeholder

engagement and evidence-based planning. Such national urban policies should be aligned with existing national development plans and policies, as well as sectoral initiatives and strategies on issues like housing, transportation, infrastructure, energy and climate change. Key elements include equitable resource allocation, robust governance frameworks and alignment with broader national and global goals, including the Sustainable Development Goals. Regular monitoring, evaluation and adaptation of national urban policies would ensure responsiveness to emerging challenges, fostering dynamic, liveable cities that enhance the quality of life of all residents.

Strengthen subnational and local data collection and reporting to promote evidence-based urban policies

Governments should prioritize the development of subnational and local capacities to collect, interpret and utilize disaggregated data with a view to effectively localizing the Sustainable Development Goals. Investing in data collection, analysis and management systems at the local level can improve the quality, availability and timeliness of urban-specific data. Building capacity among local government officials and stakeholders to analyse and utilize data for evidence-based decision-making, in particular in areas related to Sustainable Development Goal implementation and climate action, can accelerate the implementation of the 2030 Agenda. By strengthening subnational and local data ecosystems and capacities, member States can empower local governments to play a more active role in achieving the Goals and addressing climate challenges. Finally, Voluntary Subnational and Local Reviews are useful tools for integrating national and local governments as they help to align local priorities with national Goal strategies and provide a framework for tracking progress at the subnational and local levels.

Plan for urban demographic changes with strengthened spatial planning and inclusive social policies

Governments should bolster their planning capabilities to address demographic changes, including population ageing, youth outmigration and international migration, in urban areas. Parallel growth in intermediary cities and large metropolitan areas is crucial to making progress towards achieving the Sustainable Development Goals and enhancing urban resilience. Cities experiencing demographic shifts face unique challenges, including rising demand for age-friendly infrastructure, evolving public service needs and fluctuating tax revenues. These trends also present opportunities to build more inclusive and sustainable urban environments. For example, adapting infrastructure and improving access to services, to support an ageing population and persons with disabilities, and fostering youth engagement through education and employment initiatives can enhance both intergenerational cohesion and social inclusion. Expanding green and public spaces, and investing in nature-based solutions – such as urban agriculture and green corridors – can improve health, increase climate resilience and generate new economic opportunities. Furthermore, promoting inclusive urban planning processes that engage a diverse range of demographic groups enables knowledge-sharing and innovation and enhances safety, social protections and equity. By proactively managing demographic transitions and focusing on inclusive urban policies and participatory planning, cities across the Asia Pacific region can ensure no one and no place is left behind.

Pursue a diversified and innovative approach to urban financing

Governments should pursue diversified and innovative approaches to urban financing to address the financing gap in sustainable urban development across the region. While intergovernmental transfers, including revenue-sharing tax assignments between local and national governments, remain a cornerstone of municipal funding, they must be made more predictable, timely and adaptable to local priorities. Strengthening municipal own-source revenue collection, including through taxation, and in particular through property tax reforms, is crucial; governments should focus on improving property tax administration, expanding valuation capacities and aligning taxation with urban policy goals. For smaller cities, pooled financing mechanisms can enable cost-effective access to financing solutions. In addition, land value capture is a complementary tool to recover infrastructure investment costs, utilizing fiscal instruments such as betterment charges and public land leases. Furthermore, given the increased impacts of climate change, it is essential to create enabling environments at the national and local levels to improve cities' access to climate finance and strengthen their capacity to deliver sustainable development at scale. Combining traditional mechanisms with these innovative approaches will empower cities to meet their infrastructure investment needs while fostering accountability and resilience in urban governance.

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CHAPTER 1

Urban evolution: Shaping the future of cities in Asia and the Pacific

On a rapidly urbanizing planet, the status of Asia and the Pacific as the world's most populous region makes it a demographic giant.

1.1 Urban landscapes: Evolving demographic dynamics

The Asia-Pacific region is home to over 2.2 billion city dwellers and many of the planet's largest megacities. Over half of the 30 largest urban areas in the world call this region home (UN DESA, Populations Division, 2018b).

By 2050, this urban population is expected to grow by 50 per cent, with an addition of 1.2 billion people. On a rapidly urbanizing planet, the status of Asia and the Pacific as the world's most populous region makes it a demographic giant. Ensuring sustainable urban development in the region has implications not just for national governments but for the global community.

When commuters board the Tokyo subway or a Bangkok ferry, they participate in the efficient mass movement of tens of millions of people across a relatively small land footprint. Knowledge workers share ideas in offices, merchants make commerce flourish, tradespeople practice their craft, young people learn at schools and universities, older persons relax in parks, patients receive medical care and the myriad other functions of daily life are abetted by well-planned and managed urbanization.

In the best moments, the Asia-Pacific region embodies the notion articulated by the architect Daniel Libeskind, "cities are the great creations of humanity" (Abhay, 2017). But the aspiration of cities that represent the pinnacle of human achievement is by no means guaranteed. In many cities across Asia and the Pacific, urban life is characterized by inadequate housing, insufficient public transport, poor air quality, extreme wealth inequality and vulnerability to disasters and climate change. Whether and how cities live up to their potential to generate opportunity, prosperity and a better quality of life is thus a critical task for policymakers at all levels, from mayors and city councils to national governments.

High urbanization, high livability?

The story of urbanization in Asia and the Pacific is largely, though not exclusively, one of achievement against tremendous demographic pressure. Rapid economic development generated intense rural-urban migration in the latter half of the 20th century, especially in East and North-East Asia and South-East Asia. Some cities like Bangkok, Jakarta and Phnom Penh grew exponentially because rural-urban migrants only had one choice in countries with a single large metropolitan area, a phenomenon known as a 'primate city'. While moving to pursue economic opportunities can be beneficial for individuals, such large-scale and sudden urbanization can overwhelm urban infrastructure like housing and transport. In 1960, the rural population (807 million people) was quadruple that of the urban population (236 million people). By 2018, those two figures had converged at 1.08 billion each (Ritchie, Samborska and Roser, 2024). Such an enormous influx of people searching for better opportunities could have resulted in widespread and persistent informal settlements and slums (which did occur in some subregions and remains a high figure in the global context), social strife and deteriorating quality of life.

The South and South-West Asia subregion tells a different story of slower urbanization. Urbanization in this subregion reflects a complex interplay of rapid economic growth with slower urbanization, demographic shifts and persistent inequalities. From being 16 per cent urban in 1960, roughly 36 per cent of South and South-West Asians live in cities as of this decade. Meanwhile, there are megacities as well including densely-packed Dhaka, Karachi, Mumbai and others. India is projected to become 40 per cent urban by 2036 and cities are responsible for 70 per cent of the country's gross domestic product (GDP), which means sustainable urbanization is essential to the stated goal of achieving developed country status by 2047 (Kouamé, 2024). These cities are economic powerhouses, yet they face significant challenges such as inadequate housing, poor sanitation and high vulnerability to climate-related risks like heatwaves and flooding. To achieve sustainable urbanization, the subregion requires robust investments in infrastructure, inclusive urban planning and enhanced governance mechanisms to address the pressing needs of its burgeoning urban populations.

The South-East Asia subregion stands out for its rapid urbanization, driven by dynamic economies and strong regional integration. Cities such as Jakarta, Manila and Bangkok are at the forefront of this transformation, attracting millions of rural migrants annually. However, the subregion also grapples with uneven development, where intermediary cities and rural-urban fringes often lack adequate infrastructure and services. Coastal cities, which dominate the urban landscape, are particularly vulnerable to climate

change impacts, including rising sea levels and storm surges. Addressing these challenges calls for integrated territorial development strategies, investments in climate-resilient infrastructure and fostering innovation to ensure balanced and sustainable urban growth.

The South, South-West and South-East Asia subregions represent the highest concentration of slum dwellers in Asia and the Pacific. Almost 43 per cent of the urban population in South and South-West Asia and 25 per cent in South-East Asia (predominantly the latter) lives in slums, which are above the rest of the world. (Our World in Data, 2024). These rates have been steadily declining in both subregions although they ticked up slightly in South-East Asia. Moreover, given the sheer size of Asia and the Pacific, the region accounts for the lion's share of slum dwellers globally, with almost 600 million people, or around 60 per cent (UN DESA, Statistics Division, 2024).

North and Central Asian cities present a unique urbanization trajectory shaped by their legacy and sprawling geography. According to the World Bank, urbanization rates in this subregion are among the highest in Asia, with over 60 per cent of the population residing in urban areas. Cities like Almaty and Tashkent have emerged as regional economic hubs, driven by resource-based economies and strategic connectivity initiatives. However, these cities face challenges in diversifying their economies, addressing aging infrastructure and managing environmental vulnerabilities, such as water scarcity and extreme temperatures. Strengthening urban planning and fostering innovation will be pivotal in ensuring sustainable growth and resilience in this subregion.

Cities in East and North-East Asia exemplify rapid and transformative urbanization, propelled by their economic dynamism and technological prowess. This subregion is home to some of the largest and most advanced urban agglomerations, such as Tokyo, Seoul, Shanghai and Beijing, which serve as global centers of innovation and finance. Yet, these cities face mounting pressures from rising housing costs, air pollution and aging populations. The integration of green infrastructure is increasingly shaping their urban landscapes, offering potential solutions to complex challenges. Meanwhile, intermediary cities in the subregion are playing an increasingly important role in supporting balanced development and reducing pressure on megacities.

Urbanization in the Pacific is characterized by small island developing States (SIDS) with relatively low urbanization rates but rapidly growing urban populations. Cities such as Suva, Port Moresby and Honiara are focal points of economic activity and migration, often serving as gateways for trade and development. These cities, however, grapple with significant challenges, including limited land availability, climate change impacts and infrastructural deficits. Urban planning in the Pacific must prioritize climate resilience, sustainable infrastructure and inclusive growth to address these vulnerabilities while ensuring that urbanization contributes to the well-being of island communities.

While many national governments were tested along the way, the 21st century outcomes represent a notable achievement as some cities in the region earn high rankings. In 2024, four Asia-Pacific cities ranked in the top 10 of the Most Liveable Cities index (EIU, 2024b). In 2021, the most recent year in which the Economist Intelligence Unit published its Safe Cities Index, Asia and the Pacific was home to six of the world's ten safest cities (Economist Impact, 2022). While these are laudable accolades, this small handful of cities does not reflect the urban experience of hundreds of millions of residents in the Asia-Pacific region.

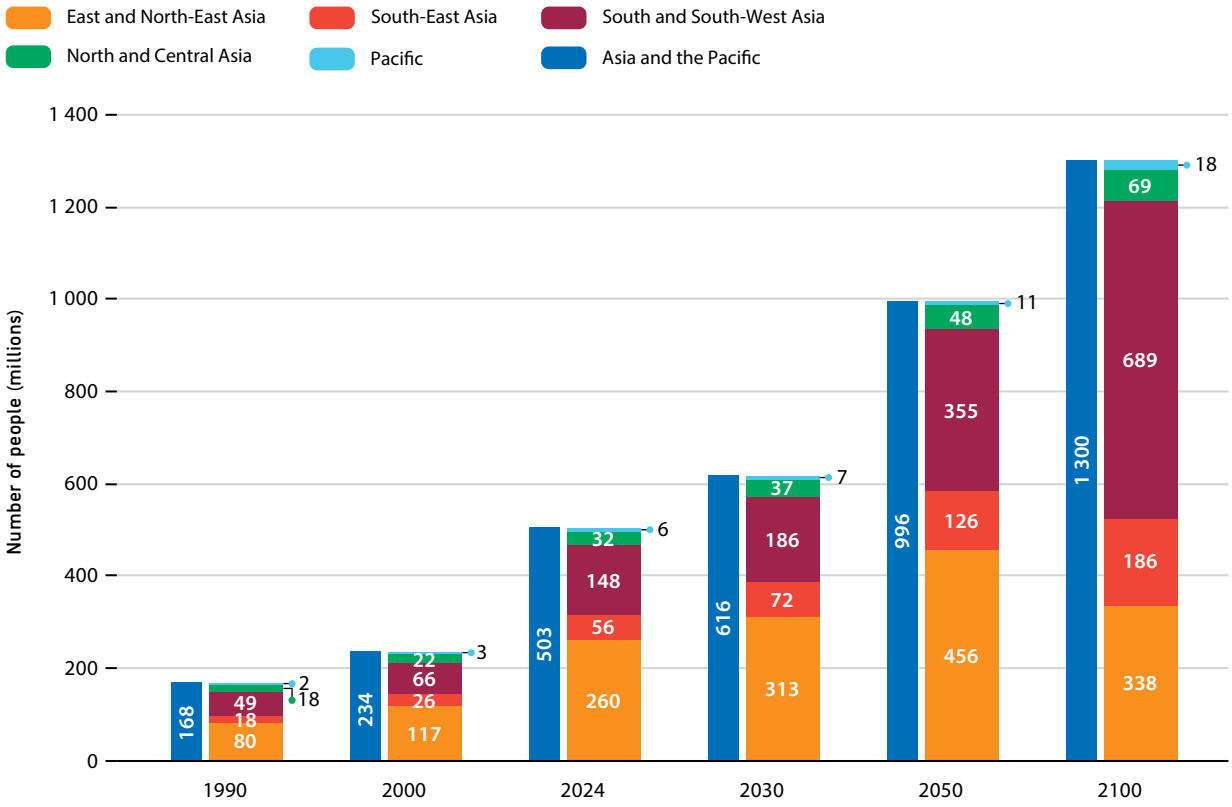
Demographic precipice

But the mighty urban demographics in Asia and the Pacific belie a remarkable proposition: the region as a whole is on the precipice of population decline, even as some countries predict continued population increase. After decades of growth and a longstanding role as the world's most populous region, and home to the world's two most populous countries (India and China), demographers project that the population of Asia and the Pacific will peak in 2051 at 5.2 billion people. By 2100, the region could decline to 4.4 billion people (UN DESA, 2024c).

Moreover, the population in Asia and the Pacific is ageing very rapidly while the birth rate has dropped to below-replacement fertility (less than 2.1 children per woman) (UN DESA, 2024b). The number of persons aged 60 years or above was 670 million in 2022. This figure is projected to double to 1.3 billion people by 2100, at which point the number of older persons (65 years and over) will exceed the number of youth aged 0–14 years (UN DESA, 2024a). Urban areas populated by a higher percentage of older persons without a commensurate swell of working-age persons may look and feel different from today's cities.

The implications for cities in Asia and the Pacific are thus profound. Traditionally, younger people move from rural areas to cities in search of economic opportunities. However, with fewer younger people there is the potential for less rural-to-urban migration. The swelling ranks of older persons, meanwhile, are unlikely to reverse migrate to their ancestral rural areas, though many rural areas are home to large proportions of older persons. Simultaneously, the increasing numbers of older persons remaining in cities

FIGURE 1.1 **Number of people aged 65 years or over in Asia and the Pacific, and by subregion, 1990–2100**



Source: United Nations, Department of Economic and Social Affairs (UN DESA), Population Division, "World Population Prospects, 2024", 2024a. Available at https://population.un.org/wpp/graphs?loc=LocID&type=Demographic%20Profiles

will stimulate a growing need for age-friendly housing, transport and other infrastructure. Older persons also have additional medical needs, including more acute risks from heat as cities face a warming climate, that may lead to increased demand on healthcare facilities.

Although Asia and the Pacific was once one of the fastest urbanizing regions, those rates have slowed down. In the 2018–2030 period, urbanization rates hover in the 1–3 per cent range for most major cities. A handful of urban areas in South, South-West and South-East Asia are growing at 3–5 per cent though East and North-East Asia, especially the Republic of Korea and Japan, show much slower rates of less than 1 per cent (UN DESA, Population Division, 2018a). In the context of an ageing population, low birthrates and slowing rates of urbanization, a relatively new phenomenon has emerged in the region: shrinking cities. China, Japan and the Republic of Korea are at the forefront of this trend and research from Japan indicates that even capital-intensive investments in transport infrastructure, like high-speed rail, have not yet been sufficient to reverse the shrinkage (Ortiz-Moya and Moreno, 2017; Long and Wu, 2016; and Reggiani and Ortiz-Moya, 2021).

Poverty and progress

These demographic trends hover in the background of a complex socioeconomic picture. Asia and the Pacific is home to some of the world's most thriving economies, largely grounded in the economic dynamism of urban areas, as well as places mired in poverty. These two trends are sometimes interrelated. Economic booms in cities can also trigger waves of forced evictions that worsen urban poverty, which can be avoided with strategies like secure tenure, on-site upgrading, land-sharing and resettlement (UN-Habitat and ESCAP, 2008).

Although efforts to reduce extreme poverty have made substantial progress, 21 per cent of people in Asia and the Pacific (excluding high-income countries) live in moderate poverty (ESCAP, 2024c). The COVID-19 pandemic and the subsequent cost-of-living crises unfortunately reversed poverty reduction efforts. An additional 42 million people fell under extreme poverty (measured by the US$ 2.15 poverty line) in 2022 as compared to 2019 (ESCAP, 2021). By 2040, ESCAP estimates that 266 million people may be pushed into poverty as a result of climate change, demographic shifts (especially ageing) and digitalization (ESCAP, 2024c).

The latest research from ESCAP reveals that poverty is on the rise and inequalities are widening, in part due to a lack of adequate social protection coverage (ESCAP, 2024c). In addition, gender gaps continue to hold back poverty reduction and human capital development, while persistent gender inequalities in the world of work compromise shared prosperity (ESCAP and UN Women, 2024).

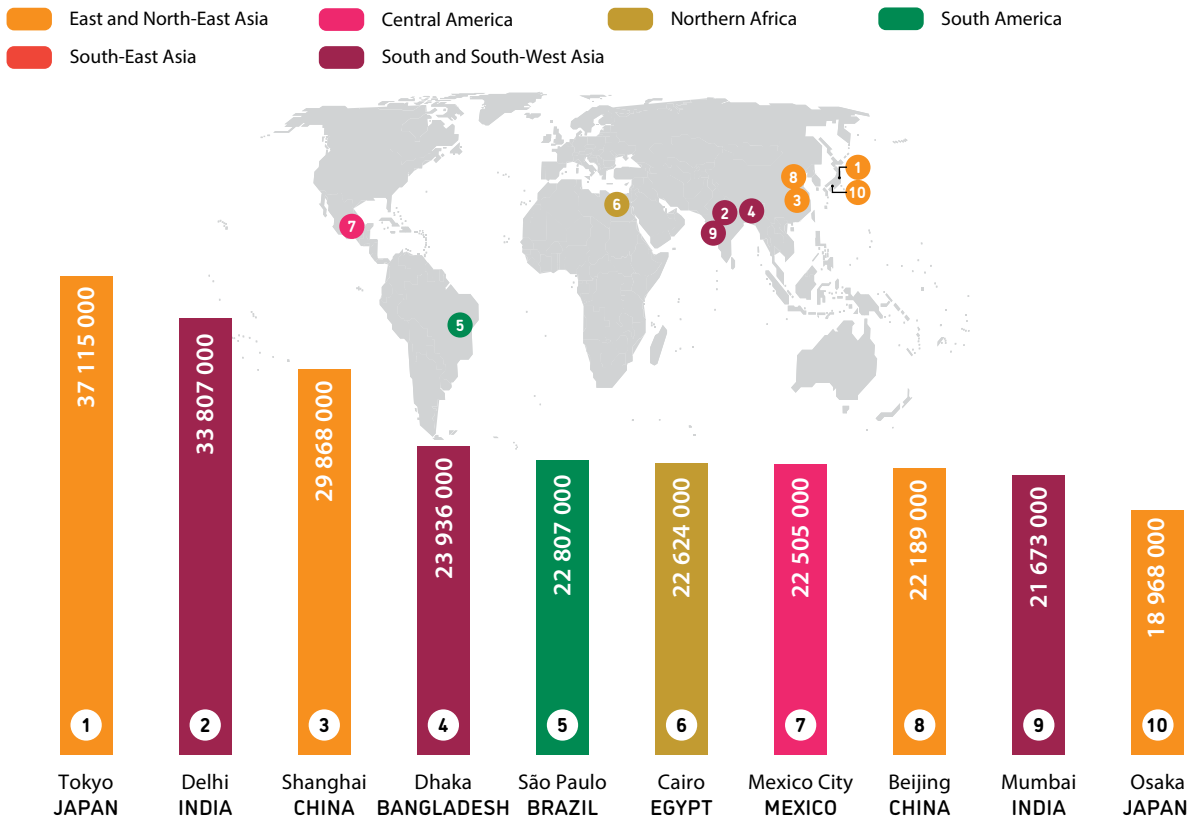
Although most of the region's poor live in rural areas, urban poverty remains a significant challenge. Out of the total 260 million urban dwellers living in multidimensional poverty in 2016, the Asia-Pacific region accounts for more than half (54.7 per cent); South and South-West Asia share 45.8 per cent of the urban poor population (ESCAP, ADB and UNDP, 2017). Meanwhile, many of the 'new poor' who entered poverty due to the COVID-19 pandemic live in urban areas (Sánchez-Páramo, 2020).

Investing in cities is an effective method for lifting the residents of Asia and the Pacific out of poverty (World Bank and IMF, 2013). Well-planned, -managed and -financed cities are powerful economic engines whose prosperity spreads across a large geography. For example, the poverty rate in Viet Nam decreased from 15.5 to 5.8 per cent over the period 2006–2016 while the urbanization rate increased from 27.7 to 33.7 per cent over the same period (Ha, Le and Trung-Kien, 2021).

As articulated in the United Nations New Urban Agenda, cities function most efficiently when they are designed around compact, walkable, mixed-use neighbourhoods with housing options for a range of incomes. This type of urban form works best when accompanied by plentiful low-carbon transport options to access multiple nodes of commercial activity rather than a single central business district (CBD), also known as polycentric cities, and a network of clean, safe public spaces and community assets like parks, green spaces, recreation centres, schools and healthcare clinics.

This type of city provides a higher quality of life for all urban dwellers. Lower-income residents benefit from affordable housing and transport, women benefit from safer cities and persons with disabilities benefit from accessible infrastructure. Cities designed and governed in this fashion also reduce the amount of air pollution that residents face and encourages vibrant, healthy economies. Urban prosperity in turn benefits rural areas in multiple ways. Cash flows from urban to rural areas via remittances and through the purchase of goods and raw materials from the rural supply chain.

FIGURE 1.2 **Ten largest cities in the world in 2024**



Source: World Population Review, "World Population by Country 2024 (Live)", 2024. Available at https://worldpopulationreview.com/cities (accessed on 13 January 2025).

1.2 Urban diversity: From megacities to small towns

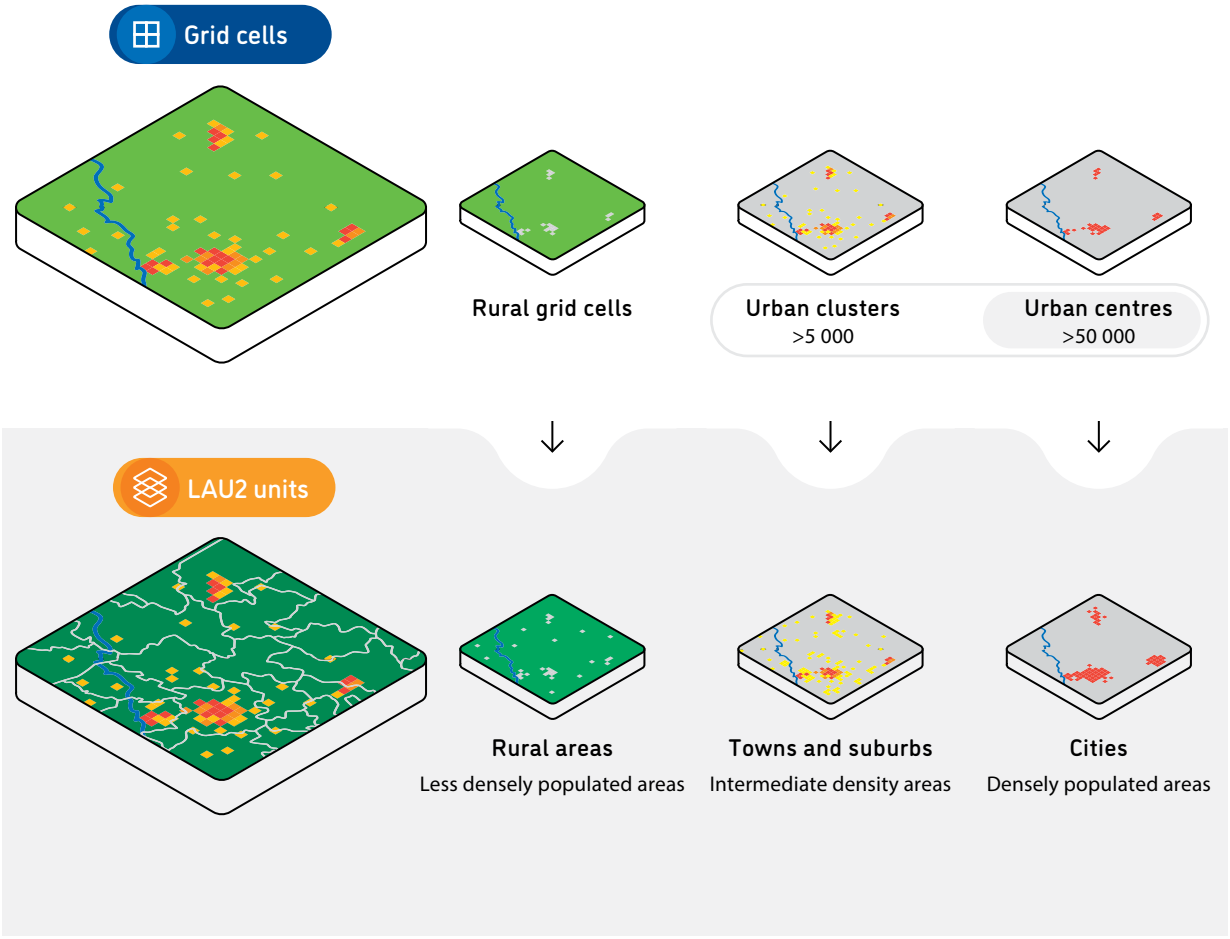
The traditional rural-urban dichotomy has become increasingly blurred by contemporary urbanization. As human settlements grow from villages into towns into the cities of the future, it is more accurate to think of a rural-urban continuum where places have a degree of urbanization that lies somewhere between a farm and a CBD and which can defy simplistic categorization (see Chapter 3). Human and financial capital, and goods and services move along this continuum. Agricultural producers may sell goods to a distributor in a nearby small city, who refines them into products sold to speciality vendors in a much larger city. Inhabitants of a small city may travel regularly to a much larger regional capital for education or healthcare needs. Megacity residents in turn might return annually to an ancestral village. Together, this system of human settlements comprise the urban diversity of Asia and the Pacific.

Degree of urbanisation (DEGURBA)

What is a city? The most recent United Nations *World Urbanization Prospects* (2018) report noted that there is no single definition of 'city'. National statistical offices employ varied definitions with different criteria. Some countries set the population threshold for 'urban' to be as low as 200 inhabitants, while, for others, the minimum number of inhabitants is 50,000. In addition, some countries include factors like population density, demonstrated economic potential and percentage of labour force engaged in agriculture. With such a range of definitions, it is difficult to make accurate comparisons between countries (UN-Habitat, 2020b).

A new methodology, elaborated by UN-Habitat, the European Commission, the Organisation for Economic Co-operation and Development and other partners, and endorsed by the UN Statistical Commission in 2020, called the "Degree of Urbanisation" (DEGURBA) uses remote sensing to capture this spectrum and provide a more nuanced view of human settlements.

FIGURE 1.3 **Degree of Urbanisation: A classification of local administrative units**



Source: Eurostat, DG Regional and Urban Policy, "Degree of urbanisation: A classification of local administrative units", n.d.
Available at https://ec.europa.eu/eurostat/statistics-explained/images/1/10/Degree_of_urbanisation_-_Grid_cells_and_LAU2_units_approaches.png

The DEGURBA methodology analyses multitemporal high-resolution satellite imagery in 1 km² grid cells by looking at built-up area, or buildings versus open space, to categorize land with the following rubric:

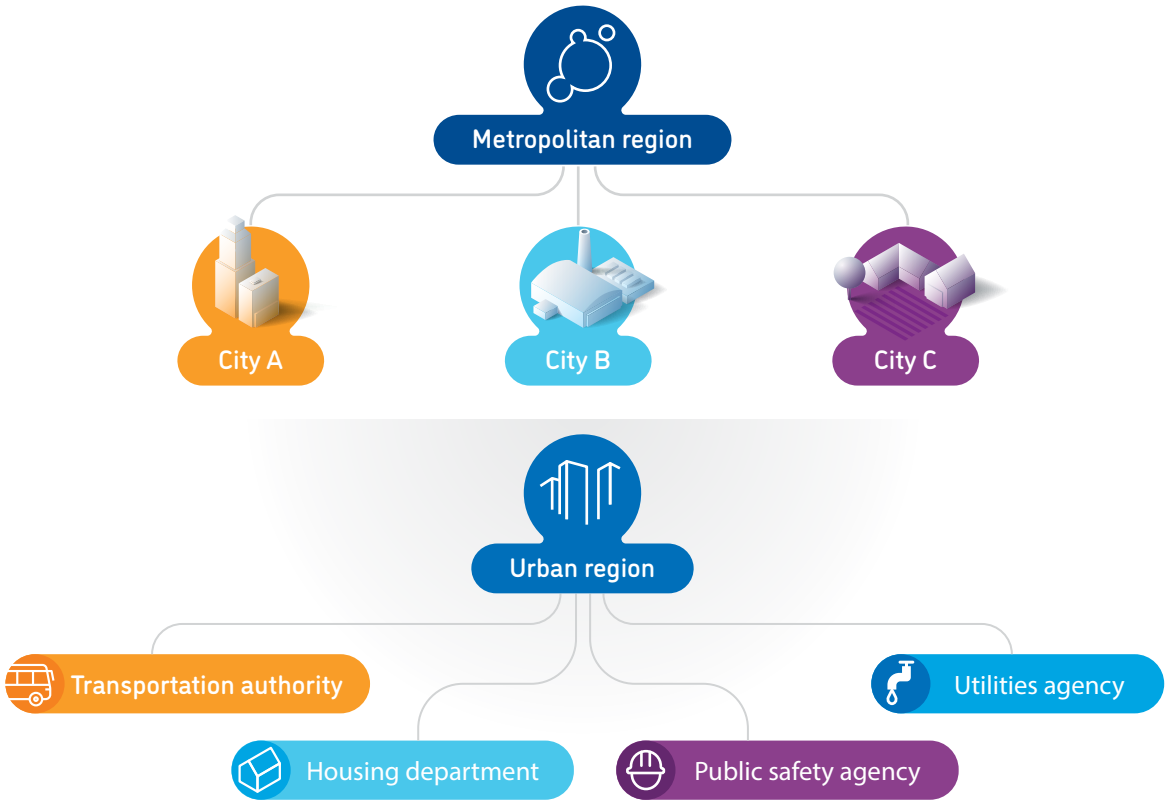
- Cities: Urban centres are continuous grid cells with at least 1,500 inhabitants per square km of permanent land and a minimum total population of 50,000 people.
- Towns, suburbs or semi-dense areas: Urban clusters are continuous grid cells with at least 300 inhabitants per square km of permanent land and a minimum total population of 5,000 people.
- Rural areas: Any grid cell with a density below 300 inhabitants per square km or grid cells with a higher density that are not adjacent to a sufficient number of other grid cells to be classified as an urban cluster. For example, a village of more than 300 people living in close proximity but surrounded by agricultural land would still be considered rural (European Commission: Eurostat, 2021).

This approach contrasts with traditional global databases and self-reported country metrics, potentially offering deeper insights into cities in Asia and the Pacific. Applying the definition above, India, in 2025, is already majority urban, with just 15.5 per cent of its population living in rural areas. A plurality live in towns and suburbs (44.8 per cent) with another 39.8 per cent of the population living in cities (European Commission, n.d.). These figures mismatch self-reported data where the urban population was noted as 31.8 per cent in the country's most recent census in 2011 (India, Ministry of Health and Family Welfare, 2019). The political implications of this data are profound for local governments, as reclassifying rural places as urban risks losing out on national government transfers to support rural areas (Dijkstra and others, 2020).

In 2020, the United Nations Statistical Commission endorsed DEGURBA as a recommended method for making international comparisons, which are critical for assessing achievements toward the SDGs. The definition seeks to make it as simple to understand cities today as the poverty line definition of $1 per day accomplished for global poverty measurement in the 1990s (Dijkstra and others, 2020).

The current phase of the DEGURBA project covers over 40 countries with the goal of supporting them as they embark on national census-taking. In this regard, Indonesia, the Republic of Korea and Nepal have been pioneers in the Asia-Pacific region.

FIGURE 1.4 **Diagram of jurisdictional fragmentation and functional fragmentation**



Source: ESCAP.

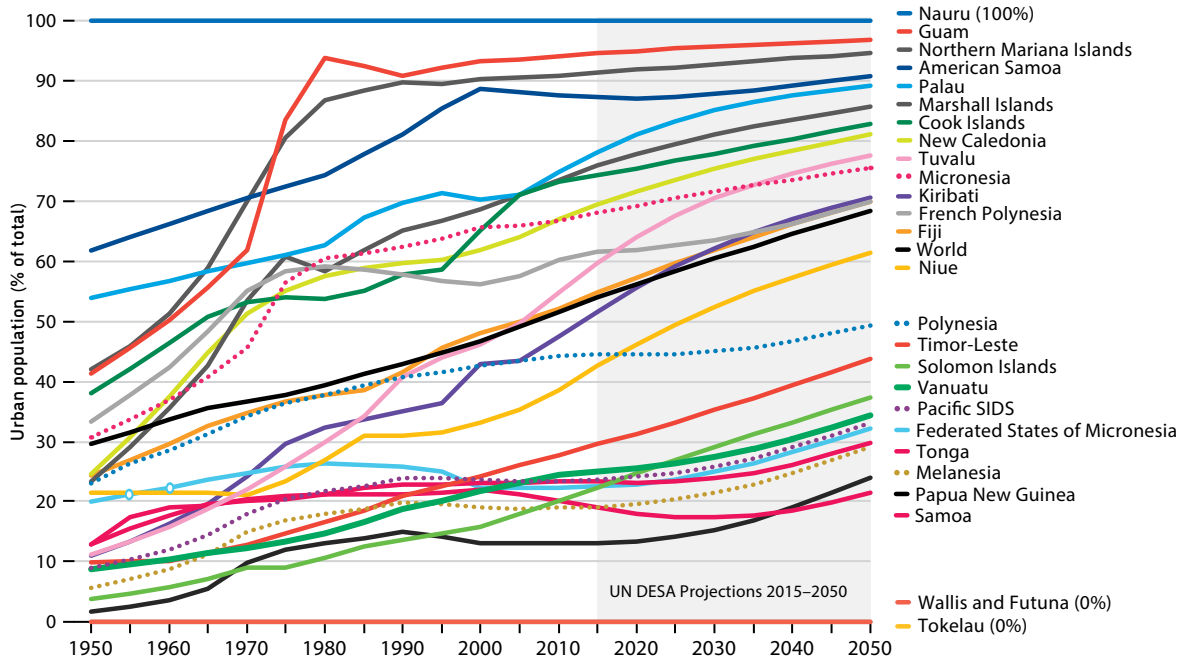
BOX 1.1 Blue Pacific: Challenges and pathways for navigating urbanization

Experiences of urbanization across Pacific Island Countries and Territories are fragmented and varied, with complex histories of cities and towns intertwined with colonization, commercial alienation of land and other vested interests. From a global perspective, the Pacific remains the world's least urban region, both in terms of the total share of population and the size of its urban centres.

Of the 21 Pacific small island developing States (SIDS), 12 have more than half of their citizens living in urban areas, 8 of which are two-thirds urbanized. Conversely, two territories, Tokelau and Wallis and Futuna Islands, are defined as being entirely rural. The estimated 9 million inhabitants of Papua New Guinea, which is nearly two-thirds of the region's total population, heavily skews regional urbanization statistics downward when they are examined in aggregate, as shown in figure 1.5.

This variation is one of several factors that complicate regional advocacy on urban issues, as reflected in the limited consideration of urbanization or sustainable urban development in the strategies and frameworks of Council of Regional Organisations of the Pacific agencies and other regional policy platforms to date. The need to address urban issues in the Blue Pacific, including through strong regional positioning on and advocacy for sustainable urban development is, however, increasingly urgent.

FIGURE 1.5 **Urbanization levels in the Pacific small island developing States**



Source: A. Trundle, "Resilient cities in a Sea of Islands: Informality and climate change in the South Pacific", *Cities*, vol. 97 (February 2020).

Between 2020 and 2050, even the conservative growth estimates used in the United Nations figures shown above project that half of the region's total population growth will occur in urban areas, which will more than double in size to a total population of nearly 7 million Pacific urban citizens. This is before accounting for the recent increase in urbanization in the larger Melanesian archipelagos.

Honiara, Solomon Islands, for instance, doubled in size over the last decade, reaching a population size of more than 130,000 people a decade earlier than expected. Peri-urban growth outside of the boundary of Port Vila, means that the population of the capital of Vanuatu is currently underestimated in official records by almost 43 per cent. When combined with the country's second city, Luganville, this adjustment increases the level of urbanization in Vanuatu by 10 per cent to nearly one-third of the national populace, a level of urbanization not expected until 2050 (as shown in figure 1.5).

Continues on next page

BOX 1.1 Continued

Independent experts and national government entities have expressed reservations about the methodology of census-taking in Papua New Guinea since 2000, with some analysts suggesting the 2011 census undercounted the urban population of the largest Pacific island State. Official reanalysis of building footprints and local headcount data by the Papua New Guinea National Statistics Office and the National Capital District Commission, however, suggests that Greater Port Moresby had reached a population of 760,000 people by 2019 which was 62 per cent higher than official figures and will reach the 1 million person threshold by mid 2025.

Cities and towns account for more than half of national GDP in most Pacific Island Countries and Territories. They contain major infrastructure, including critical health facilities, which have functions beyond the immediate urban populations. Capital cities dominate salary-based employment and present opportunities for study and facilitate international trade and travel. Pacific urban areas also account for a disproportionate share of young people, reflective of a deeper structural change in the region. As the climate crisis accelerates, cities and towns will provide long-term critical adaptation pathways for those most severely affected by climate-induced migration, which is already becoming evident in some low-lying areas.

The failure to adequately plan for this urban growth across many Pacific SIDS has resulted in large informal settlements and economic activity, infrastructure shortfalls, and ineffective support and technical expertise within local government and associated institutions. This has had significant secondary effects on local environmental conditions (particularly in terms of waste management and sanitation), health outcomes (particularly in terms of communicable disease), and social stability (as reflected in several civil disorder events across the region). Although estimates vary significantly, calculations in Port Moresby and Honiara using building analysis suggest that more than half of each of these city's buildings are now informal and lack legal land tenure, presenting a major security risk that could destabilize the region.

At the same time, the region's cities and towns offer uniquely Pacific alternatives to Western urban design and 20th century urban planning. This Pacific Island style of urbanization is better able to support community and kinship, embed cultural practices and traditional knowledge, and incorporate ecosystem services and nature-based solutions, but needs stronger support through national and regional architecture if it is to be effectively sustained and supported by development partners.

Addressing specific urban development challenges can and must go hand in hand with regional and national urban strategies and planning frameworks. Recent increases in infrastructure funding, while broadly positive and in many cases being overdue, is not enough to make urban areas function in equitable and sustainable ways and require deeper strategic connectivity and forward planning. Investments, including through donor-led financing facilities, are lacking guidance in terms of both equity in access and benefit by urban citizens, and the deeper capacity to support urban infrastructure going forward.

The 2050 Strategy for the Blue Pacific Continent can provide the basis for investment, planning, and technical support for a sustainable, resilient, inclusive, and prosperous urban Pacific. The framework for this integration is itself already laid out in both the Pacific New Urban Agenda and the Suva Statement for a Sustainable Urban Pacific, adopted at the 6th Pacific Urban Forum (PUF6) organized by ESCAP and the Pacific Urban Partnership and the Pacific Islands Forum Secretariat in 2023. The pillars of the Pacific New Urban Agenda are: i) Social equity and urbanization; ii) Urban environment, resilience, and infrastructure; iii) Urban economy; and iv) Urban governance. The Suva Declaration, as well as the outputs from earlier Pacific Urban Forums, draws upon a wide range of multi-stakeholder inputs from the six Pacific Urban Forums held to date, linking these high-level pillars to contemporary issues being faced within specific Pacific Island Countries and Territories.

Source: A. Trundle, "Resilient cities in a Sea of Islands: Informality and climate change in the South Pacific", *Cities*, vol. 97 (February 2020).

1.3 Urban governance: Who runs the city?

Asia and the Pacific is home to various governance structures between national and local governments, from unitary to federal levels, and urban governance is subsequently equally wide-ranging. The form and structure of local governments can vary from elected mayors to technocratic city managers to council-based rule. Jurisdiction also matters, such as whether one local government encompasses the entire metropolitan area or whether there are a multiplicity of local governments, like a central city and surrounding suburbs or satellites.

These specifics are important because local government is the level of government closest to the people. At its best, local governments deliver the kinds of public services that have tangible impacts, and do so more effectively than higher levels of government. While national policymaking can sometimes feel abstract to the average citizen, local policy has immediate ramifications for daily life: Will solid waste get picked up at regular intervals? Does the public transport run on time? Is there a park or playground in every neighbourhood?

Meeting the needs of the region's urban dwellers requires both authority and resources. The key challenge remains securing the necessary legislative framework that allows cities to finance operations and infrastructure to deliver urban services. Different governance models in the region can broadly be characterized by three categories: jurisdictional fragmentation, functional fragmentation and metropolitan government. Each offers unique advantages and challenges, such as managing fiscal disparities or achieving economies of scale. Effective governance will be essential as cities navigate the complex demands of urban growth and service delivery.

Jurisdictional fragmentation

Jurisdictional fragmentation describes the scenario in which a central city is surrounded by several independent municipalities. Residents of these typically smaller outlying local governments are said to "vote with their feet" and choose to live in the place that best corresponds with their preferences in terms of tax burden relative to public goods and services, even if their place of employment remains the central city (Banzhaf and Walsh, 2008). From a democracy perspective, this form of urban governance is desirable. Voters in these smaller municipalities have more control over taxes and public services.

However, this form of government can also contribute to socio-spatial segregation. Small local governments can become isolated pockets of wealth or poverty as the affluent flock to certain municipalities with better services, but more expensive housing, while the poor are confined either to the central city or other less desirable outlying jurisdictions where they can afford to live. Meanwhile, issues that cross jurisdictional lines like environmental management and public transport are more difficult to coordinate across the various city lines. A flood-prone river might pass through half a dozen different municipalities in the same metropolitan area, making flood control strategies more difficult to implement than if there were only a single local authority responsible for making decisions.

TABLE 1.1 **Summary analysis of various forms of urban governance**

GOVERNMENT STRUCTURE	EMPHASIS	ADVANTAGES	DISADVANTAGES
Jurisdictional fragmentation	Home rule	Voters have more control over services delivered and tax levels	Does not deal effectively with spillover effects; coordination is difficult; and large fiscal disparities
Functional fragmentation	Technical efficiency	Professional management; can capture economies of scale; may have access to a dedicated revenue stream	Less directly accountable to local voters; coordination with other services can be difficult
Metropolitan government	Coordination of service delivery, technical efficiency	External costs can be internalized; economies of scale can be captured; broad-based taxes are more feasible; fiscal disparities can be eliminated	Government decisions are more distant from local voters; intergovernmental conflicts with lower tier neighbourhood governments; diseconomies of scale

Source: ESCAP.

Emblematic examples of fragmented jurisdiction in the Asia-Pacific region include Manila, Kolkata and Karachi. In the Philippines, the Local Government Code of 1991 gave more autonomy to local governments, which weakened institutions like the Metro Manila Authority. Today, Metro Manila consists of 16 cities and one independent municipality that sometimes struggles to grapple with traffic management, solid waste and flood control (Manasan and Mercado, 1999). Greater Kolkata consists of four municipal corporations and 37 municipalities, while the central city is unique in India with its mayor-in-council governance system (LSE Cities, 2007). The world's worst air pollution is one of the persistent problems plaguing Kolkata's fragmented governance regime (Sarkar, 2024). Karachi, Pakistan suffers greatly from fragmented jurisdiction. As the largest city in Pakistan, it routinely ranks near the bottom of the Global Livability Survey of the Economist Intelligence Unit (EIU, 2024a). Housing estates, home to tens of thousands of families, are run by public sector authorities outside the local government's control, which contributes to overlapping and unclear jurisdictions unable to coordinate critical infrastructure. This situation can lead to disasters like the August 2020 floods that swept through Karachi, Pakistan but left better-governed cities like Lahore, Pakistan relatively unscathed (Siddiqui, 2020).

Functional fragmentation

Functional fragmentation refers to the specialization common in large governments that divides the public sector into departments, such as solid waste, water, transport, education, etc. Organizing the government into individual departments is arguably a necessity to govern a large polity and comes with significant benefits. When recruited from the ranks of skilled professionals, department leadership can push for innovation while managers can ensure better urban service delivery. However, as local governments become larger and more bureaucratic, they are less directly accountable to residents. There is also the risk of departmental silos, which makes it difficult for one specialized agency to work with another on overlapping issues like climate change, digitalization and integrated urban planning. Mumbai, India is a typical case of a city with functional fragmentation. According to the 2024 Praja Urban Governance Index, Mumbai has control over more of the 18 functions authorized by the Indian Constitution than any other city in the country, due to devolution from Maharashtra state. The authority over these 11 functions has spurred the creation of municipal agencies to oversee specialized tasks (Praja Foundation, 2024).

Metropolitan government

As cities grow larger and spill beyond the jurisdictional boundaries of the traditional central city, the metropolitan governance model has become increasingly common as the most apt form for managing large cities. The metropolitan government supersedes the fractured landscape of jurisdictional fragmentation and coordinates key services not just across arbitrary political boundaries, but rather across functional lines. Where do people actually live, work and travel for daily needs within a given urban agglomeration? Those are the preferred boundaries for a metropolitan government.

The metropolitan government of Tokyo oversees effective public services, delivering a high quality of life for an estimated 14 million people under its jurisdiction (Grant, Liu and Ye, 2018). Other more recent adoptees of metropolitan governance in the Asia-Pacific region include Bangkok, Beijing and Jakarta. Chartered in 1973, the Bangkok Metropolitan Administration is one of the region's older metropolitan governments. It has attempted to address longstanding problems like air quality and affordable housing, while also pioneering innovative health services like same-day antiretroviral therapy. But as greater Bangkok continues to grow, the metropolitan government's jurisdiction may also need to widen its aperture to outlying areas (Chokchaimadoln, 2024). Taking advantage of the 1999 Indonesian legislation that legalized autonomous regions, the national government and the Special Capital Region established the Greater Jakarta Transportation Authority in 2019, which has played a key role in the expansion of TransJakarta, the world's largest bus rapid transit (BRT) network (Vasquez, 2023).

Subsidiarity and decentralization

The principle of subsidiarity maintains that public-sector responsibility for service provision should be allocated at the closest appropriate level consistent with efficient and cost-effective delivery of services. Since the 1990s, national governments in the Asia-Pacific region have increasingly applied that principle. Their motivation has come from an understanding of the role of cities as drivers of national development and recognition of the need for better urban management to deliver on promises of growth and prosperity. Under the decentralization trend, the local level became entrusted with the prime responsibility for urban management in areas like housing, transport and energy. Since the multilevel division of governance responsibilities, while powers and resources already existed to some extent in the region, decentralization also became a matter of political and economic opportunity in the search for strategies to better manage urban development (ESCAP and UN-Habitat, 2015).

BOX 1.2 Jakarta: Integrated transport and fare system, JakLingko

Owned by the Jakarta Provincial Government, JakLingko is Greater Jakarta's transport scheme that is designed to achieve seamless integration between the TransJakarta buses (BRT) and the rail-based services, including the Mass Rapid Transit (MRT) Jakarta and the Light Rail Transit (LRT) services. Such integration has significantly enhanced urban mobility by consolidating many public transportation options under a cohesive tariff structure. Initiated in October 2022, JakLingko enables customers to utilize a singular app or card for effortless travel across several transit modalities. The maximum charge for combined journeys is established at Rp10,000 (about US$ 0.66), which is a marked decrease in commuting expenses relative to previous tariffs.[a, b]

JakLingko has achieved a high level of integration through a unified fare system, a common ticketing system, interconnected routes and collaborative efforts among transport operators. Stations and terminals are now strategically designed to facilitate easy transfers. Technological advancements, such as mobile apps and real-time information platforms, enhance the overall commuting experience.

The extensive corridor-based system covers multiple neighbourhoods and important destinations, with high-frequency service and extended operating hours. The integration of the bus rapid transit system (BRTS), the key transit system in JakLingko's network, with paratransit operators through a multi-year contract is particularly effective as it allows passengers to use a combination of buses and microbuses (Mikrotrans) services under an integrated fare for a three-hour period. These smaller vehicles can navigate through narrow roads and kampongs, substantially increasing accessibility.

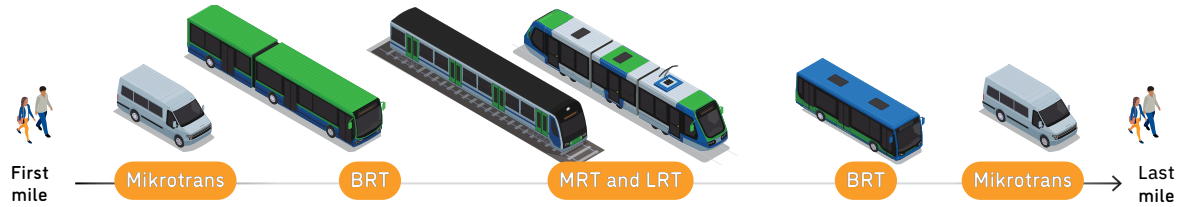
In 2023, TransJakarta marked a milestone in serving 1 million passengers in one day, including the BRTS, micro-transit and other services offered by the agency.[c]

Localization initiatives were essential for the development of JakLingko. A crucial element involved the modification of regional transport frameworks to align with Jakarta's unique setting, including the incorporation of informal Mikrotrans into the legal public transport system. This integration enhanced service coverage and accessibility for commuters, especially in regions inadequately served by official transportation systems. Community engagement was crucial as it enabled authorities to implement essential modifications to the system, assuring that population demands were addressed.

The JakLingko model offers valuable lessons for other Asia-Pacific cities. Its unified fare system that integrates multiple transport modes can serve as a blueprint for cities facing similar mobility challenges. Public-private partnerships further underscore the importance of multisector collaboration in developing sustainable transport solutions.

Regional collaboration is crucial for addressing transboundary transportation issues as urbanization accelerates. Sharing best practices from JakLingko could help create cohesive transport networks that improve mobility and reduce environmental impacts across the region.

FIGURE 1.6 **First-mile, last-mile transportation system mechanisms**



Source: Buscardini Communications, "Transjakarta project presented in Brussels: Impressive transformation of the public transport in Jakarta", 2024. Available at https://buscardini.com/transjakarta-project-presented-in-brussels-impressive-transformation-of-the-public-transport-in-jakarta/

a JakLingko Indonesia, "Transport Agency of DKI Jakarta: Integrated fares can be paid through the JakLingko app and card", 11 August 2022. Available at https://www.jaklingkoindonesia.co.id/en/newsroom/article/jakinfo/48/transport-agency-of-dki-jakarta-integrated-fares-can-be-paid-through-the-jaklingko-app-and-card

b JakLingko Indonesia, "Benefits and challenges of Jakarta's Integrated Multimodal Fare Policy in JakLingko Indonesia Platform", March 2023. Available at https://cdn.asp.events/CLIENT_CL_Conf_BDA05934_5056_B731_4C9EEBBE0C2416C2/sites/TTG-2021/media/2023-Presentations/Day-2-Theatre-1/10.20-TTG---JakLingko.pdf

c Crux Alliance, "ITDP: Indonesia's TransJakarta Public Transport Services reach one million riders in one day", n.d. Available at https://cruxalliance.org/success-story/itdp-indonesias-transjakarta-public-transport-services-reach-one-million-riders-in-one-day/

Decentralization in Asia and the Pacific has close links with the shift to market-led systems and liberal democracy. These two facets are not necessarily divergent but striking the right balance remains a key governance challenge and opportunity. What is increasingly urgent today is an assessment of the effectiveness of power shifts and the new balances of control and responsibility that have emerged. Not all change has shown to be effective and greater attention needs to be given to understanding which governance arrangements are most likely to be successful in managing the region's current and future urban dynamism. There is no single model to follow and even the most effective institutional arrangements may need to change over time.

There are good examples of such reforms across the region. For example, the Philippines' decentralization process has been described as one of the most far-reaching in the developing world (Bruckner, 2011). It has allowed local governments to retain many of the revenues generated within their jurisdiction. It has also granted relatively high levels of autonomy over local development agendas and they increased local expenditure as a result of improved capacity among urban institutions to deliver responsive local change. In Indonesia, extensive decentralization emerged in 1999 with local governments benefitting from regional autonomy legislation that devolved most powers and resources directly to subnational administrations (Miller, 2013).

Bangladesh, Pakistan and Thailand have experienced cyclical movements between periods of decentralization and recentralization. The region's member countries of the Organisation for Economic Co-operation and Development (Australia, Japan, New Zealand and the Republic of Korea) have also been committed to decentralization reform with priority put on improving services (World Bank and United Cities and Local Governments, 2008). China and Viet Nam have adopted decentralized strategies within the context of strong centralized political systems and economic restructuring. Yet, whereas the Chinese model has worked effectively in raising the productivity level of major cities, the Vietnamese system still has to result in generating significant urban autonomy and wealth. Central Asian countries, such as Kazakhstan, Uzbekistan and Turkmenistan, have opted for a more centralized model, although Kyrgyzstan and Tajikistan have cautiously started on a path of greater decentralization. The Pacific small island developing States, particularly Fiji and Solomon Islands, have, over the last decade, initiated reforms to strengthen local governments. Their main challenge remains the balancing of modern government structures and customary institutions (UN-Habitat, 2012).

Smaller cities, smaller capacity

Decentralization, in the Asia and Pacific context, has often meant transferring responsibilities to local level institutions, but rarely facilitating the creation of new institutions or the devolution of the fiscal autonomy required for responding to new and additional responsibilities. As in the past, many urban governments still depend, to a very large extent, on (usually insufficient and unpredictable) fiscal transfers from higher government levels, affecting their budgeting and investment planning capabilities. Consequently, after two decades of decentralization, the capacity of many local level institutions to perform their mandated tasks has not always been significantly enhanced. This is important, since a large proportion of the Asian and Pacific urban population lives in small- and medium-sized towns which, collectively, are growing faster than larger cities (UN-Habitat and ESCAP, 2015). Despite their growth and increasing significance, most do not have the human, financial and organizational resources to make decentralization work for them.

In the case of some Pacific small island developing States, there are limited trained urban planners, and even those may be working in other areas of the bureaucracy, while central government and higher tiers of local government often shed responsibilities to lower governmental levels without decentralizing the required funds or fundraising authority. In Central Asian countries, the resources previously transferred to cities by higher levels of government are now no longer being provided, leading to deteriorating infrastructure and housing conditions. Under this model of decentralization, local government units lack power and remain mostly dependent on the centre for resources, which may or may not be available.

1.4 Urban resilience and sustainability: Seizing the urban SDG opportunity

The global timeline to reach the 17 Sustainable Development Goals (SDGs) outlined in the 2030 Agenda for Sustainable Development has already passed the halfway mark. Achieving the SDGs requires a whole-of-society approach. Home to a majority of the population in Asia and the Pacific, sustainable cities play a pivotal role in helping the region meet these ambitious targets. When cities and human settlements are planned, financed, developed, governed and managed in alignment with the New Urban Agenda, they are more likely to produce societal outcomes that meet SDG indicators. This pathway can be described as the urban SDG opportunity.

TABLE 1.2 **Status of the dissemination of the Degree of Urbanisation in Asia and the Pacific**

STATUS OF THE DISSEMINATION	COUNTRY
NSO has learned the method but has not yet used it on national data	Azerbaijan, India, Kyrgyzstan, Tajikistan, Uzbekistan, Viet Nam
NSO has learned the method and plans to use it for the upcoming census results	Australia, Cambodia, Kazakhstan, New Zealand
Method has been used on national data, but the findings have not been released yet	Malaysia, Philippines, Thailand, Timor-Leste
Method has been used on national data, and the findings have been released	Brunei Darussalam
Method has been applied to national data, the findings have been released, and the NSO has created some SDG indicators based on DoU	Indonesia, Nepal, Republic of Korea, Türkiye

Source: Copernicus, "Capacity building and training", Programme of the European Union, n.d. Available at https://human-settlement.emergency.copernicus.eu/degurbaOutreach.php

Note: NSO = National Statistical Office; SDG = Sustainable Development Goals; DoU = Degree of Urbanisation

Thus far, the progress of Asia and the Pacific toward the SDGs is most pronounced in its efforts to ensure healthy lives (Goal 3) and develop industry, innovation and infrastructure (Goal 9). Moreover, the region is progressing faster than the rest of the world in reducing poverty (Goal 1) (ESCAP, 2025). The successes on these fronts speak to the vital importance of cities and urban areas for meeting the 2030 Agenda.

Well-planned and -managed human settlements across the rural-urban continuum have a documented effect at reducing poverty due to increasing economic opportunities (Ravillion, 2007). The Asia-Pacific region will ultimately thrive when rural areas, alongside urban areas, are productive as they provide critical supplies of food, energy and ecosystem services.

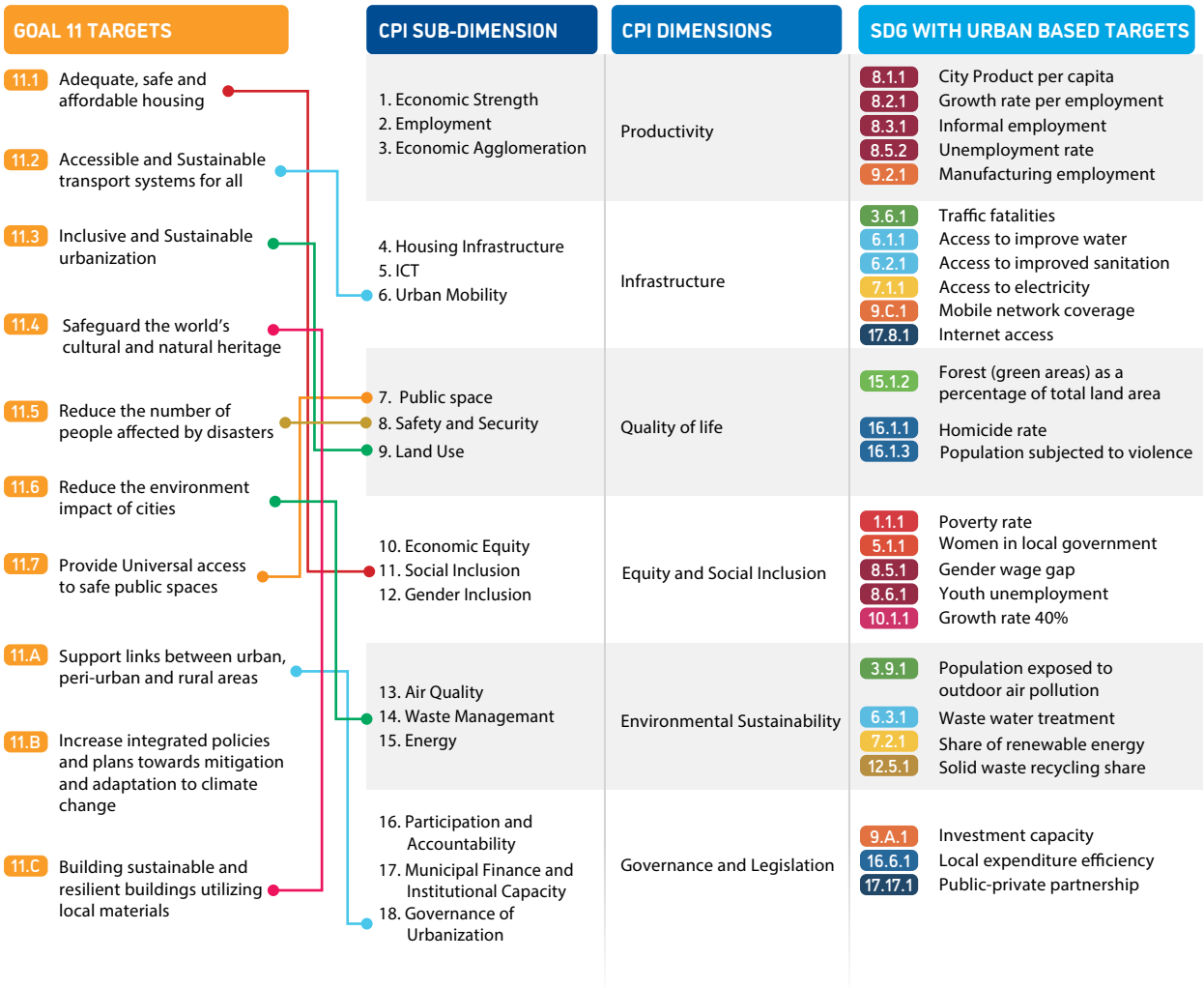
The highly urbanized Asia-Pacific region has a strong track record of poverty reduction dating to the Millennium Development Goals (World Bank Group, 2013). Industry and innovation, meanwhile, are typically hallmarks of urban areas as research and development requires dense concentrations of human capital and knowledge hubs like major universities. Increasingly, Asia and the Pacific is both an industrial giant, the workshop of the world for everything from textiles to semiconductors, and an innovation hub churning out new ideas in cutting-edge areas like mobile services, artificial intelligence and the Internet of things (Ramakrishna and Ng, 2011; Tonby and Woetzel, 2020).

Fortunately for policymakers, when it comes to advancing on the SDGs, there is an obvious way forward in a majority-urban region: invest in cities. Nearly one-quarter of the SDG indicators have a local or urban component (UN-Habitat, 2020a). Enabling the growth and development of more sustainable cities will result in stronger national progress toward the 2030 Agenda, which will in turn buoy the region.

There are potentially dire consequences for Asia and the Pacific if business as usual persists. For example, since 2015 the region has regressed on climate action (SDG 13), the only 1 of the 17 goals without any forward progress (ESCAP, 2024a).This data suggests the possibility that urbanization in Asia and the Pacific may have had beneficial impacts on poverty rates, but that rising standards of living were also accompanied by more carbon-intensive activities such as automobile ownership and air conditioning.

The role of cities in the SDG agenda is perhaps most obvious in SDG 11, the so-called "urban SDG". Asia and the Pacific is ahead of the pace to meet its 2030 target on the score of adoption and implementation of national disaster risk reduction strategies (11.b.1). The region is on pace to meet its 2030 targets for urban slum population (11.1.1) and very close to being on target for urban particulate matter (11.6.2.). It is making progress but behind target on the proportion of local governments that adopt and implement local disaster risk reduction strategies (11.b.2), and even more behind target on road traffic deaths (11.2.P1). The region has not made progress on deaths/missing/affected persons from disasters (11.5.1), and on economic loss and affected infrastructure and services from disaster (11.5.2) (ESCAP, 2024b). However, there is still insufficient data for robust tracking of SDG 11, in particular for observing subregional variation, with the evidence strength of this analysis ranking two out of four on ESCAP's SDG Progress Snapshot (ESCAP, 2024b).

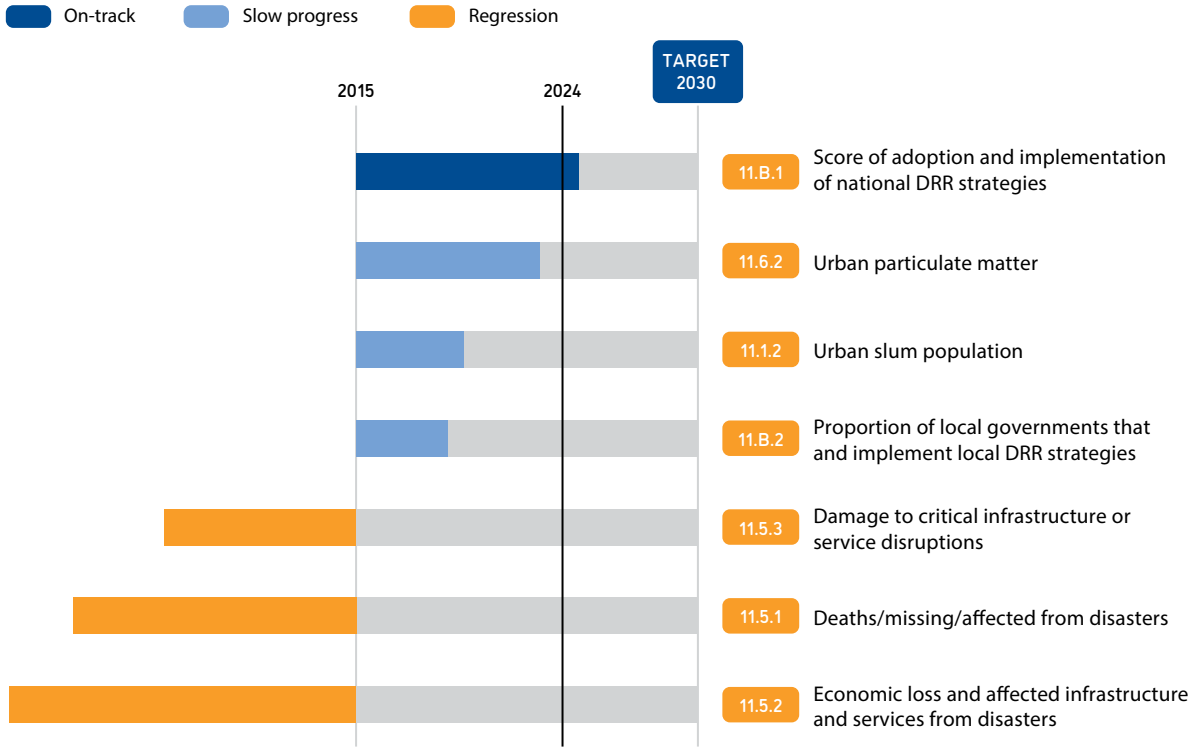
FIGURE 1.7 **SDG 11 and the City Prosperity Initiative**



Source: United Nations Human Settlements Programme (UN-Habitat), "A guide to assist national and local governments to monitor and report on SDG Goal 11+ indicators", n.d. Available at https://www.local2030.org/library/60/SDG-Goal-11-Monitoring-Framework-A-guide-to-assist-national-and-local-governments-to-monitor-and-report-on-SDG-goal-11-indicators.pdf

Note: The City Prosperity Initiative is a composite index made of six dimensions: infrastructure, productivity, quality of life, equity, environmental sustainability and governance. These dimensions and related indicators can be adjusted to specific requests for global and local monitoring. The CPI has the potential to be a global framework for indicators and targets of SDG 11 – The CPI framework is built based on a sound statistical approach that integrates various indicators to the different dimensions of shared prosperity and sustainability.

FIGURE 1.8 **SDG 11 progress in Asia and the Pacific**



Source: United Nations Economic and Social Commission for Asia and the Pacific, "SDG Gateway Asia Pacific: SDG Progress – Asia and the Pacific (ESCAP) Snapshot", 2024b. Available at https://data.unescap.org/data-analysis/sdg-progress

Note: 6 indicators and one proxy measured out of 15 official SDG indicators.

There are also some notable bright spots across the region. According to data submitted to the United Nations Economic and Social Council in 2023 at the High-Level Political Forum, Australia and New Zealand have already met Target 11.1 on reducing the percentage of people living in slums and informal settlements. They are also "close to target" on the other four indicators which were benchmarked globally (UN-Habitat, 2023). Housing stock in Tajikistan is growing at a faster rate than its population, which will help the country reduce its housing deficit (United Nations, n.d.a.). Uzbekistan has implemented a preferential mortgage loan programme to boost access to affordable housing (United Nations, n.d.b.). In Viet Nam, the percentage of population living in temporary housing declined from 2.6 to 0.9 per cent between 2016–2022 (United Nations, n.d.c).

Taking full advantage of the urban SDG opportunity includes taking vital steps like implementing the New Urban Agenda, the globally agreed upon roadmap for how to deliver on the SDGs at the local level, and supporting local governments as partners in their commitments to the Paris Agreement on climate change. The ultimate goal is simple to state, if breathtakingly ambitious in scope: Leave no one — and no place — behind.

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CHAPTER 2

City limits: Key vulnerabilities of urban Asia and the Pacific

Urbanization has produced tremendous wealth for Asia and the Pacific in an interconnected global economy ...

Cities in the Asia-Pacific region face vulnerabilities from macrotrends like economic volatility and climate change, as well as from the nexus of migration, inequality and social justice. Economic downturns can increase poverty rates and deplete the revenue streams needed to build infrastructure and invest in public services. Climate change presents a range of vulnerabilities from heatwaves to sea-level rise to disasters that can threaten lives, properties and livelihoods. Unsafe, disorderly and irregular migration has the potential to diminish human capital in countries of origin and strain services in host countries. Understanding the nature of these challenges, as well as what policymakers can do to mitigate their impacts, is important for making cities more resilient to shocks and stresses.

2.1 Cities on the edge: Economic volatility

The Asia-Pacific region is home to the world's second, fourth and fifth largest economies of China, Japan and India, respectively (Seong and others, 2023). Wealth, in the region, predominantly comes from the cities, with over 80 per cent of the region's GDP being generated in urban areas (UNEP, 2024). Urbanization has produced tremendous wealth for Asia and the Pacific in an interconnected global economy, which has prompted an urgent need for reform so that local and metropolitan governments can mobilize revenue and finance public services (Bahl, 2018, p. 26).

But whether cities are centres of goods production and export or hubs for services to domestic and foreign customers, local governments are subject to economic volatility over which they have little control. Macroeconomic trends, like rising or falling inflation, drive up or reduce the costs of delivering public services. Central banking policies, like fluctuating benchmark interest rates, influence urban real estate markets for residential and commercial properties. Supply chain policies like decoupling, derisking and 'friendshoring' shutter industries in some countries while leading them to flourish in others.

Curbing inflation by hiking interest rates can strangle a vibrant real estate market, where sales of property provide critical tax revenue. Forcing local governments to take on debt can lead them to cut services when a property bubble bursts. Local governments, in turn, must brace for these economic shocks and stresses by implementing measures such as establishing reserve funds during periods of economic prosperity to support core public functions and essential services during downturns. Such vulnerabilities are higher among local governments that are legally prohibited or otherwise do not have the capacity to take on debt. Smaller municipalities may not have the capacity to stockpile financial reserves and instead must rely on yearly contingencies. Ideally, national and local governments should work together on smart public investments that produce economic dividends while enhancing urban quality of life (box 2.1).

BOX 2.1 Tokyo: The enduring value of public investment in transport

On 23 October 2023, the Tokyo Metro made an initial public offering (IPO) on the Tokyo Stock Exchange. In the first week of trading, the firm attracted US$ 2.3 billion in investment and shares rose by 45 per cent. While investors have become accustomed to IPOs from firms offering digital products, like apps and web services, that rise to prominence as frequently as they fail to sustain, Tokyo Metro was praised by analysts as a low volatility investment safe for ordinary investors. With 6.5 million daily users, the Tokyo Metro transport-based business model relies on the 150-year-old practice of urban dwellers paying for rail service. The national government and the Tokyo Metropolitan Government jointly owned Tokyo Metro until the IPO, but reduced their ownership stake to 50 per cent and are utilizing the proceeds to pay for reconstruction bonds issued in 2011 after the Fukushima earthquake and tsunami. The successful IPO illustrates how a long-term public investment in a reliable, much-needed public good can generate value that creates flexibility for the government to address other financial needs.

Source: S. Nussey, "Tokyo Metro on market fast track with 45% jump in debut", *Reuters*, 23 October 2024. Available at https://www.reuters.com/business/autos-transportation/tokyo-metro-shares-untraded-with-glut-buy-orders-2024-10-23

Housing, land and property markets

Housing, land and property markets are significant drivers of urban economies. Whether stemming from the public or private sector, investments in housing stock create construction jobs, generate tax revenue, provide economic stability for renters and offer wealth-building opportunities to homeowners. Well-functioning land markets are also important components of healthy urban economies. In particular, access to secure tenure is vital for the poor across the spectrum of human settlements.

Vulnerabilities can emerge for cities when unchecked residential construction is coupled with loose monetary policy and lax lending standards. The Global Financial Crisis that began in 2008 was triggered by a property bubble in the housing market in the United States of America with lenders holding too many risky mortgages. Real estate speculation was also a contributing factor to the 1997 Asian Financial Crisis, whose specter looms large in the region. When housing becomes a commodity, rather than a place to live, there are systemic risks to urban economies and by extension national and even global economies.

The inability of informal and other socioeconomically disadvantaged urban inhabitants to invest in or access the technical expertise to build resilient housing and settlement infrastructure also compounds impacts for those already disadvantaged, reinforcing poverty cycles, and leaving both livelihoods and housing precariously vulnerable to major shocks or stress events.

Pandemic recovery

While the Asia-Pacific region did not face the same extreme changes in urban behaviour as North America and parts of Europe in the aftermath of the COVID-19 pandemic that continue to depress the office market, commercial real estate has not yet reached a full recovery. The office market continues to post higher-than-normal vacancy rates (CBRE, 2024). In cities, where the economies are driven by professional services like finance, accounting, insurance, law, banking and advertising, a robust office sector is vital for concentrating economic activity and creating spillover effects that support other jobs, from the food and beverage sector serving lunchtime meals to retail outlets where workers purchase clothes.

Moreover, more than 65 per cent of the population in Asia and the Pacific works in the informal sector (ILO, 2018). The exact amount varies across the region from below 20 per cent in Japan to approximately 90 per cent and above in Bangladesh, Cambodia, India, the Lao People's Democratic Republic and Nepal (ILO, 2018). Public health measures enacted during the COVID-19 pandemic adversely affected the economic opportunities for workers in the informal sector, who lacked any sort of social protection. Economists found that the impact of high rates of informal employment hampered economic recovery from the pandemic (Ohnsorge and Kose, 2022). By 2023, most economies in East, North-East and South-East Asia had recovered from the pandemic, although Pacific Island countries had not regained their pre-pandemic levels of economic output (World Bank Group, 2023). Governments and planners in the region are increasingly recognizing the importance of supporting the informal sector due to its significant contributions to the urban landscape and national economies.

Amid the backdrop of the multiple crises, the significance of cities and local economic development has become more pronounced, as they make substantial contributions to national and regional GDP by functioning as catalysts for economic recovery, stimulating overall economic growth and infusing innovation into various sectors. Planners must consider economic factors relating to land-use decisions, infrastructure planning, housing revitalization efforts and sustainability goals to create economically vibrant and sustainable urban environments. Additionally, urban planning can support women's economic empowerment by fostering well-designed mixed-use neighbourhoods, enhancing access to job opportunities and services, promoting safety and providing affordable housing options. Thus, urban planning plays a key role in presenting opportunities for the informal sector to thrive.

The construction industry continues on pace in Asia and the Pacific with an anticipated growth of 3.7 per cent in 2024, which is roughly the same as in 2023 (World Construction Network, 2024). In the third quarter of 2024, two of the region's five largest new multi-family housing schemes broke ground in Phu Ly City, Viet Nam and Biggera Waters, Australia. These examples are indicative of investment in suburban and intermediate cities outside of the larger megacities.

2.2 Climate and environment showdown: How cities are facing the future

The Asia-Pacific region is vulnerable to numerous disasters caused or intensified by climate change. The bulk of the economic impact of the region's many climate disasters is a result of damage to urban areas, infrastructure and livelihoods. Adaptation and mitigation in the face of global climate change is a paramount challenge for countries in Asia and the Pacific, which must grapple with vulnerabilities like extreme heat, water scarcity, food insecurity and disasters. Six of the region's countries ranked on the top ten countries most affected by climate-related risks during the last two decades (Germanwatch, n.d.).

National-level climate commitments, such as Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs), are pivotal in framing the urban response to climate challenges. Many countries in Asia and the Pacific have integrated urban content into their NDCs, recognizing cities as critical nodes for climate action.

Similarly, NAPs focus on localized adaptation efforts, often prioritizing urban areas as frontline responders to climate impacts. Examples include the Climate Change Strategy and Action Plan of Bangladesh, which integrates flood management systems and climate-resilient infrastructure in urban centres, and the NAP of Fiji which focuses on climate-proofing urban housing and infrastructure.

Despite these efforts, gaps in implementation persist. Many countries face challenges in translating national policies into actionable urban projects due to financial, technical and governance barriers. Bridging these gaps requires stronger alignment between national and subnational governments, capacity-building for local authorities and innovative financing mechanisms.

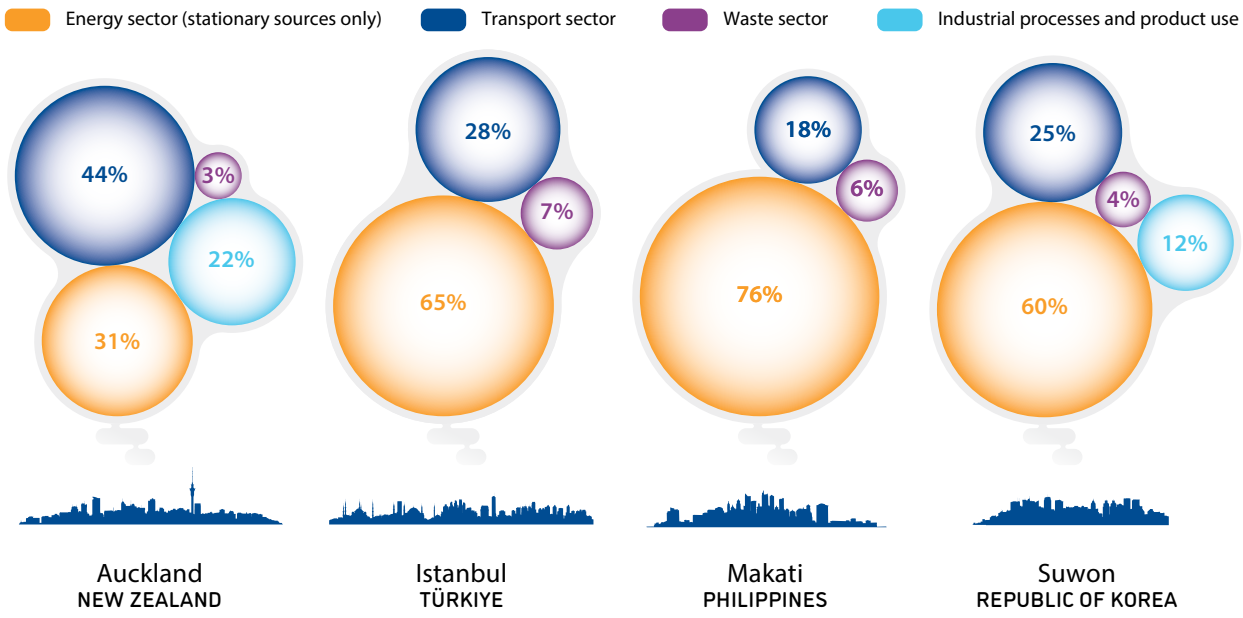
At the urban level, new research by C40 Cities Climate Leadership Group analysed 10 cities and predicts that that 8 million people will migrate due to climate change by 2050 if the world warms by more than 1.5°C over pre-industrial levels (C40 Cities Climate Leadership Group, 2024). Of those 10 cities, the two located in the Asia-Pacific region will feature the most extreme climate-induced in migration: 3.07 million additional people in Dhaka and 2.4 million additional people in Karachi, Pakistan (C40 Cities Climate Leadership Group, 2024). At the same time, cities are responsible for 70 per cent of global carbon emissions, so national action to decarbonize energy grids, reduce fossil fuel consumption in transport and cap emissions from waste will all have to be implemented in some fashion at the local level. As cities prepare for increased climate-induced migration and heightened vulnerabilities, the alignment of urban planning with national climate objectives will be a cornerstone of sustainable development in the Asia-Pacific region.

Extreme heat

Asia and the Pacific encompasses every climate zone identified globally, from tropical to polar. But on a warming planet, extreme heat is an increasingly deadly concern. During the last decade, the number of heatwaves increased more than fourfold in East Asia and nearly doubled in South Asia compared to the previous two decades. The probability of heatwaves in South Asian countries has increased 30 times due to climate change (Global Disaster Preparedness Center and others, 2022).

The year 2024 was the warmest on record, with little relief for urban dwellers across Asia and the Pacific, resulting in cities across Bangladesh, Cambodia, India, the Lao People's Democratic Republic, Myanmar, the Philippines and Thailand to experience record or near-record high temperatures (WMO, 2025).

FIGURE 2.1 **Example of GHG emissions from ESCAP subregional cities 2023, by sector**

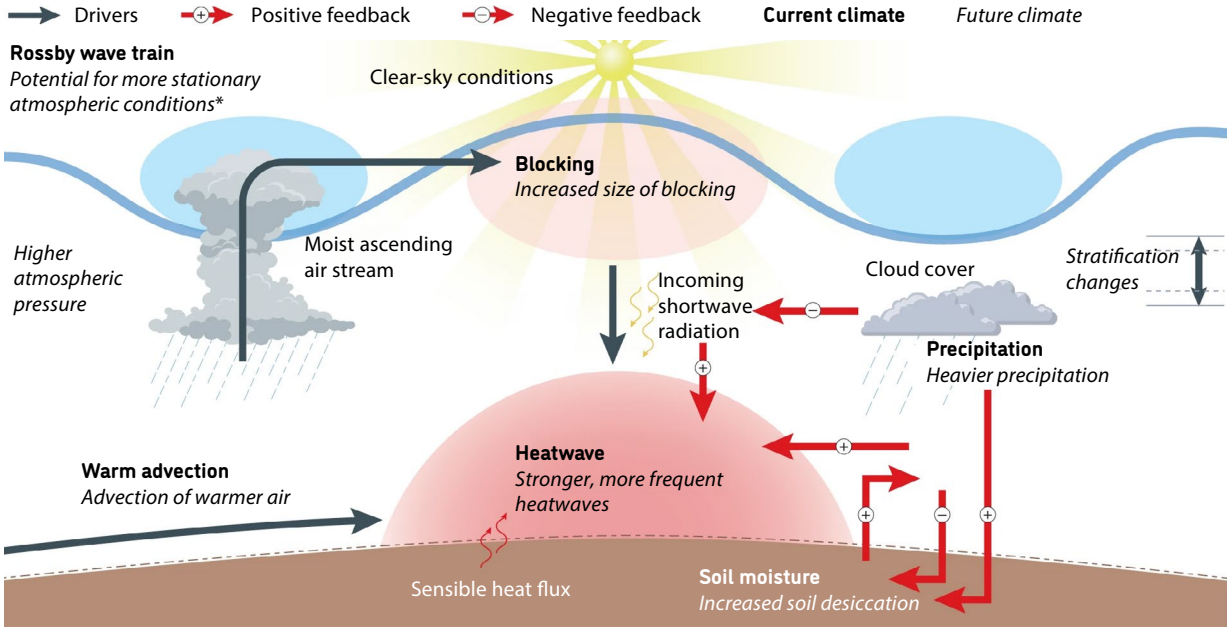


Source: Updated by ESCAP from original data source: CDP, "2023 city-wide emissions percentage split by sector", n.d. Available at https://data.cdp.net/Emissions/2023-City-wide-Emissions-Percentage-Split-by-Secto/hq6a-qxux (accessed on 13 January 2025).

Extreme heat exposes vulnerabilities in human settlements in several ways. People of all ages, but especially the very young and older persons, face an increased risk of heat-related illness. A study indicates that between 2000–2019, there were around 489,000 heat-related deaths globally each year, 46 per cent of which occurred in Asia and the Pacific, largely shared by South Asia (Zhao and others, 2021). The health impacts of extreme heat can force schools to close, affecting educational obtainment for young people, and limit the wage-earning potential of labourers in the informal sector whose livelihoods consist of working outside. Extreme heat can damage crops, thus hurting the economic prospects of rural dwellers, as well as damage physical infrastructure like streets, bridges and railroad tracks that are critical for urban mobility. Costly infrastructure repairs also create additional fiscal burdens on local and national governments.

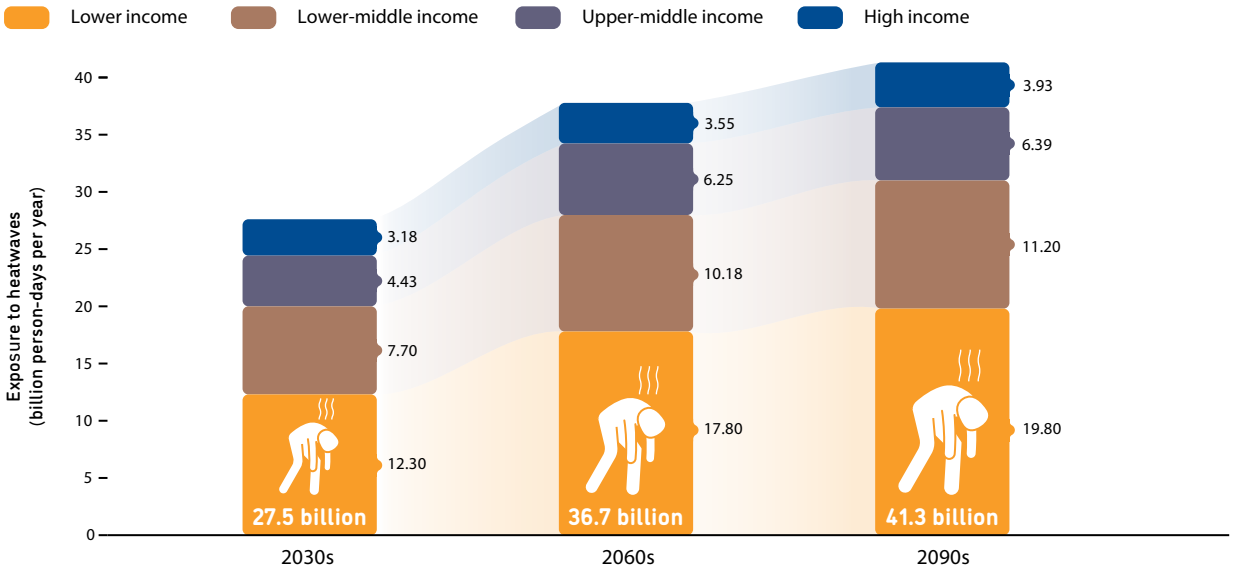
Cities are particularly vulnerable to extreme heat because of the urban heat island effect. The tendency for buildings and paved surfaces to absorb heat can make urban areas hotter than their surroundings,

FIGURE 2.2 **Schematic representation of processes contributing to mid-latitude summer heatwaves**



Source: D. I. V. Domeisen and others, "Prediction and projection of heatwaves", *Nature Reviews Earth and Environment*, vol. 4 (December 2022). Available at https://www.nature.com/articles/s43017-022-00371-z

FIGURE 2.3 **The highest exposure to heat waves is expected in the lowest-income countries**



Source: M. Sadegh, J. Abatzoglou and M. R. Alizadeh, "Heatwaves hit the poor hardest – calculating the rising impact on those least able to adapt to the warming climate", The Conversation, 10 February 2022. Available at https://theconversation.com/heat-waves-hit-the-poor-hardest-calculating-the-rising-impact-on-those-least-able-to-adapt-to-the-warming-climate-175224

further exacerbating the risks of heatwaves. Research conducted on East and South-East Asian cities from 2016–2020 discovered that urban areas were on average 1.6°C warmer than rural areas that were only 2 km away and 2.0°C warmer than rural areas that were 10 km away, with the worst effects felt in Indonesia, Malaysia and the Philippines (Roberts and others, 2023). There are also disparities within cities, as poorer neighbourhoods have more heat-absorbing surfaces and less greenery than more affluent neighbourhoods. The same research found a 7.0°C difference between the hottest and coolest neighbourhoods in Bandung, Indonesia (Roberts and others, 2023).

Managing shocks and stresses

One of the most visible consequences of climate change in the region is rising sea levels, which threaten low-lying coastal areas and small island nations. Countries, such as Bangladesh, the Philippines and Viet Nam, along with island States, like Kiribati and Tuvalu, face the dual threats of coastal erosion and saltwater intrusion. These phenomena jeopardize agriculture, drinking water supplies and housing, potentially forcing millions into displacement. Moreover, the region's economic hubs, such as Bangkok, Jakarta and Manila, are situated in coastal zones, making them particularly susceptible to flooding and storm surges. The loss of infrastructure and economic productivity compounds the region's vulnerability to disasters.

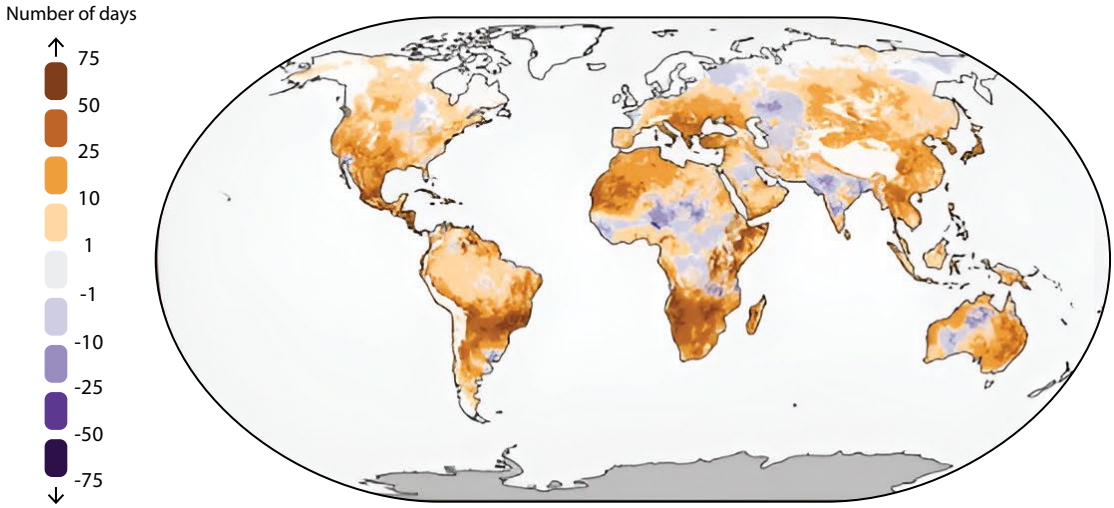
Climate change has also led to an increase in the frequency and intensity of tropical cyclones, typhoons and monsoons. Warmer ocean temperatures fuel stronger storms, which in turn bring heavier rainfall and devastating winds. Countries like the Philippines and Japan experience multiple typhoons annually, causing widespread destruction to homes, infrastructure and livelihoods (World Weather Attribution, 2024). Flooding, both from heavy rainfall and overflowing rivers, has become a recurrent issue in countries like India and Pakistan. In 2022, Pakistan witnessed unprecedented floods, which submerged a third of the country, displaced millions and caused significant economic losses (Pakistan, Ministry of Planning Development and Special Initiatives and others, 2022). The recurring nature of such events hampers recovery efforts and perpetuates cycles of poverty.

Planning for peace in crises

It is important to recognize that urban areas, their planning and their development play critical roles in promoting peace as they become hubs for humanitarian relief and assistance, sites of refuge from civil unrest and disorder, and hubs of services, economic opportunity and education, that can enable reorientation of livelihoods following significant social, environmental or political upheaval either within or adjacent to the region.

Conversely, the failure to adequately cater for urban growth or temporary influxes in post-disaster contexts can mean cities and towns, in and of themselves, become hubs of destabilization. For example, one-quarter of Pacific Island countries have experienced urban riots in the past 15 years (Ride, 2022). Therefore, there is an urgent need to both address

FIGURE 2.4 **Number of days of 'strong heat stress' in 2024, relative to the average for 1991–2020**



Source: Copernicus, "The 2024 Annual Climate Summary: Global Climate Highlights 2024", 2024. Available at https://climate.copernicus.eu/global-climate-highlights-2024

Note: Anomalies in the number of days, relative to the average for the reference period. Feels-like temperature exceeding 32°C based on the Universal Thermal Climate Index (UTCI). Data source: ERA5-HEAT UTCI. Credit: C3S/ECMWF.

urban governance and its associated security and peacebuilding, whilst simultaneously tackle the root causes of civil disobedience through tailored livelihood pathways and localized governance structures aligned with the unique nature of cities and towns.

Whether urban migration is the result of people seeking better access to jobs, services and education, or as a result of climate displacements, urban areas are often ill-prepared to absorb the newcomers, with insufficient housing, jobs and service capacity. This can lead to the expansion of informal settlements, poverty and crime.

As recognized in the Boe Declaration on Regional Security, climate change remains the single greatest threat to the livelihoods, security and well-being of the people living in the Pacific (Pacific Islands Forum, 2018). Mobility and movement have long been central to the resilience of the Pacific Islanders; however, adoption of urban livelihoods and land tenure drastically shifts these cultural norms. The systems that govern and service the cities and towns in the Pacific starkly contrast with this flexibility and resilience. At the same time, climate change is also a threat multiplier across all components of urban systems, driving a deeper sense of long-term insecurity, particularly for those in highly exposed or climate vulnerable urban settlements.

Urban climate insecurity can be addressed through various approaches, all grounded in the principles of human rights, well-being and just climate transitions. Key strategies include enhancing the capacity of urban services and economic systems to accommodate growing populations, decentralizing services and opportunities to improve quality of life, and implementing regional programmes to support climate-induced relocations. These programmes should facilitate the movement of populations from rural to urban areas and from climate-vulnerable urban locations to safer, more resilient ones.

Water management and scarcity

Urban population growth, in Asia and the Pacific, has begun straining the region's water resources. Several countries now face moderate-to-severe water shortages. Per-capita availability of water has declined by almost 80 per cent since the 1950s in South Asia (Neto and Camkin, 2023). The increasing demand is not being met as resources are diminishing. The Himalayan region, often referred to as the 'Third Pole', is experiencing rapid glacier melt due to rising temperatures. This not only threatens the livelihoods of mountain communities but also endangers water resources for hundreds of millions of people across several Asia-Pacific countries who depend on rivers fed by these glaciers, such as the Brahmaputra, Ganges, Indus, Mekong, Yangtze and Yellow rivers (ICIMOD, 2023). Additionally, changing weather patterns, including erratic monsoons, make it difficult for communities to predict and prepare for agricultural cycles, further destabilizing food systems.

At the same time, wasteful consumption and inadequate water management infrastructure has inhibited the ability of the region to do more with less. Water shortages also fuel urban-rural conflict between the needs of the agricultural sector and urban interests, from municipal drinking water to industrial uses. Some countries have embarked on ambitious water diversion schemes from wetter to drier places, but there are significant risks to ecosystems when rivers are engineered away from their natural course (Du and others, 2021).

Finally, extensive ground water extraction and loss of natural buffers has increased the risk of land subsidence. While the threat is most visible in megacities, such as Bangkok, Dhaka, Ho Chi Minh city, Jakarta, Karachi, Manila, Mumbai, Shanghai and Tianjin, similar conditions are affecting secondary and other cities like Chittagong in Bangladesh and Semarang in Indonesia. A 2022 study found that the most rapid land subsidence is occurring in South, South-East and East Asia at a faster rate than sea-level rise, creating even greater urgency to build urban resilience in these centres (Tay and others, 2022).

Air quality

The Ambient Air Quality Database maintained by the World Health Organization (WHO) has found that 99 per cent of the world's population breathes unhealthy air (WHO, 2024). The database tracks ground measurements of annual mean concentrations of nitrogen dioxide (NO_2), a common urban pollutant and precursor of particulate matter and ozone, as well as measurements of particulate matter with diameters equal or smaller than 10 µm (PM10) or 2.5 µm (PM2.5) in 6,000 cities across 117 countries (WHO, 2024). While the database cannot rank cities or provide comparisons between countries, there is evidence that Asia and the Pacific is bearing the brunt of this health crisis. Medical researchers estimate that air pollution is responsible for 6.5 million deaths annually, with 70 per cent concentrated in the region (Fuller and others, 2022).

Some of the top contributors to poor air quality in cities are vehicle and building emissions. After a brief dip in 2020 and 2021, the long-term prospects are for more emissions from privately-owned vehicles. By 2030, vehicle ownership throughout Asia and the Pacific is expected to rise to 1.6 billion, causing a significant increase in emissions unless remedial actions are taken (Gota and Huizenga, 2022). Between 2010 and 2021,

the region saw a 34 per cent rise in transport-related emissions, a trend that threatens to worsen without intervention (ESCAP, 2024).

Buildings contribute between 14 per cent and 33 per cent of direct and indirect CO_2 emissions in Asia and the Pacific, making them one of the most pervasive and difficult sectors to decarbonize in the global economy. According to estimates by the International Energy Agency, 65 per cent of new floor area to be constructed from 2017 to 2050, or about 70 billion square metres, will be in ASEAN, China and India (Zhou, Lee and Tian, 2023).

Plastic pollution and waste management

Asia and the Pacific generates a substantial portion of the world's plastic waste as home to all but one of the top 10 ocean plastic polluters on the planet. While these countries are not necessarily the world's top plastic manufacturers or consumers, their rivers and coastlines accumulate plastic waste as rivers act as conduits transporting plastic into oceans. Coastal areas, due to inadequate infrastructure and high population density, are especially vulnerable to plastic leakage.

Combined, the nine countries in the Asia-Pacific region, listed in figure 2.5, account for 806,000 metric tonnes of ocean plastic waste, the proportion being just over 80 per cent of the global total (Meijer and others, 2021). The United Nations Environmental Programme is currently leading negotiations for a legally binding treaty on global plastic pollution (UNEP/PP/INC.5/INF/1).

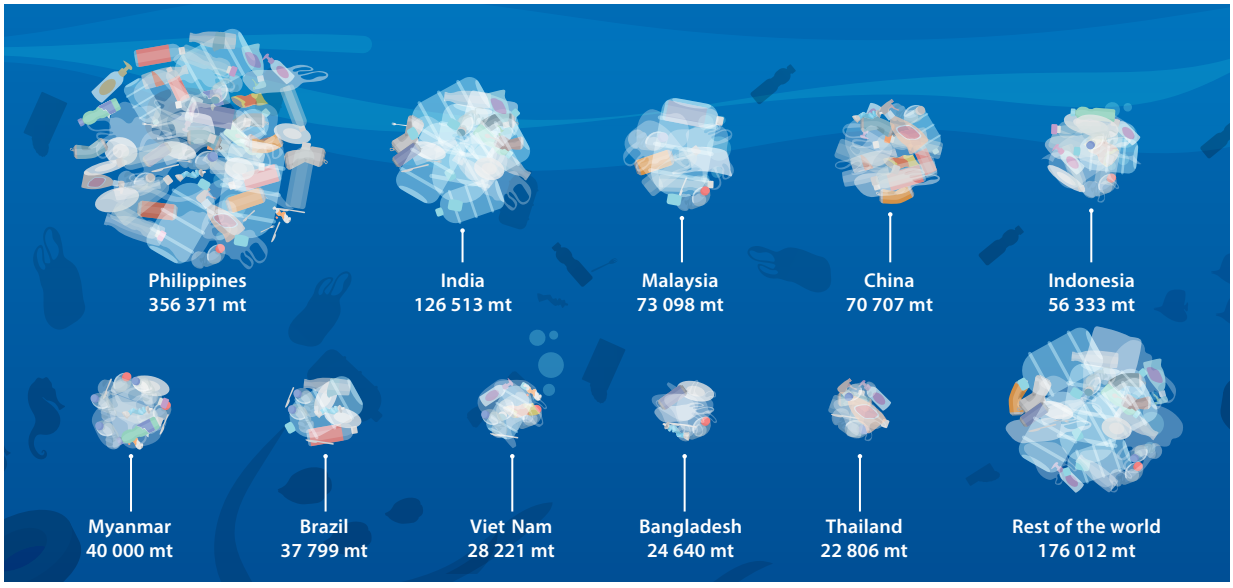
One of the primary causes of plastic pollution in the region is the lack of efficient waste management systems. Many countries in Asia and the Pacific struggle with insufficient waste collection, low recycling rates and an overreliance on landfills. Informal waste sectors dominate in several nations, where scavengers manually collect and recycle materials under hazardous conditions. This system, while contributing to recycling efforts, is neither safe nor sustainable.

Landfills, often poorly managed, exacerbate the problem. Overflowing landfills release microplastics into the soil and water, and burning plastic waste as a disposal method contributes to air pollution, releasing harmful toxins such as dioxins and furans (UNCRD, 2020).

The environmental impact of plastic pollution is profound. Marine ecosystems suffer the brunt of the damage as plastic debris harms marine life through ingestion, entanglement and habitat destruction. Sea turtles, birds and fish often mistake plastic for food, leading to internal injuries, blockages and death. Microplastics, resulting from the breakdown of larger plastic items, infiltrate the food chain, posing risks to marine biodiversity and human health. Plastic pollution also affects terrestrial ecosystems. Improperly discarded plastic clogs drainage systems, leading to flooding in urban areas during heavy rains.

Plastic pollution also has direct and indirect consequences for human health. Microplastics have been detected in drinking water, seafood and even the air, raising concerns about long-term health effects. Chemical additives in plastics, such as phthalates and

FIGURE 2.5 **Major ocean plastic polluters**



Source: L. Zorzi, "How to defeat the plastic tide threatening the ASEAN region's green growth", World Economic Forum, 10 October 2023. Available at https://www.weforum.org/stories/2023/10/defeat-plastic-tide-threatening-asean-green-growth/

Note: Data that were collected and published before March 2019 were used for the calibration, while data published or made available to us after March 2019 were used for the validation; mt = metric tonnes.

bisphenol A (BPA), are known to disrupt endocrine systems and cause other health problems. Waste pickers, who are often from marginalized communities, face health risks due to prolonged exposure to hazardous materials and toxic fumes from burning waste. The lack of protective measures and healthcare access compounds their vulnerability.

Finally, the economic costs of plastic pollution are significant. The tourism industry suffers as littered beaches and polluted waters deter visitors. Fisheries and aquaculture industries face declining productivity due to degraded marine environments. Governments also bear financial burdens in managing cleanup efforts and addressing environmental damages.

2.3 Urban fault lines: Migration, inequality and social justice

Social issues like migration, housing affordability and wealth inequality challenge the social cohesion of cities in Asia and the Pacific. Safe, orderly and regular migration provides opportunities for migrants as well as countries and cities of origin and destination, but irregular migration can intensify urban challenges like slums, social exclusion and inadequate access to housing and services. The Asia-Pacific region has a high rate of intraregional migration, with many moving to urban centres, potentially exacerbating existing social strains (ESCAP and others, 2024).

Voluntary migration

Economic opportunity is a pull factor that drives people to migrate. Today, one-third of migrants, globally, come from Asia and the Pacific, while the region is home to 24 per cent of the world's migrants, some 66.6 million people (ESCAP and others, 2024). In 2020, the three main countries of destination in the region were the Russian Federation (hosting 11.6 million migrants or 17 per cent of all foreign-born people in Asia and the Pacific), followed by Australia (7.7 million/12 per cent) and Türkiye (6.1 million/9 per cent). Economic and demographic developments in the Republic of Korea have made it a destination for labour migrants, with the number of migrants increasing steadily between 1990 and 2020 (from an estimated 43,000 to 1.7 million migrants) (ESCAP and others, 2024).

Remittances, money sent by migrants back to their home countries, account for a significant international financial flow in Asia and the Pacific. In 2023, four of the top five recipient countries for remittances among low- and middle-income countries were from the region: India ($120 billion), China ($50 billion), the Philippines ($39 billion) and Pakistan ($27 billion). India has been the largest recipient of remittances since 2008. In terms of remittances as a share of gross domestic product, by contrast, the three of the top five recipients in 2023 were from Asia and the Pacific: Tonga (41 per cent), Tajikistan (39 per cent) and Samoa (28 per cent) (World Bank Group, 2024).

Such flows of people and money have profound implications for the region's cities, from exposing vulnerabilities to creating more prosperity. The movement of educated workers can cause brain drains in origin cities but add knowledge capital to host cities. Large influxes of migrants in a short period of time can lead to overcrowded housing stock in host cities and depopulation in origin cities. But migration can also revitalize decaying urban neighbourhoods in host cities and remittances can shore up local economies in origin cities. Given the potentially varied effects, addressing migration requires coordinated action between national and local governments.

Forced migration

Forced displacement is also on the rise in the region, with 17.5 million people fleeing conflict in 2023, predominantly in Afghanistan and Myanmar (IOM, 2024a). The number of migrants in Türkiye has more than quadrupled since 2010, a result of the conflict in the Syrian Arab Republic (ESCAP and others, 2024). In 2023, another 12.6 million people were newly displaced by disasters, comprising 41 per cent of the global total for disaster displacement. In the last decade, 225 million people have faced internal displacement due to disasters in the region, while another 88.9 million people may be forced to move by 2050 due to slow-onset disasters like sea-level rise, ocean acidification and increasing temperatures (IOM and others, 2024). As a result of these factors, countries like Bangladesh, the Islamic Republic of Iran, Pakistan and Türkiye host large refugee and asylum-seeking populations. Forced displacement exposes urban development vulnerabilities in the provision of services like housing, water, energy and waste collection.

There is an international road map for addressing this issue in the Global Compact for Safe, Orderly and Regular Migration, adopted in 2018 as a resolution by the United Nations General Assembly (IOM, 2024b). The Mayors Migration Council serves as the subnational hub for international leadership on migration and cities, although participation from Asia and the Pacific is minimal compared to other regions. Cities from Armenia, Australia, Nepal, New Zealand, Pakistan, the Philippines and Türkiye formerly served as coalition cities that engage diplomatically on migration or as action cities that participate in the council's core programmes. One city, Dhaka North, remains active as one of the leadership cities that serve as the council's primary ambassadors (Mayors Migration Council, n.d.).

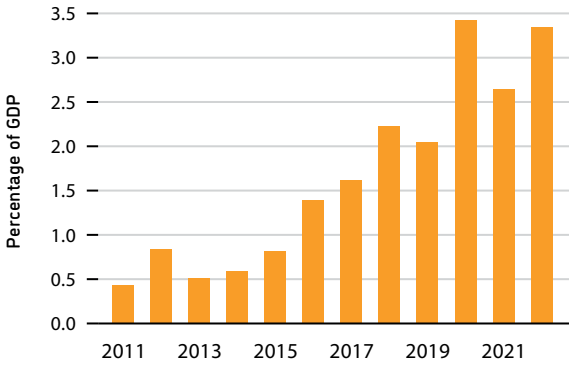
BOX 2.2 Bhutan: A Mindful City

The Gelephu Mindfulness City (GMC), a ground breaking initiative in Bhutan, is an innovative urban development project that integrates economic growth with mindfulness, holistic living and sustainability. This initiative aims to reverse the emigration trend of working-age population from Bhutan and solve the challenge of youth unemployment that has been rising from 20.9 per cent in 2021 to 28.6 per cent in 2022.[b, c]

With a vision to create a vibrant economic hub and gateway for tourists, the city is also designed to attract young professionals and foster local employment. By offering new opportunities, particularly in sectors such as bioscience, education and renewable energy, the GMC seeks to reinvigorate the local economy and encourage the youth to build their futures within Bhutan.[d] This ambitious project aligns with the Gross National Happiness (GNH) philosophy of Bhutan,[e] emphasizing sustainable development and cultural preservation while addressing the pressing issue of urban saturation in existing cities like Thimphu and Phuentsholing.[f]

The GMC is being developed under a Special Administrative Region (SAR) framework, which grants it executive autonomy and the ability to enact its own laws.[g] The purpose is to encourage collaboration between national and local governments, as well as partnerships with private entities and international organizations. The Government's commitment to enhancing connectivity, such as the construction of an international airport and improved transportation links with neighbouring regions, further supports the city's goal of becoming a hub for economic activity while ensuring that development respects Bhutanese cultural values and environmental integrity.[h] The GMC serves as a prototype for integrating economic growth with environmental sustainability and social well-being.

FIGURE 2.6 **Bhutan - Workers' remittances and compensation of employees, received (% of GDP) 2011–2022**



Source: Trading Economics, "Bhutan – Workers' remittances and compensation of employees, received (% of GDP)", 2025. Available at https://tradingeconomics.com/bhutan/personal-remittances-received-percent-of-gdp-wb-data.html

FIGURE 2.7 **The exterior of Gelephu's planned health-care center**

Source: M. Pitrelli, "Bhutan's new 'Mindfulness City' is massive – with plans showing a city unlike any other in the world", *CNBC Travel*, 6 February 2024. Available at https://www.cnbc.com/2024/02/07/bhutans-gelephu-mindfulness-city-heres-what-it-may-look-like.html

a T. Choki and A. Etang, "Understanding the challenges and constraints of Bhutanese youth in accessing employment opportunities", World Bank Group, 30 November 2023. Available at https://documents1.worldbank.org/curated/en/099122324072013661/pdf/P1795941d6be490481ad6a1d7d7e19394f9.pdf

b World Bank Group, "Personal remittances, received (% of GDP)", 2025. Available at https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS

c Trading Economics, "Bhutan – Workers' remittances and compensation of employees, received (% of GDP)", 2025. Available at https://tradingeconomics.com/bhutan/personal-remittances-received-percent-of-gdp-wb-data.html

d Gelephu Mindfulness City, "His Majesty's address to the nation on National Day 2024", 2024b. Available at https://gmc.bt/nd2024speech/

e M. Pitrelli, "Bhutan's new 'Mindfulness City' is massive – with plans showing a city unlike any other in the world", *CNBC Travel*, 6 February 2024. Available at https://www.cnbc.com/2024/02/07/bhutans-gelephu-mindfulness-city-heres-what-it-may-look-like.html

f Asian Development Bank (ADB), "Sector assessment (summary): Water and other urban infrastructure and services", Secondary towns urban development project (RRP BHU 42229), n.d. Available at https://www.adb.org/sites/default/files/linked-documents/42229-016-ssa.pdf

g Gelephu Mindfulness City, "Gelephu Mindfulness City enacts 'GMC Law No. 1 of 2024' to drive economic growth and innovation", 26 December 2024a. Available at https://gmc.bt/gmc-law1/

h Gelephu Mindfulness City, "Newsletter", 2024c. Available at https://gmc.bt/engage/

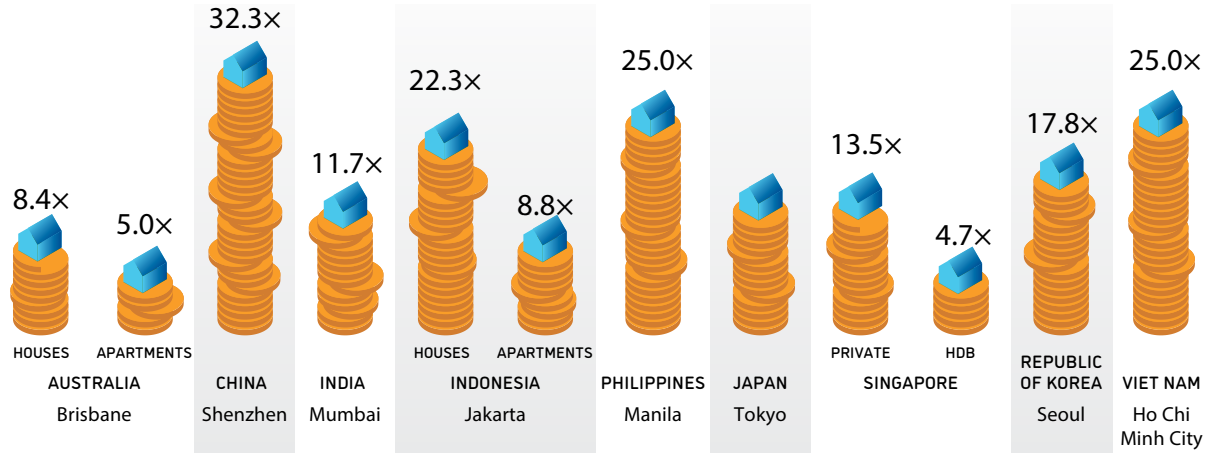
Housing affordability

Commercial towers may be the signature of an urban skyline, but most urban property is residential. A well-functioning housing market is critical for the stability of any urban economy, and on that score the Asia-Pacific region shows wide variation. According to the Urban Land Institute's *2024 Asia Pacific Home Attainability Index*, many cities have price-to-income ratios that exceed five, the ratio that many economists consider the maximum healthy amount for buyers to afford homeownership (figure 2.8) (Urban Land Institute, 2024). The median price of a flat in Perth, Australia is 3.9 times the median annual household income, the lowest of any city surveyed. By contrast, the price-to-income ratio in Shenzhen, China is 32.3, the highest of any city surveyed (Urban Land Institute, 2024).

Rental housing is most affordable in cities in the Republic of Korea and Japan that are outside the national capitals of Seoul and Tokyo, respectively, with rents running 14–25 per cent of median household income (figure 2.9) (Urban Land Institute, 2024). Economists consider households that spend more than one-third of their income on housing to be 'cost burdened'. In the Republic of Korea and Japan, national governments have enabled and encouraged local governments to permit new private sector construction of dense housing within a compact land-use pattern while the public sector has invested in extensive transport links that allow people to move quickly across a large geography in order to access jobs and education (Appelbaum, 2023).

At the other end of the housing spectrum is the informal sector. Despite global success in meeting the Millennium Development Goal target to improve the lives of 100 million slum dwellers by 2020, the planet is far from realizing the vision of "cities without slums" as first articulated by Nelson Mandela in 1999 (Cities Alliance, n.d.). Current projections show the slum population forecasted to increase from less than 500 million in 2020 to 1.52 billion in Southern and Central Asia by 2050, while East and South-East Asia will see a more modest rise from approximately 350 million to 465.4 million dwellers (UN-Habitat and others, n.d.). Half of global slum growth is projected to take place in eight countries, three of which are in Asia and the Pacific: India, Pakistan and the Philippines. Over half of all urban dwellers in Afghanistan, Bangladesh, the Lao People's Democratic Republic, Myanmar and Tuvalu live in slums (ADB, 2024).

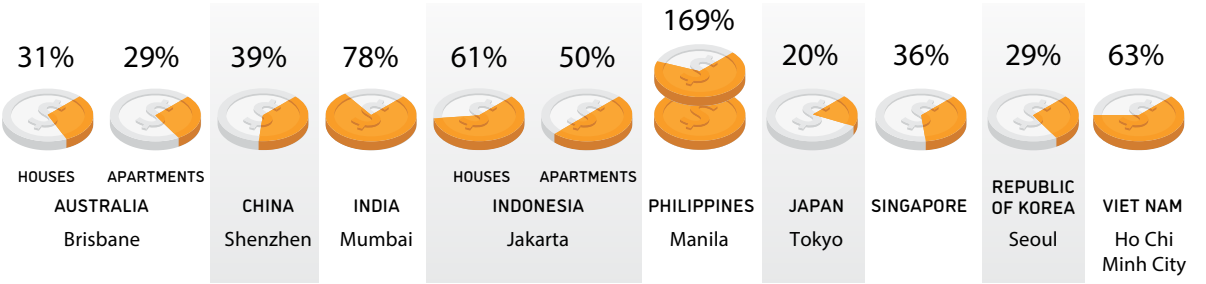
FIGURE 2.8 **Median/average home price compared with median annual household income, 2023**



Source: Urban Land Institute, *2024 ULI Asia Pacific Home Attainability Index* (Hong Kong, 2024). Available at https://knowledge.uli.org/-/media/files/research-reports/2024/2024-uli-asia-pacific-home-attainability-index-report.pdf

Note: HDB refers to Singapore's housing estates managed by the Housing and Development Board.

FIGURE 2.9 **Median/average monthly rent compared with median monthly household income, 2023**



Source: Urban Land Institute, *2024 ULI Asia Pacific Home Attainability Index* (Hong Kong, 2024). Available at https://knowledge.uli.org/-/media/files/research-reports/2024/2024-uli-asia-pacific-home-attainability-index-report.pdf

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CHAPTER 3

Unlocking the future: Tapping into the urban potential of Asia and the Pacific

It has been estimated that developing countries will require 2.8 per cent of their GDP for new infrastructure investment in urban areas, and an additional 2 per cent of GDP for maintenance

Although Asia and the Pacific faces vulnerabilities, one way the region can contribute toward its efforts to achieve sustainable development is to unlock the urban opportunity. There are pathways in the areas of finance, social inclusion and climate mitigation and adaptation that will enable policymakers in the region to make progress toward the SDGs and the Paris Agreement, as well as opportunities for policy experimentation and data collection to improve urban governance.

3.1 Financing the future: Innovative solutions for urban investment

Financing is crucial for realizing sustainable urban transformation, yet local governments face challenges in revenue mobilization. Keeping up with infrastructure investment needs is perhaps the major financial challenge facing metropolitan cities. It has been estimated that developing countries will require 2.8 per cent of their GDP for new infrastructure investment in urban areas, and an additional 2 per cent of GDP for maintenance (Bahl, 2018, p. 26). Asia and the Pacific requires an annual investment of $1 trillion annually for climate mitigation through 2030 (Press-Williams and others, 2024). If these projections are only approximately correct, they are well beyond the reach of most developing countries, where public resources are limited. To that end, it is vital for national and local governments to strike the right balance of longstanding financing mechanisms like intergovernmental transfers and municipal taxation as well as newer, more innovative financing mechanisms like land-value capture and green bonds (box 3.1). All are important pathways for supporting ambitious urban development projects.

BOX 3.1 Ahmedabad, India: Municipal green bond

International financial markets are a ripe source of capital for revenue-strapped local governments. In many developed countries, most notably Japan in Asia and the Pacific, municipalities are creditworthy and can borrow money by issuing bonds. However, national governments frequently block local governments from bond issuance because of the risk of assuming the debt if the municipality were to default on the loan. In 2017, the Securities and Exchange Board in India relaxed the rules governing municipal bonds to encourage more investment in so-called green bonds focused on environmental infrastructure improvements. Two years later, the Ahmedabad Municipal Corporation seized on the opportunity after improving its credit rating to AA+ following years of responsible budgeting and fiscal surpluses, including four previous municipal bond issuances. This experience proves that allowing access to bond markets rewards good governance. Ahmedabad, India raised INR 200 billion ($26.2 million) for green infrastructure projects addressing waste management and water supply, especially cleaning up the Sabarmati River. Issue of the bond, with a five-year maturity period and 8.7 per cent interest rate, was oversubscribed, offering evidence that capital markets are eager to invest in sustainable urban development.

At the same time, debt sustainability has become a much greater development concern for developing Asia-Pacific countries in the last decade, especially in South Asia where all countries except for India are under some sort of sovereign debt pressure. For many developing countries, even the central government has weak debt management capacity. Strengthened public debt management with centralized debt management offices and oversight procedures under the Ministry of Finance are prudent steps for any government embarking on municipal bonds.

Source: ICLEI-South Asia, *Urban Green Growth Strategies for Indian Cities*, vol. 1 (Delhi, 2015). Available at https://southasia.iclei.org/wp-content/uploads/2021/09/Ahmedabad-Green-Municipal-Bond-Case-Study-2.pdf

Intergovernmental transfers

Over the last two decades, fiscal decentralization policies gave local governments in general, and municipal governments in particular, expanded expenditure responsibilities, but these additional responsibilities have not been matched with sufficient increases in budgetary allocations or the legal authority to collect their own revenues. Central and state governments have often been reluctant to delegate revenue collection authority to municipal governments for various reasons, including local capacities and necessary fiscal reforms, and a preference for shaping local government priorities according to national or central government objectives.

Consequently, intergovernmental transfers are still the most important source of funds for local governments in many countries, particularly low-income and low middle-income countries. While they are an essential source of revenue for local governments, intergovernmental transfers can be problematic. The amount and timing of transfers may be affected by economic conditions and policy changes by other higher levels of government irrespective of the needs and timing of local governments. For example, transfers may be insufficient to address local needs, especially for infrastructure, or received too late in the fiscal year to be fully spent. Transfers can be conditional (earmarked) or unconditional. The former generally require local governments to spend the funds they receive according to guidance or requirements of the upper levels of government and often require local government matching funds.

Municipal taxation

There are several advantages of empowering local governments to raise revenues through municipal taxation. First, the standard of accountability of government officials is much higher when they must finance some public services with taxes on residents. The result of this accountability may be a better quality of public services, a package of services that fits local preferences and a greater willingness to pay taxes by citizens. This greater willingness to pay is likely to result in increases in the overall rate of revenue mobilization by governments, which would be highly beneficial in developing countries in Asia and the Pacific.

Property tax is widely regarded as the most appropriate principal subnational government tax revenue source. In OECD countries, it contributes on average 2 per cent of GDP and is also believed to create greater pressure on the accountability of subnational government spending. It has many desirable features: approximating a benefit levy for some local services, being not regressive in its distribution of burdens, imposing less harmful distortive effects than consumption taxes, possessing significant revenue potential and having a potential of cost-effective administration. But property tax has so far performed poorly in developing countries, which on average collect only 0.6 per cent of GDP and often depend more on one-time taxes on property development and transfers instead of recurrent taxes on property ownership.

There is no 'one size fits all' for property tax reform, yet there are some basic principles to guide property taxation:

- Determine the primary role the property tax will play in national urban policy
- Do an audit of the legal underpinnings of the property tax
- Provide incentives to stimulate property tax revenue mobilization
- Set an optimal division of property tax administration between higher and lower levels of government
- Ensure that the infrastructure for property tax administration is sufficient
- Provide local governments greater taxing power
- Strengthen collection rates to increased revenues
- Concentrate their reform and revenue mobilization efforts on the big cities
- Focus on a comprehensive system for taxing all land and real property

Municipal bond financing

Municipalities of developing countries, particularly those of large cities, face two prerequisites to access bond financing. The first one is an institutional framework for municipal finance that includes not only the decentralization of spending responsibilities but also revenue raising authority and the capacity to incur debt. The second prerequisite is the development of national securities markets, including effective regulations for listings and financial disclosures, the presence of exchanges for primary and secondary bond market activity, and the use of ratings in those markets (Lizon, 2023).

With these two prerequisites in place, the issue of municipal bonds requires additional efforts for municipalities to build their creditworthiness, have a robust capacity to demonstrate predictable revenue streams and possess systems for efficient revenue collection, good financial planning and management, and the ability to prepare and execute a bankable pipeline of projects (Lizon, 2023). These are achievable and worth pursuing by municipal governments of large cities, as they not only can issue bonds at a suitable

scale but also have a large revenue base to secure bond payments. However, they are likely to be beyond the capacities of municipal governments of smaller cities.

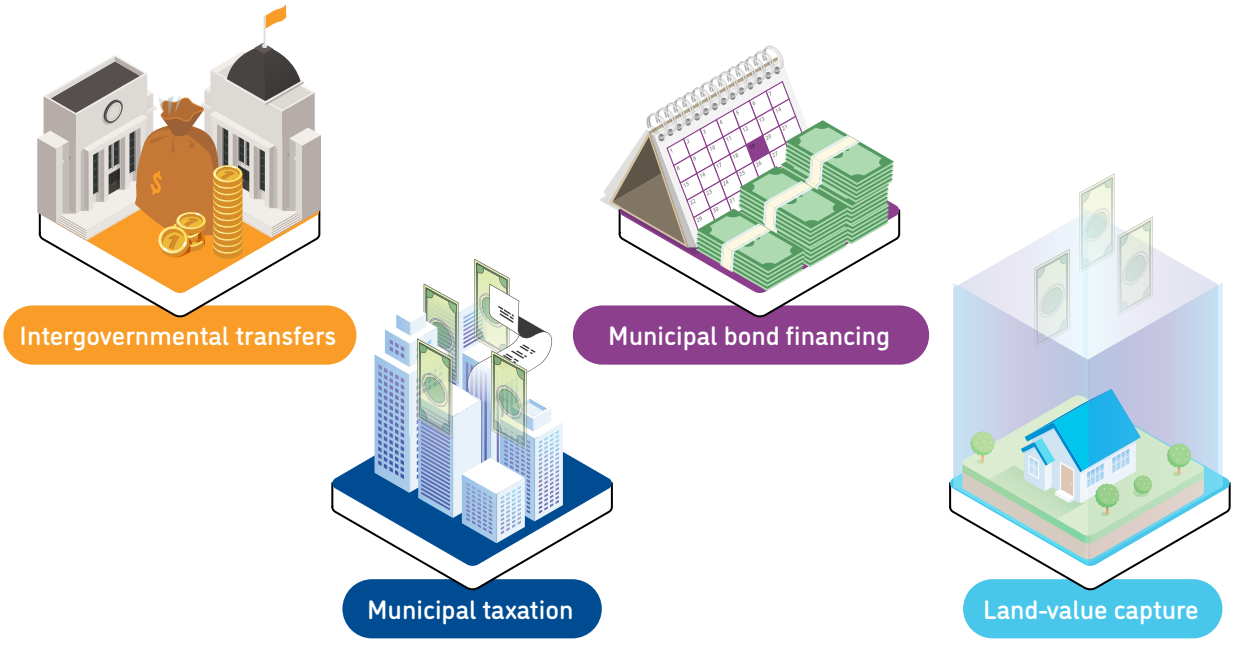
To facilitate access to bond finance for municipalities of smaller cities and towns in developing countries to finance their infrastructure investment needs, pooled financing mechanisms (PFM) can be an option worth considering. PFMs facilitate cooperation between local authorities to finance local infrastructure investments through external debt sources. The benefits of PFMs include access to capital markets to small- and medium-sized local authorities, lower borrowing and processing costs, reduced risk for investors through diversification and the provision of technical and financial advice to issuers, capacity-building and increased transparency (Andersson, 2015). A successful example of a PFM is Japan's Finance Organization for Municipalities (JFM) as illustrated in box 3.2.

Land-value capture

Urbanization increases land values and local governments set the rules of the game that enable urbanization, whether through government action like building new transport links or authorizing new construction in previously underbuilt areas. There is subsequently a strong case for the public sector to accrue an increment of the increase in land values that results from government action. For example, when the public sector invests in new infrastructure, like parks and transport links, it can raise the land value in the immediate vicinity. Land-value capture can thus provide an important complement to property taxes in municipal revenue mobilization. Value capture can vary in terms of the fiscal instruments used, including betterment charges (special assessments on beneficiaries to recover the cost of a project), sales of development rights (payment by developers to compensate government for a change in land use that will enhance values or incur costs), land adjustment fees (recovery from land owners of costs of expansion of urban settlements into the urban fringe), and certificates of additional construction bonds (development rights sold by auction to private firms). In countries where sizable public ownership of land is present, land-value capture can also take the form of public land lease.

Land-value capture tools, such as land pooling, can significantly ease the pressure on governments to fully finance infrastructure delivery. They also represent a potentially useful alternative to solving traditional land acquisition issues, by facilitating public participation in future urban planning. The investment cost of a land pooling pilot project in Tra Vinh, Viet Nam was VND 25 billion ($1.08 million) in order to finance upgrades to the road network in a flood-prone area covering 24 hectares of land, 480 land users and 1,000 land parcels (Tuan, 2023). In Naya Bazar, Nepal, 50 per cent of a project to improve road infrastructure was covered through land pooling, benefitting about 500 households and the value of the 40 hectares of land also doubled after project completion (Faust and others, 2020).

FIGURE 3.1 **Innovative solutions for urban investment**



Source: ESCAP.

BOX 3.2 Japan: The Japan Finance Organization for Municipalities (JFM)

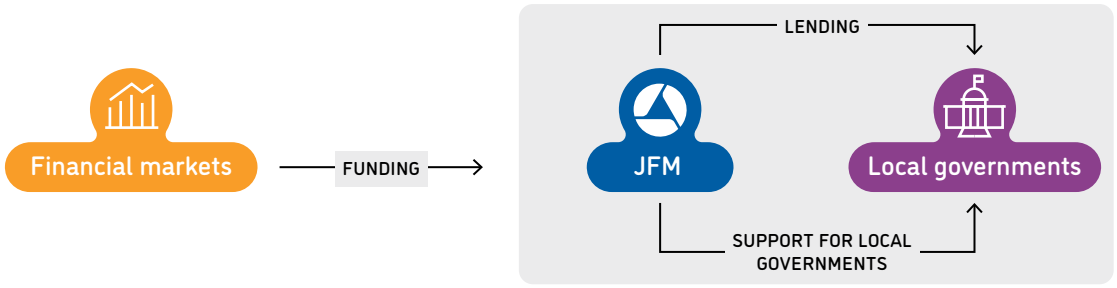
Municipalities in Japan face considerable fiscal challenges due to disparities in tax capacities and a rigid local tax system, leading to a substantial vertical fiscal gap between central and local governments.[a] This gap necessitates effective mechanisms for local governments to secure funding for public projects. The Japan Finance Organization for Municipalities (JFM) addresses these challenges by offering financial support that enables municipalities to undertake critical infrastructure projects while maintaining fiscal balance.[b]

The JFM plays a pivotal role in facilitating access to municipal bond finance in Japan, primarily aimed at supporting municipalities. With strong credit ratings (S&P: A+, Moody's: A1, R&I: AA+ as of March 2023), JFM can access funding from financial markets and banks at low interest rates and provide stable and low-interest funds to local governments. JFM primarily utilizes the Local Government Borrowing Programme (LGBP) as its funding source.[c]

Established under national law, the main objective of JFM is to provide long-term, low-cost financing to municipalities, thereby enhancing their financial stability and capacity to deliver essential public services. As of March 2022, JFM had outstanding loans amounting to approximately JPY 23.5 trillion ($192.4 billion), with over JPY 6.8 trillion ($56.1 billion) specifically allocated to sustainable projects, particularly in water and wastewater management.[d]

In terms of economic impact, support from JFM drives economic development by creating jobs and stimulating growth through infrastructure improvements, supported by environment, social and governance (ESG) bonds within the green bond framework based in the International Capital Market Association (ICMA). The ICMA conducts an annual compliance review and has received a second-party opinion from Moody's.[e] Other sectors that benefit from JFM support include local road development, transport, schools, hospitals, housing and tsunami evacuation towers to improve social well-being.

FIGURE 3.2 **Basic mechanism of the Japan Finance Organization for Municipalities (JFM)**



Source: Japan Finance Organization for Municipalities (JFM), "Basic mechanism of JFM", n.d. Available at https://www.jfm.go.jp/en/index.html

The development of the JFM solution stemmed from a comprehensive understanding of the fiscal challenges faced by local governments in Japan. The process began with the recognition of a significant vertical fiscal gap between central and local governments, which necessitated a structured approach to municipal financing. The JFM was established under national law, specifically designed to provide long-term, low-cost loans to local governments, aligning with national mandates aimed at improving public service delivery and infrastructure development.

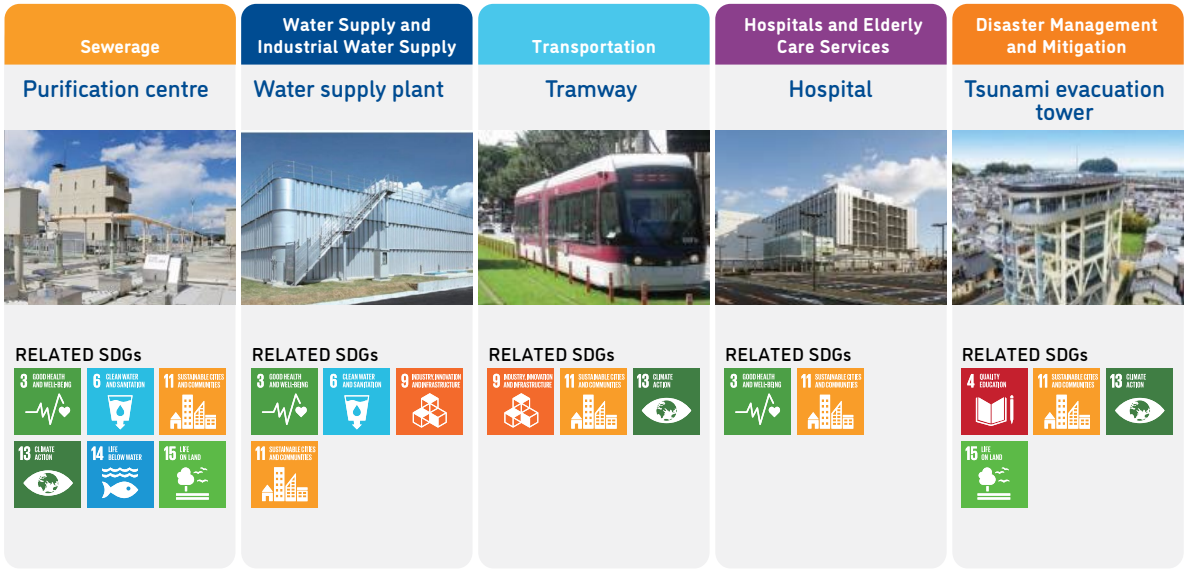
The JFM's solution is deeply rooted in both local and national government priorities. Local governments formulate their financing needs based on their mandates to provide essential services such as education, public health and infrastructure maintenance. Simultaneously, JFM operates under the Local Government Borrowing Programme (LGBP), which is a national framework that specifies borrowing guidelines and funding sources for municipalities. This dual alignment ensures that local projects are not only financially viable but also contribute to national policy objectives.[f]

BOX 3.2 Continued

The JFM presents a compelling model for municipal financing that can be replicated in other Asia-Pacific countries, particularly with the recent framework aimed at issuing green bonds in domestic markets. JFM's shift toward local market issuance aligns with the growing demand for sustainable financing solutions tailored to local needs.[g] This localized approach not only enhances accessibility but also fosters a deeper connection between financing and community priorities.

Central to JFM's success is its robust governance structure, which includes a Sustainability Working Group that actively involves government participation. This group is responsible for evaluating and selecting projects based on sustainability criteria, ensuring that funded initiatives align with both local and national mandates.[h] The involvement of a sustainability committee, chaired by the JFM president, further emphasizes the organization's commitment to integrating sustainability into its financing strategies.

FIGURE 3.3 **The Japan Finance Organization for Municipalities' (JFM) SDGs-related lending operations**



Source: Japan Finance Organization for Municipalities, "JFM Green Bond Impact Report 2023" (Japan Exchange Group, 2023). Available at https://www.jpx.co.jp/english/equities/products/tpbm/green-and-social-bonds/b5b4pj00000247t6-att/JFM_ImpactReport_2023.pdf

a Japan Finance Organization for Municipalities (JFM), "Japan Finance Organization for Municipalities (JFM) Green Bond Framework", December 2022. Available at https://www.jpx.co.jp/equities/products/tpbm/green-and-social-bonds/nlsgeu00000335h2-att/JFM_Framework_Dec2022a.pdf

b Y. Hyotani, "Japan Finance Organization for Municipalities", October 2012. Available at https://www.chihousai.or.jp/english/07/pdf/2012_03_jfm.pdf

c Japan Finance Organization for Municipalities (JFM), "Japan Finance Organization for Municipalities (JFM) Green Bond Framework", December 2022. Available at https://www.jpx.co.jp/equities/products/tpbm/green-and-social-bonds/nlsgeu00000335h2-att/JFM_Framework_Dec2022a.pdf

d Japan Finance Organization for Municipalities, "JFM Green Bond Impact Report 2023" (Japan Exchange Group, 2023). Available at https://www.jpx.co.jp/english/equities/products/tpbm/green-and-social-bonds/b5b4pj00000247t6-att/JFM_ImpactReport_2023.pdf

e Japan Finance Organization for Municipalities (JFM), "Japan Finance Organization for Municipalities: Base Prospectus", August 2021. Available at https://dl.bourse.lu/dl?v=WXwWYRZ4kwVZCUK9zieO0LkGQBhazkjaMHotIn2kDJvxnKsyxadZNw0kwnxNtSmsCX4O5hqWolBVI+sQH3muB8tozJ8NWB6wvVUCt20N9UxdDqioUKSKd7g2JZGGU1ukMzhR+U1Ct+uiJYa54%2F2VpzKEQyBmJeg7cQbHelkAX09%2FV5qb0cRK823zxzJDTEQ+.

f Japan Finance Organization for Municipalities, "JFM Green Bond Impact Report 2023" (Japan Exchange Group, 2023). Available at https://www.jpx.co.jp/english/equities/products/tpbm/green-and-social-bonds/b5b4pj00000247t6-att/JFM_ImpactReport_2023.pdf

g Japan Finance Organization for Municipalities (JFM), "Japan Finance Organization for Municipalities (JFM) Green Bond Framework", December 2022. Available at https://www.jpx.co.jp/equities/products/tpbm/green-and-social-bonds/nlsgeu00000335h2-att/JFM_Framework_Dec2022a.pdf

h Japan Finance Organization for Municipalities, "JFM Green Bond Impact Report 2023" (Japan Exchange Group, 2023). Available at https://www.jpx.co.jp/english/equities/products/tpbm/green-and-social-bonds/b5b4pj00000247t6-att/JFM_ImpactReport_2023.pdf

3.2 Inclusivity matters: Gender, age, disabilities and social equity in cities

Fostering inclusive communities is vital for addressing social disparities in urban areas. Nearly every facet of urban life has a social inclusion dimension, including access to basic services, economic empowerment and employment, and affordable housing and land rights.

Women, particularly those in low-income households, depend heavily on accessible healthcare, education, sanitation and childcare services. Inadequate access to these services in cities affects women disproportionately, impacting their health, economic stability and ability to engage in the workforce. Women often work in informal, low-wage, or care economy roles without sufficient protections or benefits. Sustainable urban development must include policies and infrastructure that create economic opportunities, including support for women entrepreneurs, skill-building programmes and spaces that support work-life balance, such as affordable childcare and flexible workspaces.

Women, especially those who are single, elderly, or head of households, face greater challenges in accessing affordable housing and secure land tenure. Ensuring women's rights to housing and land promotes stability and resilience for households and supports inclusive, sustainable urban development.

The world is also in the midst of the United Nations Decade of Healthy Ageing (2021–2023) with the goal of improving the health and well-being of older people and combating ageism during the last 10 years of the SDGs.

Inclusive mobility

Transport networks are the circulatory system of cities. If people cannot easily move around a city, then they will not be able to participate in the labour market, send their children to school, seek medical attention, go shopping, attend a cultural event or relax in a park.

Women, older persons and persons with disabilities face specific mobility barriers that can hinder their ability to access the benefits of urban life and contribute to society. Women can face harassment on public transport, which cities like Delhi, Kathmandu and Manila have addressed with the introduction of women-only rail carriages and buses. They also tend to travel at off-peak hours more than men and less in a tradition pattern between a residential periphery and a city centre job. Persons with disabilities and older persons have a wide range of accessibility needs such as access to information on transportation schedules and destinations, using ticket vending machines as well as seating in transportation and human assistance.

BOX 3.3 Data innovation for SDG tracking: Leave no one behind approach

Discrimination based on aspects of an individual's identity, such as gender, age, disability, tenure status, place of residence, among others, leads to exclusion and marginalization. Analyzing disaggregated quantitative data and qualitative information is crucial for identifying who is being left behind and why. To understand why certain people and groups are being left behind, it is essential to examine the underlying issues and root causes, which may be structural and perpetuate long-term marginalization and exclusion. At the same time, this analysis must also account for the fact that marginalized groups are often hard to reach in existing data due to their exclusion and lack of voice.

In 2024, ESCAP applied a machine-learning algorithm to household survey data in five countries in order to identify gaps in the SDGs at the national and local levels across Asia and the Pacific. The analysis uncovered relevant gaps and inequities, like determining which cities in Bangladesh have the largest and smallest range of exposure to disasters. Another data set revealed how socioeconomic status correlates with access to clean fuel in Ulaanbaatar, where air pollution is a chronic problem. A third analysis showed how no household is being left behind in Koror, Palau for water and sanitation, but that gaps remain on Internet access.

This application of the latest innovations in data analysis help translate static census data sets and household surveys into dynamic tools for addressing inequalities.

Source: Economic and Social Commission for Asia and the Pacific (ESCAP), "Localizing Sustainable Development Goals to leave no one and no place behind in Asia and the Pacific: SDG Localization Series", policy brief, 1 October 2024d. Available at https://www.unescap.org/kp/2024/localizing-sustainable-development-goals-leave-no-one-and-no-place-behind-asia-and-pacific

No matter how robust a city's transport system, if people cannot reach the network then they cannot use it. The so-called 'first and last mile problem' describes the challenge that urban dwellers face in travelling between a public transport stop and their final destination at both the start and end of their journey. According to the latest UN-Habitat SDG data, the Asia-Pacific region is performing below the global average for access to public transport within 500 metres with a regional average of 44 per cent (ESCAP, 2024c). These longer distances to public transport are an obstacle for women, older persons and persons with disabilities when they face poorly maintained sidewalks and obstacles like stairs, kerbs and roadways without safe pedestrian crossings as well as caregiving responsibilities.

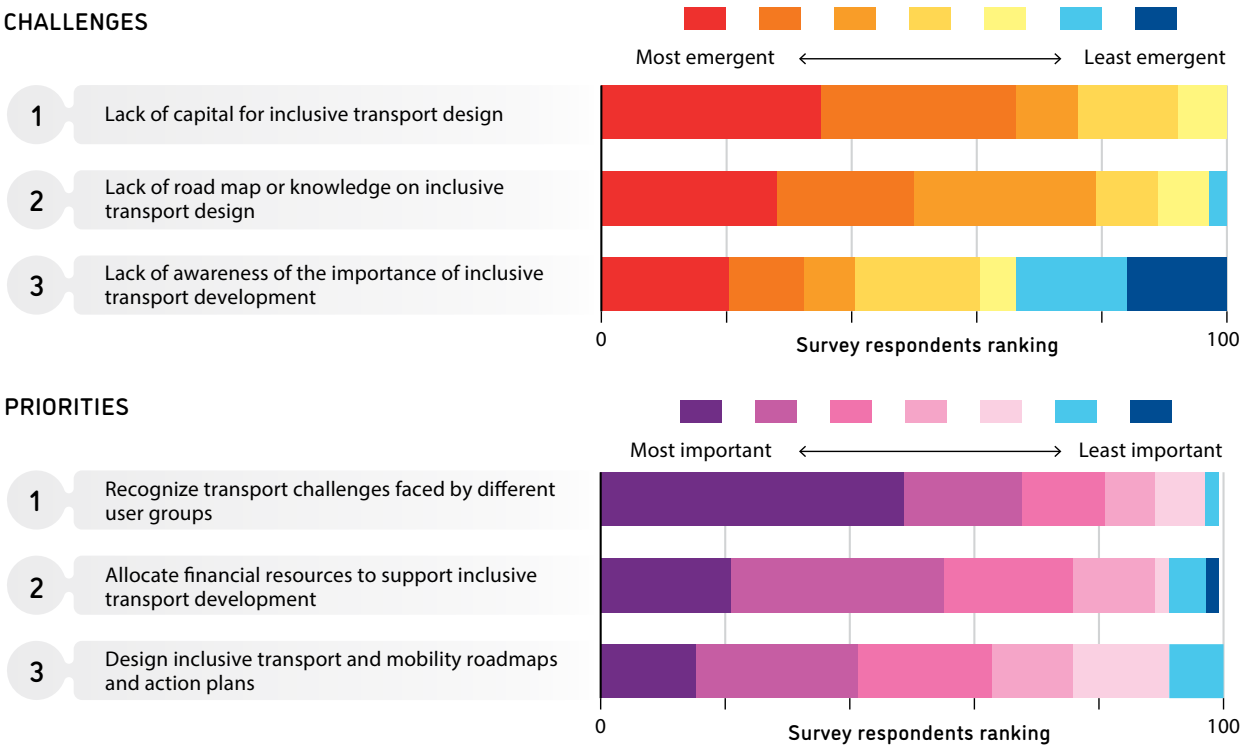
ESCAP published guidelines on enhancing social inclusion and innovations in urban transport systems in Asia-Pacific cities in August 2024 for adoption at the Committee on Transport's meeting in November 2024 (ESCAP, 2024g). The guidelines were based on four urban transport national assessments conducted in Azerbaijan, the Lao People's Democratic Republic, Mongolia and Nepal. They resulted in the following conclusions: (a) conduct timely data collection and analysis; (b) mainstream social inclusion in urban transport; (c) integrate transport innovation for social inclusion; (d) enhance capacity-building and awareness-raising; and (e) promote inclusive consultation and collaboration (ESCAP/CTR(8)/6).

Leadership representation

Despite global commitments, women remain underrepresented in leadership positions and decision-making processes related to urban development. Inclusive governance structures that ensure women's participation can result in policies and urban designs that better reflect women's needs and contribute to more equitable and responsive cities. In the 2022 Sustainable Cities Index, half of the top 10 sustainable cities were led by female mayors (Torrie and Morson, 2022). In contrast, United Cities and Local Governments estimates that just 5 per cent of mayors globally are women and that female elected local government representatives are outnumbered by men at a rate of four to one (UCLG, 2015). In Asia and the Pacific, among the 'top 50' sustainable cities with female leaders are Sydney, Mumbai, Tokyo and Singapore, representing more than half of the cities listed from across the region.

Local government policies that support equitable treatment for women and men, such as equal pay or maternal and paternity leave, are critical to expand women's leadership opportunities. Expanding these initiatives to include flexible work arrangements and childcare will help women effectively manage both professional and personal responsibilities and avoid the so-called 'motherhood penalty'. Urban-level representation of women is crucial, as it can serve as

FIGURE 3.4 **Top three challenges and priorities in inclusive transport and mobility**



Source: *Review of Developments in Transport in Asia and the Pacific 2024: Transition towards Sustainable Transport Solutions* (United Nations publication, 2024g).

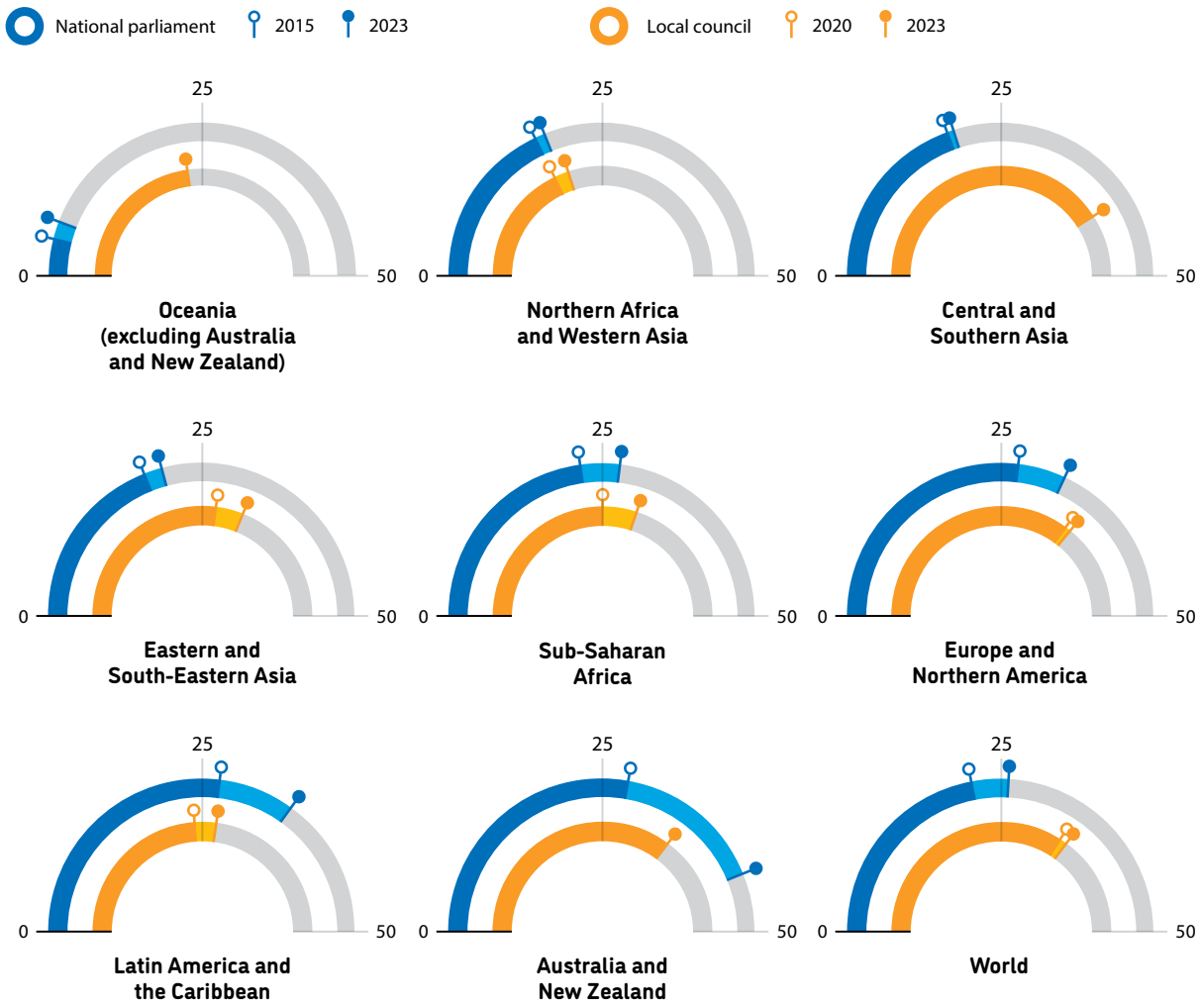
a stepping stone towards enhancing their presence in national governance, thereby promoting a more inclusive political landscape.

The *Asia and the Pacific SDG Progress Report 2023* found that women held 35.5 per cent of seats at the local government level and just 26.5 per cent of seats in parliaments worldwide (ESCAP, 2023b). The subregions of Asia and the Pacific perform both above and below the global average, although all fall below 50 per cent thresholds (figure 3.5) (United Nations, 2023).

Countries around the world have successfully legislated gender quotas in order to boost women's leadership representation, including at the local level. In Asia and the Pacific, such requirements can be found in Afghanistan, Armenia, Australia, Bangladesh, China, Georgia, India, Indonesia, Kazakhstan, Kyrgyzstan, Maldives, Mongolia, Nepal, Pakistan, Papua New Guinea, the Philippines, Sri Lanka, Timor-Leste, Türkiye, Uzbekistan, Vanuatu and Viet Nam (International IDEA, 2024).

But numerical requirements alone are not sufficient to grow the pipeline of qualified women leaders. Leadership training and career advancement programmes specifically for women in the fields of municipal governance and urban planning could increase the numbers. One proven model is the C40 Cities Women4Climate gender-inclusive climate action leadership training programme (C40 Cities Climate Leadership Group, 2019). The objective of the initiative is to scale and replicate the learnings from women who have or continue to hold positions of leadership in global cities taking transformative climate action, and provide training, toolkits and networks designed to support emerging women leaders and develop more gender-inclusive urban climate action policies.

FIGURE 3.5 **Proportion of seats held by women in national parliaments and local councils (percentage)**



Source: *The Sustainable Development Goals Report 2023: Special edition: Towards a Rescue Plan for People and Planet* (United Nations publication, 2023).

3.3 Localizing global goals: Tailoring SDGs and climate action

Achieving the SDGs and meeting obligations under the Paris Agreement both require a steadfast commitment at the local level. If cities do not deliver on the global goals, then countries will also fail. Just as there are defined mechanisms for national governments to track and report progress toward these critical global agreements, local and regional governments can do the same. Indeed, coherent coordination, whereby reporting at the local level informs status updates at the national level, is the most logical method for gathering a clear picture of what is happening on the ground in a given country. The key method for this coordination is the Voluntary Local and Subnational Review, whereby local governments integrate these global objectives into actionable plans. The aim is to provide a framework that enables cities to translate broader goals into concrete, localized initiatives, enhancing accountability and fostering community engagement. Those localized initiatives cover a wide range of climate actions, but in Asia and the Pacific particular attention should be paid to extreme heat and water issues.

Voluntary Local and Subnational Reviews

Every year since the SDGs were adopted in 2015, a group of countries present reports during the annual High-Level Political Forum at United Nations Headquarters in New York. These reports, known as Voluntary National Reviews (VNR), reflect a countrywide perspective on progress toward the global goals and targets as measured by the SDG indicators. But given the essential role that cities and other subnational governments play in delivering on the SDGs, a fully national snapshot does not provide a complete picture. Hence the complementary reports known as the Voluntary Local Review (VLR) or Voluntary Subnational Review (VSR) were developed.

In the decade since the SDGs were adopted, urban experts have worked diligently to localize the SDGs and their indicators so that they can be measured at the local level. ESCAP has prepared detailed guidelines for local governments who choose to embark on the VLR or VSR pathway (ESCAP, n.d.d.).

Between 2017 and 2024, more than 50 local and subnational governments in the Asia-Pacific region have already taken up the challenge of producing a VLR or VSR (figure 3.6). A majority have been published since 2021 and more are in the preparation phase, indicating a groundswell of interest in this important trend (ESCAP, 2024a). Complementary to the VLR and VSR methodology, of the 100 Asian cities reporting mitigation actions to the Carbon Disclosure Project (CDP) in 2020, a total of 44 per cent had a city-wide emissions reduction target and 48 per cent had a climate action plan (CDP Worldwide, 2021).

The most effective VLRs and VSRs are not mere reports, however, but rather action-oriented documents that translate the aspirations of the SDGs into concrete results on the ground as they connect evidence to action. Diagnosing the current state of affairs at the local level with solid data is the first step toward identifying projects that address local priorities and mobilizing resources to deliver. Additionally, cutting-edge analytical tools are dissecting and processing disaggregated data in novel ways. In the case of cities that already have strategic plans, the VLR process can provide an additional impetus to implement a plan when it is seen to enhance a city's progress toward the SDGs. That linkage has recently proven effective in Santa Rosa, the Philippines, where the VLR process is running concurrent with the city's five-year comprehensive development plan, and in Tokyo, whose VLR includes strategic visions and specific projects on a timeline into the 2040s aligned with "Future Tokyo: Tokyo's Long-Term Strategy" (CDP Worldwide, 2021).

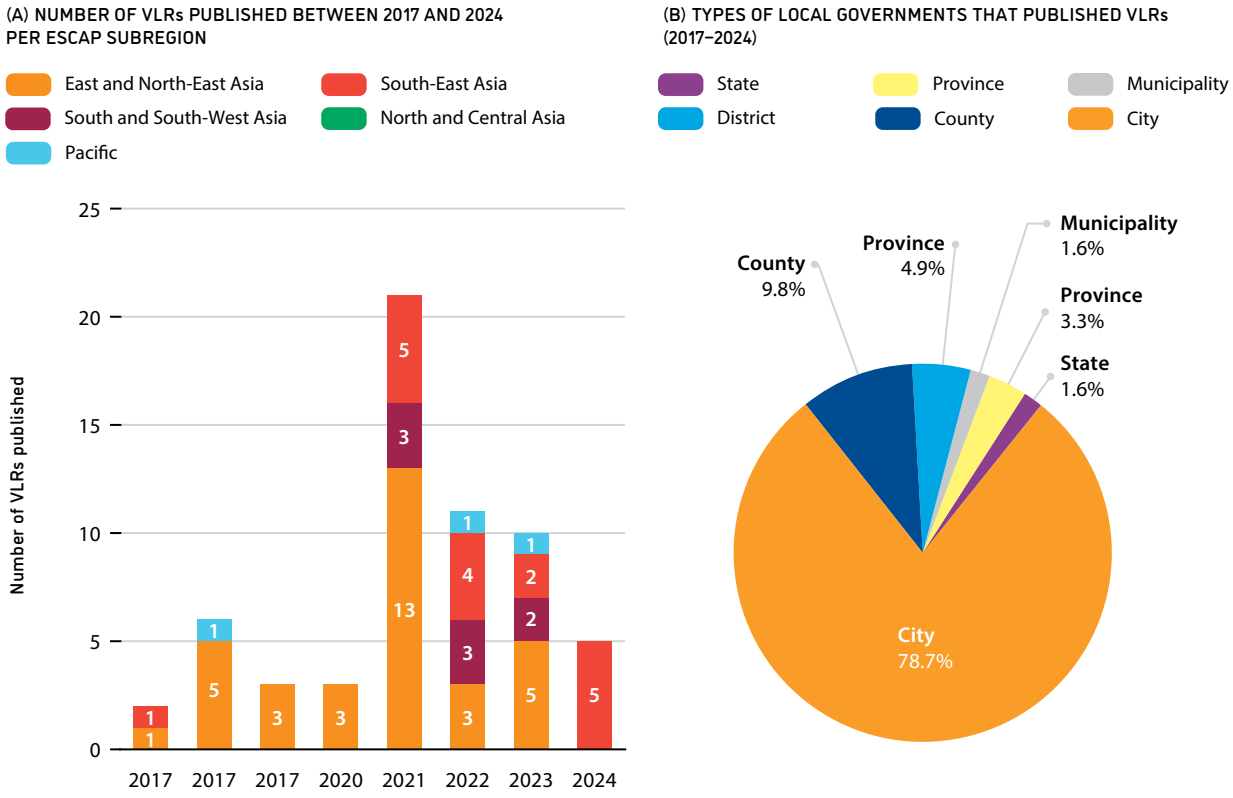
Regionally and Locally Determined Contributions

Just as countries report their SDG progress in Voluntary National Reviews, they also make pledges to reduce their carbon emissions under the Paris Agreement in what are known as Nationally Determined Contributions (NDCs). Fighting climate change, meanwhile, is no different than achieving sustainable development insofar as local action is critical to national success. To that end, there is also a local counterpart to NDCs, known as Regionally and Locally Determined Contributions (RLDCs). In these pledges, local governments commit to reduce their greenhouse gas emissions by specific metrics in order to do their part to keep global warming below 1.5°C.

Over 11,000 cities and local governments have made climate action commitments, as tallied by the Global Covenant of Mayors. RLDCs are formally acknowledged by the United Nations Framework Convention on Climate Change. The core elements of an effective RLDC include baseline level of ambition; mitigation and adaptation commitments and actions; institutional set-up and implementation parties; transparency, measurability and aggregation; compatibility with NDCs; alignment with existing nationally recognized commitments; and consultation and dialogue (Global Covenant of Mayors for Climate and Energy, 2021).

The burden of reporting on subnational and national governments alike associated with global agreements and frameworks can be significantly reduced by

FIGURE 3.6 **Voluntary Local Reviews (VLRs) published by ESCAP member States by (a) subregional breakdown and (b) types of government**



Source: United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), "Action-oriented VLRs: Unleashing the power of locally led SDG actions in Asia and the Pacific: SDG Localization Series", policy brief, 2024a. Available at https://repository.unescap.org/handle/20.500.12870/7434

integrating VLRs/VSRs with RLDCs and climate action plans (table 3.1). Streamlined reporting of these subnational tools can leverage overlapping areas of data collection and progress-tracking, reducing the overall time and resources needed to undertake reporting.

In Suva, Fiji, for example, the Pacific's first VLR report provided new data on climate-induced sea level rise, energy use and disasters. This was then used to develop the city's priority investments in its subsequent 10-year development plan. This aspect of Suva's VLR, as a tool in supporting 'means of implementation' at the national level, was further featured in the 2023 VNR report of the Government of Fiji (ESCAP, 2024d).

Water, water everywhere

Cities and towns of Asia and the Pacific are disproportionately located in coastal, riparian and delta areas. These areas are also being heavily affected by tropical and monsoonal hydrological cycles, increasing their vulnerability to climate risks, such as storm surges, cloud bursts, tropical cyclones and flooding (Nunn, Smith and Elrick-Barr, 2021). Hard infrastructure is a traditional method of protecting against flooding. Coastal and low-lying Asia-Pacific cities have built and maintained seawalls, dikes, embankments, flood barriers, canals and pumping stations. These investments to protect against rising waters can be capital-intensive, such as the $40 billion National Capital Integrated Coastal Development Masterplan in Jakarta, which envisions a system of dikes and artificial islands in the shape of a Garuda (the national symbol) (Salim, Bettinger and Fisher, 2019).

There are other methods to guard against flooding, however, including nature-based solutions. Mangroves thrive in warmer climates in the region. This type of vegetation has a well-documented ability to dissipate wave energy, reduce storm surge impacts and trap sediments, which helps stabilize shorelines. The United Nations Decade of Ecosystem Restoration (2021–2023) has encouraged mangrove restoration projects benefitting in urban areas in Indonesia, Malaysia, the Philippines and Thailand (Gerona-Daga and Ill, 2022). In the Mekong Delta in Viet Nam, mangrove reforestation projects have reduced flood risks while supporting fisheries that sustain local communities.

TABLE 3.1 **Examples of the co-benefits of SDG localization and subnational climate action**

EXAMPLE ACTIVITIES	BENEFITS FOR CLIMATE ACTION	BENEFITS FOR THE SUSTAINABLE DEVELOPMENT GOAL (SDGs)
Urban forest programmes	• Enhanced carbon sequestration reduces GHG emissions. • Strategically planted trees around buildings provide natural cooling in summer and windbreaks in winter, reducing energy system needs.	• Trees act as natural filters, trapping pollutants and ozone, improving air quality and human health (SDG3) • Trees mitigate the urban heat island effect (SDG11) and provide habitat and food sources for a variety of wildlife (SDG15).
Inclusive city and subnational climate action planning, disaster risk reduction	• Provides equitable access to resources and services necessary for climate resilience, such as clean water, energy, healthcare and transportation.	• Gender-responsive climate planning addresses the unique needs and vulnerabilities of women and girls, who often bear the brunt of climate change impacts (SDG5). • Inclusive planning and design addresses existing inequalities among low-income populations, ethnic minorities, persons with disabilities, indigenous peoples and all stakeholders (SDG10, 11, 17).
Accessible low carbon transport infrastructure projects	• Expands low-carbon transport infrastructure, such as public transit systems, bike lanes and pedestrian-friendly pathways	• Improvement in traffic-related air quality has significant health benefits in urban areas (SDG3). • Alternative modes of transportation that are less vulnerable to disruptions help ensure continuity in transportation services during emergencies (SDG11). • Compact, transit-oriented development reduces urban sprawl and preserves green spaces and ecosystems. These play a crucial role in maintaining biodiversity (SDG11, 15).
Local investments in renewable energy	• Shifts energy use from fossil fuel sources. • Distributed renewable energy systems to enhance the resilience and reliability of the local energy infrastructure, particularly in the face of extreme weather events or other disruptions.	• Localized energy generation reduces reliance on imported fossil fuels, enhancing energy security and reducing vulnerability to price fluctuations (SDG7). • creates jobs across manufacturing, installation, maintenance and research and development, thereby attracting private investment and fostering innovation (SDG8, 9). • Decentralized renewable energy solutions can provide reliable and affordable electricity access to underserved or remote communities (SDG7, 10).
Revitalization of cultural heritage	• Adaptive measures to protect cultural heritage sites from climate impacts, and revitalize surrounding green spaces helping preserve urban greenery mitigate the urban heat island effect and improve air quality. • Retrofitting with modern, energy-efficient technologies can reduce energy consumption and GHG emissions.	• Cultural heritage sites can stimulate economic growth by attracting tourists, supporting local businesses, and creating job opportunities (SDG8). • Revitalizing cultural heritage can strengthen social cohesion by fostering dialogue, understanding and collaboration among diverse local communities, promoting inclusivity and social integration (SDG10, 11,16).

Source: ESCAP.

One innovator in the area of nature-based solutions is China, where 641 of its 654 cities are exposed to frequent floods (Jiang, Zevenbergen and Fu, 2017). Such an acute vulnerability requires a sophisticated forecasting and warning system (box 3.4). But there are also proactive ways including the concept of a 'sponge city' that deploys natural areas, such as parks, lakes, permeable pavements, green roofs and restored wetlands, to absorb excess runoff, as well as store, filter and purify rainwater (Chan and others, 2018). The ideal sponge city is designed to withstand a 100-year flood or storm. The sponge city methodology was first implemented in 30 pilot cities in China and now there are approximately 50 pilot cities chosen in the national Sponge City Programme (ESCAP, 2023a). The Government has provided funding and technical support, while public-private partnerships have played an important role in the project design and construction phase. By 2030, sponge cities in China aim to process 70 per cent of rainwater across 80 per cent of the urban land (Grassi and others, 2020; Yeung, 2023). This approach not only mitigates floods but can also recharge aquifers, but should be incorporated as part of a larger urban water management system.

Urban water management is important for avoiding water stress and scarcity. One potential solution is water recycling and reuse, such as the NEWater programme in Singapore that uses advanced filtration and reverse osmosis to treat wastewater for industrial use and indirect potable supply (Singapore, 2024). This initiative has significantly reduced the city-state's reliance on

imported water. Rainwater harvesting systems are another potentially effective strategy. In India, cities like Chennai promote rooftop rainwater collection to replenish groundwater and provide a supplementary water source for urban households (Marin, 2013). Smart water management systems can leverage technology to improve efficiency. For instance, Tokyo uses a robust leakage detection system, reducing water loss from distribution networks to less than 3 per cent, among the lowest globally (Tokyo Metropolitan Government, 2016).

Beat the heat

Australia and Bangladesh are on the forefront of addressing urban heat. Melbourne, Australia appointed two chief heat officers in 2022 and Dhaka appointed a chief heat officer in 2023, the first two Asia-Pacific cities to create a leadership role around the issue of urban heat (City of Melbourne, 2019; Molla, 2024). These positions have a bully pulpit to promote adaptation measures that address extreme heat. The Department of Health for Victoria, the Australian state that includes Melbourne, advises local governments on the elaboration of heat action plans (Victoria, Department of Health, 2024). Targets to improve resilience to heat are also a component of Dhaka's climate action plan (C40 Cities Climate Leadership Group, 2024).

The highest temperatures in cities are found on heat-absorbing streets and building surfaces, a phenomenon known as the urban heat island effect. To lower the temperature in urban areas, some of the most effective methods include water features, shade structures, trees and wetlands. An intervention as simple as planting a shady tree with large leaves and crowns can decrease the impact of the urban heat island effect, especially when deployed at scale. On larger buildings, green roofs and green walls also reduce building and surrounding street temperatures. Expanding the land cover of parks and wetlands also helps reduce heat while providing ancillary benefits for urban dwellers like additional recreation areas and enhanced biodiversity.

Some Asia-Pacific countries have provided financial incentives for green infrastructure. Australia, Japan and Singapore have provided incentives for green roofs and green building through direct funding, subsidies, low-interest loans and tax credits. Incentives are also provided by local governments through technical support (ESCAP, 2023a).

Share climate actions

The global diversity in city-level approaches to building resilience through climate action provides a rich tapestry of policy, infrastructure and investment experiments that are regularly shared and adopted horizontally on an ad hoc basis, rather than as part of a more comprehensive multisectoral low-carbon strategy. The C40 Cities Climate Leadership Group has inventoried more than 14,000 city-based climate actions and includes 94 of the world's largest cities, encompassing 15 per cent of the world's urban population and a quarter of global GDP (Davidson, Coenen and Gleeson, 2019). The IICLEI – Local Governments for Sustainability network encompasses

BOX 3.4 Shanghai, China: Real-time urban flood forecasting and warning system

A real-time urban flood forecasting and warning system was built for Pudong New District in Shanghai, China covering 1,210 km^2 of the rapidly developing urban area east of Huangpu River. The coastal metropolis Shanghai is susceptible to flooding due to its low-lying terrain and massive urbanization, and the location downstream of the large Taihu Basin. Although local water authorities were collecting weather and hydrological data, more intelligent data technologies were needed to help make the right decisions for flood prevention and management. A digital urban flood forecasting and early warning system was built to integrate all of the data and support water management, enabling flood risk evaluation with just a few clicks. With the help of meteorological forecast estimates, and real-time rainfall and river-level data received from stations all over the Pudong New District, rapid forecasting technology allows online monitoring and simulation of flood events, providing a prediction of the scale, timing and location of impending floods. The early warning system improves response management of watershed and flood management agencies, allowing Pudong to optimize utilization of flood management infrastructure, especially where there is limited flood carrying service capabilities of existing infrastructure.

Source: Asian Development Bank (ADB), *100 Climate Actions from cities in Asia and the Pacific* (Manila, 2021).

2,500 local governments globally, which share ideas through the ICLEI Climate Neutrality Framework. Climate actions shared through the network are designed to achieve three goals: drastically reduce and sequester greenhouse gas emissions; divest, repurpose and reinvest; and offset and compensate for emissions that cannot immediately be removed, reduced or avoided. ESCAP, together with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and United Cities and Local Governments Asia-Pacific (UCLG ASPAC) began the Urban-Act project in 2022, which supports five national governments and over 20 pilot cities across China, India, Indonesia, the Philippines and Thailand to jointly integrate climate change into urban plans, budgets and multilevel governance structures through 2027, funded by the International Climate Initiative (IKI) of the German Federal Ministry for Economic Affairs and Climate Action.

3.4 Prioritizing implementation: Turning ideas into action

In order to make urban transformation progress from growth to resilience, policymakers at all levels of government must implement comprehensive strategies that prioritize sustainability and enhance adaptive capacities to future challenges. That means turning ideas into public policies, scalable programmes and other initiatives that generate tangible impact on the lives of people across the urban-rural continuum in Asia and the Pacific. These means of implementation ranges from housing and budgeting policy experimentation to strengthened urban and territorial planning regimes to subnational data collection methods. Combined, this section offers a menu of options for pursuing sustainable urban development in Asia and the Pacific.

Urban sandbox: Supporting innovation

Cities are the ideal setting for experimenting with innovative policies due to their dense populations and diverse challenges. As the unit of government closest to the people, local governments can quickly implement policy ideas, observe their efficacy and course correct. Urban areas serve as testing grounds for sustainable solutions that can then be scaled regionally or nationally.

Inadequate housing is a bedrock urban issue ripe for policy experimentation and widespread adoption of successful ideas. While cities vary in size and environment, all local governments face the common challenge of ensuring there is enough decent housing for the city's population. Methods that work to improve housing stock in one city can often be transferred to another city in the same country, as the housing sector is regulated by a common set of building codes, land-use ordinances and financing mechanisms.

The quasi-public Community Organizations Development Institute (CODI) in Thailand is a prime example, which became the main implementing agency of the Baan Makong ("affordable housing") programme, launched in 2003 (Boonyabancha and Kerr, 2018). Under the scheme, slum dwellers receive long-term leases backed by low-interest loans if they band together and propose a redevelopment plan that meets building and planning standards. By 2010, the percentage of the population living in decent housing increased from 66 per cent to 84 per cent, while poverty declined from 39 per cent to 9 per cent even as the country continued to urbanize (Apolitical, 2018).

Gender equality in the public sector is another issue where progress will not happen by chance. Rather, it requires an intentional effort like gender-responsive and participatory budgeting (GRPB) to ensure that resources are allocated proportionally to benefit women as well as men by supporting policy priorities like childcare, as well as maternity or paternity leave (box 3.5). Moreover, direct democracy methods like participatory budgeting, where citizens have a say in how public funds are spent, have the potential to produce better gender equality outcomes.

Youth participation in urban policymaking is essential for fostering inclusive, equitable and sustainable cities. Involving young people in decision-making processes is important to ensure urban environments are designed with their unique needs and rights in mind. In particular, youth are recognized as agents of change under frameworks like the 2030 Agenda and the New Urban Agenda. Their participation can enhance intergenerational equity and contribute to better urban planning outcomes, such as safer public spaces and improved mobility systems. This is particularly relevant as an estimated 350–500 million children live in urban slums, where they face significant challenges like limited access to green spaces, sanitation and education (UN-Habitat and UNICEF, 2023).

To integrate youth perspectives effectively, urban policymakers are encouraged to adopt participatory approaches, enabling children to contribute to coalition-building and co-creating child-responsive urban settings. Strategies include using geospatial data to identify inequalities and engaging young stakeholders in planning efforts. These initiatives not only empower youth but also help shape cities that promote safety, inclusivity and sustainability, ensuring better futures for all residents.

BOX 3.5 Malaysia: Gender-responsive and participatory budgeting

NGOs that advocate for gender equality in Penang, Malaysia have been making the case for gender-responsive and participatory budgeting since the early 2000s. Their ideas entered the mainstream in 2008 when a newly elected government showed interest in social justice issues. Penang hosted a gender mainstreaming conference in 2010 to introduce the idea to a broader audience. In 2011, lawmakers formed the Penang Women's Development Corporation (PWDC) with an explicit goal to "mainstream gender into key policies, programmes, and practices of the public sector". Learning from peer experiences, including a study trip to gender-responsive budgeting pioneer Berlin, helped inform Penang's approach.

In 2012, the PWDC tested its ideas out with two local governments, who both agreed to commit RM 200,000 ($46,000) annually for three years to a gender-responsive and participatory budgeting pilot project. Another local government signed on in 2015 for the Duit Kita, Hak Kita ("Our Money, Our Say") scheme, which allocated RM 100,000 ($23,000) for 17 community groups to decide how to spend. The pilot projects were so successful that the PWDC published a handbook on how to conduct gender-responsive and participatory budgeting in 2016.

Today the methodology is practiced nationally with the PWDC holding regular trainings and workshops where local governments from across Malaysia learn how they can also improve gender equality and enhance democratic participation in their communities.

Source: International Observatory on Participatory Democracy (OIPD), "Gender responsive and participatory budgeting – Penang (Malaysia) - VIII Distinction for Best Practices in Citizens' Participation", 2014. Available at https://www.oidp.net/docs/repo/doc15.pdf

Reimagining spatial planning

Cities are organic, but they cannot be left entirely untended. When urbanization occurs in an unplanned manner, particularly in countries where the rate is increasing rapidly, it poses substantial problems for urban management and environmental sustainability. Unplanned urbanization places immense pressure on local governments already grappling with limited resources and capacity to meet the escalating demand for urban services. Cities and local governments of all sizes should therefore employ qualified urban planners who can help guide urbanization through comprehensive and strategic planning. Their skills are necessary to map out a city's future housing needs, transport links, commercial nodes, resource demands (energy, water etc.) and overall growth trajectory.

City planning expertise is uneven throughout Asia and the Pacific. Commonwealth countries like Australia and India benefit from a legacy of town and country planning. Planning institutions and education are strong in the Republic of Korea and Singapore, while China is quickly adding to the ranks of qualified planners.

Hiring planners is easier in well-resourced larger cities, but national and state or regional governments can support secondary and tertiary cities with planning expertise, especially in countries like Malaysia that have taken the step of preparing national physical plans. Supporting planning at all levels of government is also a priority in countries that have adopted national urban policies. International and regional planning associations, such as the International Society of City and Regional Planners and the Eastern Regional Organization for Planning and Human Settlements, are potential avenues for finding relevant planning expertise.

Finally, UN-Habitat's International Guidelines on Urban and Territorial Planning remains a comprehensive global reference for how local governments should embark on the vital technical work of planning for their future (UN-Habitat, 2024).

Compact cities and planned urban extensions

Urban planning and governance require answering a framework question: What should the city look like? The New Urban Agenda, which was adopted in 2016, articulates a vision of well-designed compact cities that improve quality of life for residents through efficient land use, reduced travel distances and congestion, enhanced social cohesion, vibrancy, cultural richness and livability. The provision of public and private social spaces, and integration of live, work and play lifestyles and opportunities, also increases foot traffic and potential interactions of different businesses and potential collaborators that can drive cross-sectoral innovations and business development and increase profitability and resilience of consumer-facing businesses. Over time, this creative ecosystem can attract more businesses, entrepreneurs and other elements of business development ecosystems, one of the many benefits of urban agglomeration, which are maximized in the hyperdense, mixed-use, pedestrian-driven compact urban cores of major cities (Moretti, 2013).

BOX 3.6 Hong Kong, China: Integration of land use and public transport planning

Integrating land use and public transport planning in Hong Kong, China[a] has been crucial for addressing challenges such as increased population density, limited land resources and environmental constraints.[b] With a density of 26,700 individuals per square kilometre, urban mobility has been optimized by prioritizing integrated policies, including the Comprehensive Travel Study (CTS), that diminish dependency on motor travel and improve public transit networks.[c]

A fundamental element of the urban planning vision in Hong Kong, China is the regulation of the growth of developed regions. The establishment of railways and MTR stations adheres to the principles of transit-oriented development (TOD), establishing public transport as the foundation of the city's urban expansion. These collaborations have guaranteed that transport infrastructure facilitates both mobility and sustainable urban development.

The integrated land use and transport planning has resulted in notable achievements, including a 40 per cent expansion of the railway network to enhance accessibility, the establishment of park-and-ride facilities to encourage public transport utilization and improved pedestrian infrastructure to facilitate non-motorized transport. These approaches have enhanced governance by promoting more effective urban administration and mitigating environmental issues through decreased car emissions.[d]

The city's TOD policy is based on three fundamental principles: high-density construction in close proximity to stations for easy access, land-use density to enhance community vibrancy, and superior connectivity to ensure pedestrian safety and green spaces. Stations are designed as high-density, mixed-use zones that include offices, residential units, retail and recreational facilities.

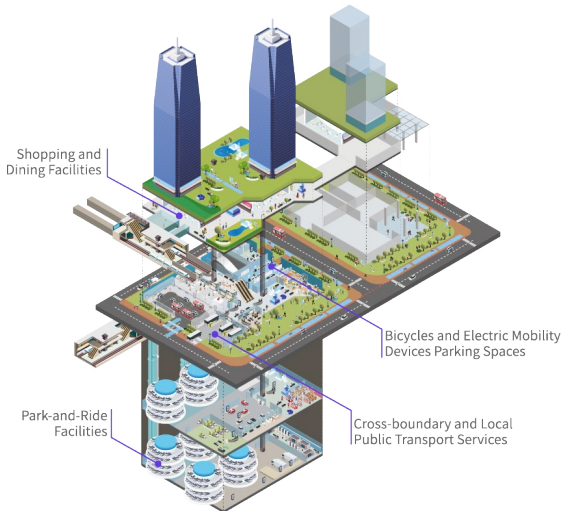
Under the Climate Action Plan 2050, Hong Kong, China intends to attain zero vehicle emissions by 2050 and prohibit new registrations of fuel-powered personal vehicles by 2035. To achieve its carbon neutrality objectives, the city intends to promote a transition to public transport, enlarge low-emission zones, adopt the '15-minute city' model, prioritize bike infrastructure and enhance pedestrian facilities to increase walkability.[e]

Community engagement has been essential to the localization process. Public consultations have guaranteed that developments correspond with local requirements. Essential measures comprise the creation of pedestrian-friendly areas, enhancement of intermodal connections and execution of environmental evaluations for new initiatives.

The integrated strategy implemented in Hong Kong, China provides significant insights for other Asia-Pacific cities confronting analogous urbanization issues. Essential replicable elements encompass TOD, which advocates for high-density construction near transit centres to enhance public transportation utilization. Stakeholder engagement which includes community involvement in the planning process, cultivates local ownership and ensures that development is context specific.

Furthermore, enhanced regional cooperation is critical to tackle transboundary challenges associated with urban planning and transportation networks. Exchanging best practices across municipalities can enhance the efficacy of addressing shared concerns such as traffic congestion and environmental deterioration.[f]

FIGURE 3.8 **Strategic transport interchange hub**

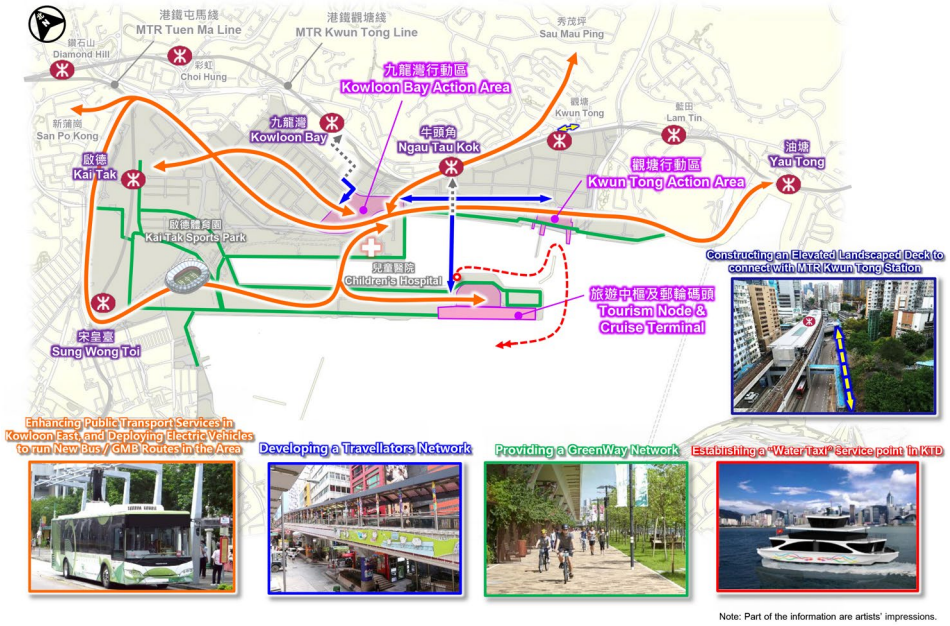


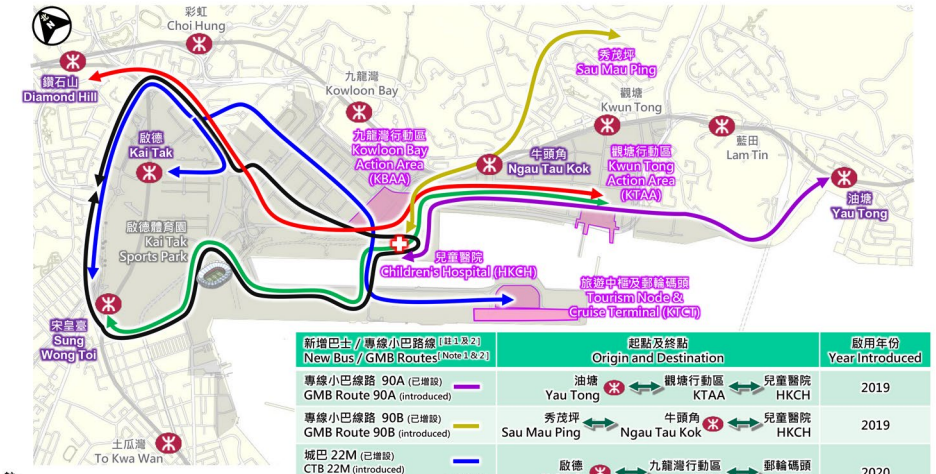
Source: Traffic and Transport Strategy Study, "Future public transport services: Building a new generation of Transport Interchange Hubs (TIHs)", n.d. Available at https://www.ttss.gov.hk/en/futurepublictransportservices/transport-interchange-hub/

Continues on next page

BOX 3.6 Continued

FIGURE 3.7 Proposed "multi-modal" EFLS





註:
Note:
1. 視乎未來發展，路線或會延伸至旅遊中樞及九龍灣行動區等。
1. Routes may be extended to tally with the future developments of Tourism Node, KBAA, etc.

2. 計劃由2021年開始，逐步採用電動巴士 / 電動小巴行走有關路線。
2. Planned to gradually introduce from 2021 onwards the use of electric buses / electric public light buses for the related routes.

新增巴士 / 專線小巴路線 [註1及2] New Bus / GMB Routes [Note 1 & 2]	起點及終點 Origin and Destination	啟用年份 Year Introduced
專線小巴線路 90A (已增設) GMB Route 90A (introduced)	油塘 Yau Tong ⇔ 觀塘行動區 KTAA ⇔ 兒童醫院 HKCH	2019
專線小巴線路 90B (已增設) GMB Route 90B (introduced)	秀茂坪 Sau Mau Ping ⇔ 牛頭角 Ngau Tau Kok ⇔ 兒童醫院 HKCH	2019
城巴 22M (已增設) CTB 22M (introduced) (現行路線: 啟德 Kai Tak ⇔ 郵輪碼頭 KTCT) (Existing Route: Kai Tak ⇔ KTCT)	啟德 Kai Tak ⇔ 九龍灣行動區 KBAA ⇔ 郵輪碼頭 KTCT	2020
擬新增巴士線路 2 New Bus Route 2 (under planning)	宋皇臺 Sung Wong Toi ⇔ 觀塘行動區 KTAA	2023 – 2028
擬新增巴士線路 3 New Bus Route 3 (under planning)	鑽石山 Diamond Hill ⇔ 觀塘行動區 KTAA	
擬新增巴士線路 4 New Bus Route 4 (under planning)	啟德 Kai Tak ⇔ 九龍灣行動區 KBAA	

Source: Civil Engineering and Development Department (CEDD), "Detailed feasibility study for environmentally friendly linkage system for Kowloon East: Proposed "multi-modal" ELFS", 2021. Available at https://www.ktd.gov.hk/efls/en/proposal.html

a Hong Kong, China, Transport Department, "Transport in Hong Kong: Public Transport: Introduction", 2011. Available at http://www.td.gov.hk/en/transport_in_hong_kong/public_transport/introduction/index.html

b Hong Kong, China, Transport and Logistics Bureau, "Hong Kong Moving Ahead: A transport strategy for the future", 2024. Available at https://www.tlb.gov.hk/eng/publications/transport/publications/hk_move_ahead_txt.html

c Hong Kong, China, Planning Department, "Chapter 8: Internal Transport Facilities", in *Hong Kong Planning Standards and Guidelines* (2024). Available at https://www.pland.gov.hk/file/tech_doc/hkpsg/full/pdf/ch8.pdf

d Ibid.

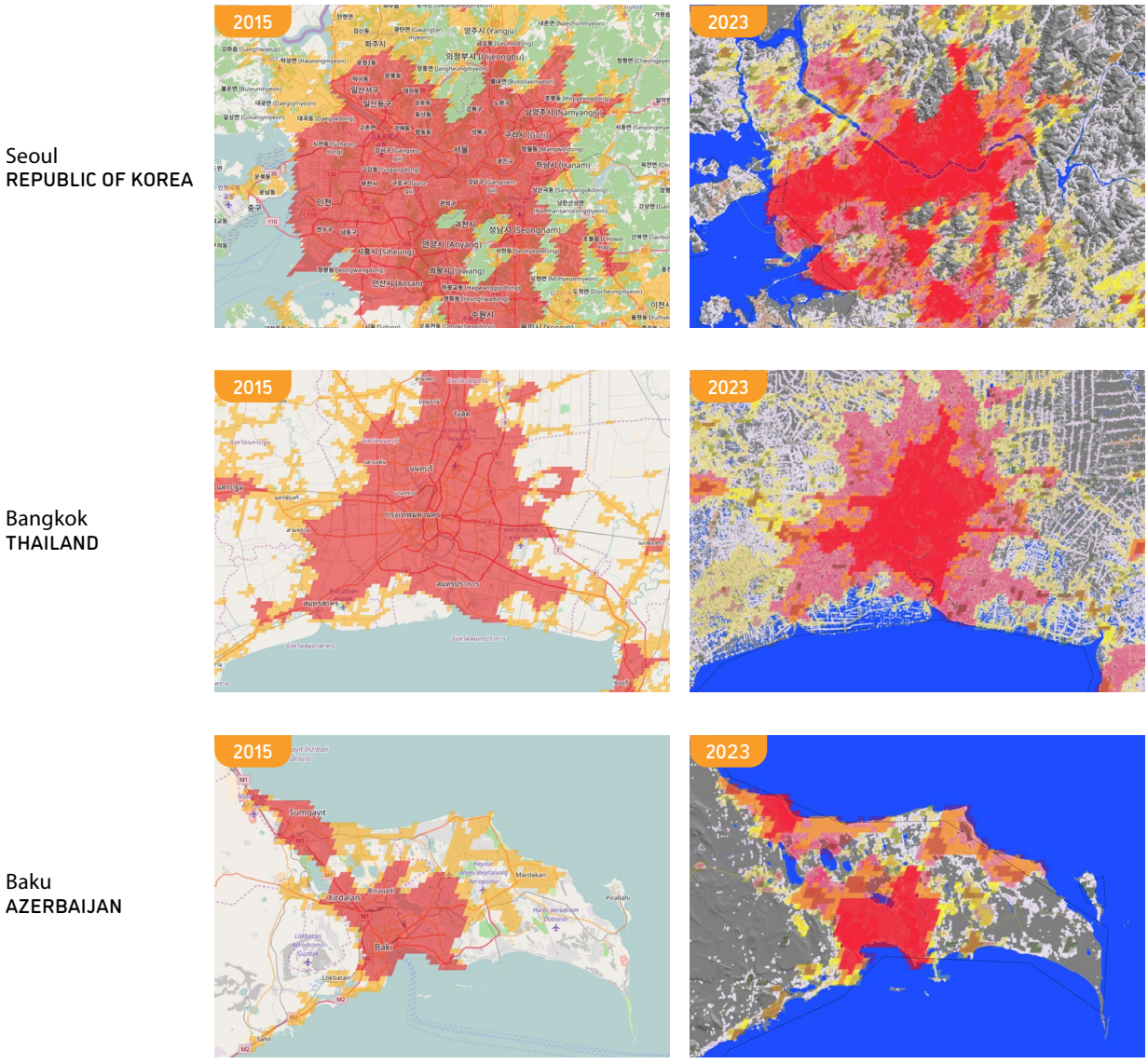
e Z. J. Zhao, K. V. Das and K. Larson, "Joint development as a value capture strategy in transportation finance", *Journal of Transport and Land Use*, vol. 5, No. 1 (2012).

f Y. Lu, and others, "Do transit-oriented developments (TODs) and established urban neighborhoods have similar walking levels in Hong Kong?" *International Journal of Environmental Research and Public Health*, vol. 15, No. 3, (March 2018).

By contrast, sprawl loses the benefits of urban agglomeration. When urban areas expand in low-density, disconnected formats, it becomes harder for residents to move around without private cars or long journeys by public transport. Figure 3.9 depicts the degree of urbanization for several cities in the Asia-Pacific region, comparing data from 2015 to 2023. The visuals show the vertical growth of the urban cores of megacities, such as Bangkok and Seoul, along with the expansion of the boundaries of cities due to sprawl. Such expansion requires provided services over a larger geographical footprint and has increased the costs of municipal infrastructure development and operating costs by approximately 20–35 per cent (Gielen and others, 2021). SDG indicator 11.3.1, land consumption rate to population growth rate, is a metric that serves as a barometer for urban sprawl.

Not all planned city growth will consist of urban infill, in which new housing, commercial spaces and transport are built within the city's existing footprint. Some urban areas are fully built out to their maximum potential, or the cost of urban land is too high for development. Density is beneficial, but overcrowding is not. Thus, in some instances, growing outward and urbanizing previously undeveloped land is the best option. Projections indicate that South-East Asia is poised to double its urban land between 2010 and 2050 (Baker, Ellis and Roberts, 2016). This expansion necessitates strategic investments in infrastructure, including transport, energy systems, water and sanitation, and housing, and climate-proofing measures for coastal cities. UN-Habitat provides technical assistance for planned city extensions and has published both an analysis of historical examples and a handbook for financing urban growth (UN-Habitat, 2015; 2016).

FIGURE 3.9 **Urban concentration in capital cities**



Source: European Commission, "Global Human Settlement Layer," database, 2023. Available at https://ghsl.jrc.ec.europa.eu/dataToolsOverview.php#inline-nav-R2023 (accessed on 23 May 2023).

Transit-oriented development

Transit-oriented development (TOD) solutions, which situate high-density housing and commercial land near public transport nodes, are another approach to negotiate sustainable urban expansion into adjacent regions that require innovative governance approaches. The method is catching on, especially in many middle-income countries in Asia and the Pacific.

Poorly planned urban expansion has led to car- or motorcycle-saturated cities in many Asian countries. By contrast, TOD solutions were crucial in the development of contemporary Japanese city agglomerations as well as Mumbai, India (Adusumilli, 2016). TOD makes use of new rapid bus and rail networks, thereby reducing spatial development sprawling outward along highways. Multi-nodal approaches distribute housing expansion, and land-value capture can accommodate peri-urban settlement upgrading. Improved and subsidized public transport can also increase labour mobility.

In Indore, India, TOD is a crucial instrument to plan for job access and housing affordability, especially for the expanding ICT sector (India, Ministry of Urban Development, 2015). The approach requires a strong vision and regulatory support with regard to density, mixed use, walkability, park-and-ride requirements, and public-private joint development (Kidokoro, 2019). In general, planning restrictions send signals to the market concerning land supply restrictions. Hence, the approach works only if sufficiently ambitious in scale and scope as well as being supported by governance that stretches beyond short-term electoral cycles. Kuala Lumpur's application of transit planning zones, with standards both for population and jobs density, is a good example.

These zones need to be complemented with mixed-use regulations, incentives and walkability standards (Hashim, 2019). At least one global TOD standard offers specific recommendations that can be adopted into local ordinances:

- Rapid transit stations should be within 1,000 m walking distance of buildings.
- Parks and playgrounds at least 300 m² in size should be within 500 m walking distance of residences.
- Walkways should be at least 2 m wide.
- Crosswalks should be in place at all intersections where traffic exceeds 15 km per hour.
- Protected cycle lanes should be installed on streets where traffic exceeds 30 km per hour (ITDP, n.d.).

Digitalization and urban governance: IoT, 5G, AI, big data

Smart cities are reshaping urban resilience and sustainability worldwide, with the Asia-Pacific region at the forefront. Ever since the region hosted the 2010 World Expo in Shanghai under the theme "Better City, Better Life," smart cities have thrived in the region, leveraging technology for better urban governance. The majority of cities in the region already identify as smart cities and while a number of definitions of smart cities exist, all generally emphasize people-centredness improving public services, quality of life and environmental protection.

The technological core of the smart city concept are sensors and actuators embedded in Internet-connected devices that sense the environment in order to facilitate effective decision-making. The microcontrollers available in these devices are programmed to take decisions automatically based on the information received from the sensors (Ahad and others, 2020). This connected hardware is an example of the Internet of things (IoT), while the advent of 5G mobile networks enables data to move faster and also improves digital connectivity in rural areas. The latest developments of artificial intelligence (AI) allow for sophisticated computer models to analyse the enormous quantities of data that underpin these automated decisions, while cloud computing technology enables for the off-site storage of data such that a small sensor does not have to physically store all of the information it is collecting.

For example, a traffic signal can be programmed to turn from red to green at regular intervals, regardless of the presence of vehicles or pedestrians. A smart, connected traffic signal can sense when a pedestrian arrives in order to give them a crossing signal or adjust the interval of the light cycle as vehicular traffic fluctuates, relying on both historical patterns and real-time conditions across the city. Like this example suggests, mobility is a major area of promise for the adoption of smart city technology. Smart traffic management systems are already in use in Melbourne, Seoul, Singapore and Sydney to improve traffic flow and manage road incidents.

Public lighting is another type of public infrastructure improved by smart city technology in order to make illumination more energy efficient. Beijing, Guangzhou, Kuala Lumpur, Shanghai and Singapore all use these systems. Many of these cities have implemented smart water management, which similarly optimizes efficiency for a critical, and sometimes scarce, resource.

BOX 3.7 Thailand: Development of Long-Term National Strategies and Plans of Actions with Sustainable Urban Development as one of the main priorities

Thailand places importance on resilient and sustainable urban development and has included urban development in the formulation of its National Strategy 2018–2037, its National Strategy Master Plan 2023–2037, and its 13th National Economic and Social Development Plan (2023–2027), with particular emphasis on monitoring, inspection and evaluation.

Within the revised National Strategy Master Plan 2023–2037, a comprehensive and integrated strategy towards urban development was outlined, namely

1 the Smart Urban Development strategy, which includes development of Smart Cities with enhanced quality of life and emphasis on urban development that can support the increase in economic activities and housing needs in urban areas, while reducing inequality; and

2 the development of sustainable urban, rural, agricultural and eco-industrial township plans. The local administrative units will oversee these plans and be organized in accordance with the ecological map with a view to create urban areas that are efficient, inclusive, and have standardized ecological and waste management systems.

The 13th National Economic and Social Development Plan (2023–2027) is another important mechanism to help implement the National Strategy. There are three milestones directly related to sustainable urban development goals, including Milestone 8 - Thailand has smart cities as well as safe and liveable regions with sustainable growth. Key targets include:

1 substantial increase in economic and investment growth in special economic zones;

2 decreased inequality especially in the context of income distribution; and

3 liveable, sustainable, inclusive and resilient cities towards all aspects of change through strengthening of local economy, public-private partnerships, urban infrastructure including logistical and digital, and management of urban areas through efficient municipalities.

The formulation of the National Strategy and the National Economic and Social Development Plan involved extensive consultations with a diverse range of stakeholders to ensure inclusivity and good governance, with key processes including:

1 public hearings and consultations to gather input from various stakeholders, including the public sector, private sector, civil society and academia;

2 the enactment of the National Strategy Act, which mandates public participation in the strategy's formulation, monitoring and evaluation; and

3 the drafting process which involved collaboration between different government agencies to ensure coherence and integration across all levels of government.

Within the National Strategy, various provisions were made to promote participation of all stakeholders, especially through the promotion of the 'Sufficiency Economy Philosophy' as a means to achieve sustainable development, which involved awareness-raising campaigns towards conservation of natural resources and a consideration of environmental impacts of manufacturing and over-consumption.

The 13th National Economic and Social Development Plan (2023–2027) contained provisions to promote stakeholder participation, such as the emphasis on an integrated approach towards the implementation of the plan across all public agencies while fostering collaboration with the private sector, civil society, academia and local population. The Plan aims to ensure transparency by enabling public access to government data and encouraging feedback through various technologies and communication channels to foster public support and trust.

Source: This case study was submitted to ESCAP by the Government of Thailand, Ministry of Foreign Affairs, 6 January 2025.

BOX 3.8 Moscow: The Active Citizen platform

The Moscow municipal administration emphasises legitimacy and popular endorsement via urban development projects, enhanced services and strategic engagement with citizens. The Active Citizen platform, established in 2014, aims to improve citizen engagement by facilitating public involvement in decision-making processes concerning urban governance.[a] The platform facilitates communication between the government and the public by enabling residents to express their views on infrastructure, services and other municipal matters. This effort fosters transparency and accountability while addressing coordination difficulties within social institutions, promoting direct public engagement in the formulation of policies that affect their everyday lives.

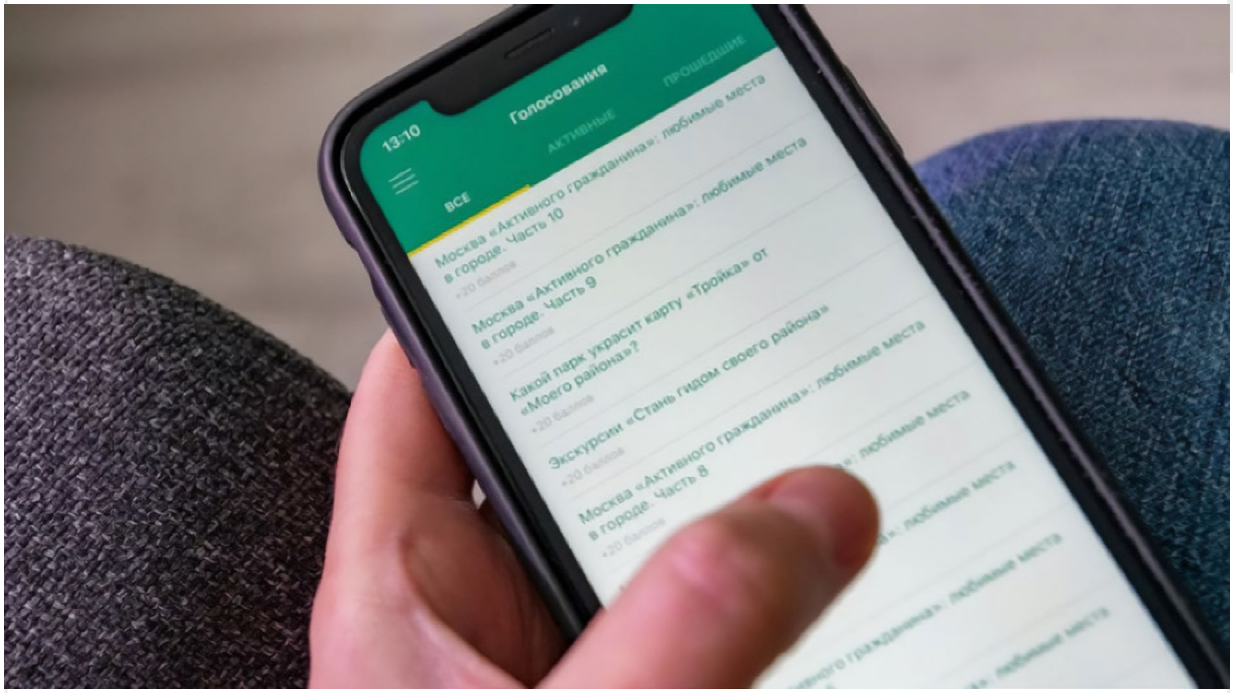
The Active Citizen platform reflects a collaborative endeavour spearheaded by the mayor's office in partnership with civic organizations and technology firms, as part of Moscow's digital city infrastructure.[b] This multisectoral approach has been crucial in the integration of advanced technologies, including blockchain, to enhance civic engagement strategies and ensure security and transparency. The platform facilitates public discussions, project evaluations and polls on urban development, thereby empowering residents to evaluate implemented policies and influence future decisions. This demonstrates a coordinated, multilevel partnership that is designed to enhance citizen participation and enhance various aspects of urban life, including public services, infrastructure and cultural initiatives.

In addition, the platform illustrates the transformative potential of digital technology in democratic governance by emphasising citizen empowerment, transparency and efficiency. The Active Citizen project empowers residents of the city to shape key aspects of city life. Over the years, it has held over 6,900 votes on various urban issues, with more than 7 million citizens participating.[c]

The platform's essential attributes; a user-friendly interface, blockchain-based voting and incentive-driven participation, render it highly replicable for cities in the Asia-Pacific region. By tailoring these features to local situations, cities in the area can improve public involvement, transparency and governance efficacy.

Continues on next page

FIGURE 3.10 **The Active Citizen app**



Source: Y. Ivanko, "Active Citizen: A dialogue between the city and its residents", October 2020. Available at https://www.mos.ru/en/news/item/80669073/&ved=2ahUKEwjk9ouLuq6KAxWiTGwGHXklN0gQFnoECBcQAQ&usg=AOvVaw0mxn1T6rkwqdjG8hFjGovU. (Submitted to ESCAP by colleagues in the Russian Federation and accessible in the Russian Federation only).

BOX 3.8 Continued

TABLE 3.2 **Number of votes on the Active Citizen app by thematic category and type of poll in thousands (2014–2018), budgets of organizational unit in charge of a category in million Rubles (2018)**

CATEGORY	RULES	OBJECTS	SERVICE (TEMPORARY)	SERVICE (PERMANENT)	RANKINGS	SYMBOLS	TOTAL VOTES BY THEMATIC CATEGORY	BUDGET OF AN ORGANIZATIONAL UNIT IN CHARGE
Tourism	0	0	0	406	180	0	585	
Information technology	0	157	0	221	0	289	668	49 239
Economic development	0	0	131	0	554	0	686	16 459
Veterinary	235	0	564	0	0	0	799	644
Commerce	657	270	0	0	0	0	928	13 026
Social security	0	0	1 495	232	0	210	1 937	277 771
Cultural heritage	0	803	768	43	770	0	2 385	4 143
Construction	535	113	1 222	0	414	426	2 709	524 824
Public services	240	591	0	1 585	568	105	3 089	351
Sport	434	0	2 588	0	0	274	3 296	32 705
Nature and environment	227	211	2 932	21	0	18	3 410	9 795
Culture	397	1 328	1 477	2 478	743	1 182	7 605	60 662
Transportation	454	1 523	3 93	1 901	313	3 254	7 838	190 091
Education	1 071	423	1 905	4208	341	456	8 404	266 544
Public health	206	279	216	4894	2 662	312	8 568	220 557
Housing and utilities	0	8 710	206	0	346	194	9 457	210 728
City events	681	410	9 919	443	234	1 593	13 281	–
Total by type of poll	5 138	14 817	23 818	16 432	7 124	8 314	75 644	–

Source: D. Gritsenko and A. Indukaev, "Digitalising City Governance in Russia: The Case of the 'Active Citizen' Platform", *Europe-Asia Studies*, vol. 73, No. 6 (July 2021).

a D. Gritsenko and A. Indukaev, "Digitalising City Governance in Russia: The Case of the 'Active Citizen' Platform", *Europe-Asia Studies*, vol. 73, No. 6 (July 2021).

b Ibid.

c Information Center of the Moscow Government, "Participants of "Active Citizen" will evaluate the work of electronic projects in 2024", 18 December 2024. Available at https://icmos.ru/news/ucastniki-aktivnogo-grazdanina-ocenyat-rabotu-elektronnyx-proektov-v-2024-godu. (Translated from Russian).

Smart cities: National strategies and international networks

Smart city investments have gone from ad hoc experiments by local governments to citywide policies to national strategies. At least 15 of the 53 ESCAP member States have a national smart city strategy, while others are under development.

The most ambitious embrace of smart cities at the national level in Asia and the Pacific came from India, where the Smart Cities Mission launched in 2015 with the goal of transforming 100 Indian urban areas into smart cities. As of September 2024, 75 cities had completed 75 per cent of their planned projects. The scheme proposed over 8,000 multisectoral projects overall, ranging from equipping solid waste collection with automatic vehicle location to developing digital libraries and e-health centres to installing over 83,000 CCTV cameras (India, Press Information Bureau, 2024). The ASEAN Smart Cities Network was launched in 2018 to work with 26 'middleweight' cities that have the potential to become the next large or even megacities. Today the network has expanded to 31 cities and continues to meet annually (ASEAN, 2024). ESCAP supports the network through the three pilot cities in the Smart Cities Innovation Lab (ESCAP, n.d.c.). Chiang Mai, Thailand has launched a bike-sharing system and digitized some government services. Surabaya, Indonesia provides free Wi-Fi in public places and monitors water and waste management with IT systems. Sihanoukville, Cambodia is exploring ways to implement smart city solutions as part of its commitment to the SDGs.

Urban metrics: City-level data and subnational statistics

Urbanization is recognized as one of the recommended dimensions for disaggregation for the SDGs. However, despite having over 50 indicators to track SDG progress in the Asia-Pacific region, only 13 indicators were supported by sufficiently disaggregated data, as presented in the Asia and the Pacific SDG Progress Report 2024. This indicates that, of the more than 50 indicators eligible for disaggregation, only a limited number provide actionable data (figure 3.11) (ESCAP, 2024b).

TABLE 3.3 **List of SDG indicators with available disaggregated data by urbanization**

SDG	INDICATOR	
1	1.4.1	Population using basic drinking water services
	1.4.1	Population using basic sanitation services
2	2.2.2	Overweight prevalence in children under 5 years (%)
3	3.8.2	Population with large household expenditure on health (>10%)
	3.8.2	Population with large household expenditure on health (>25%)
4	4.1.2	Completion rate, lower secondary education
	4.1.2	Completion rate, primary education
	4.1.2	Completion rate, upper secondary
6	6.1.1	Population using safely managed drinking water
	6.2.1	Population using safely managed sanitation services
	6.2.1	Population practicing open defecation (%)
	6.2.1	Population with basic handwashing facilities on premises
7	7.1.2	Population with primary reliance on clean fuels and technologies

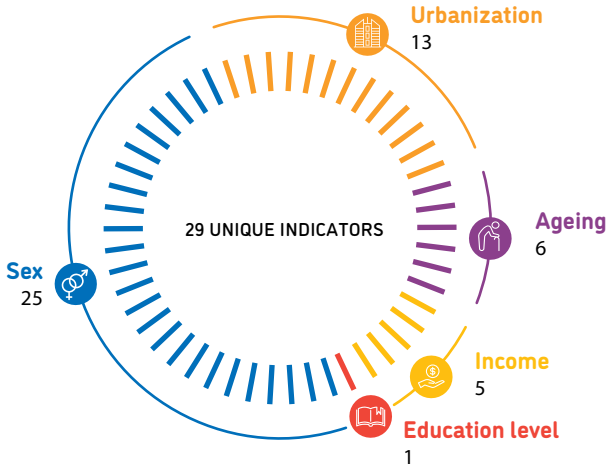
Source: *Asia and the Pacific SDG Progress Report 2024: Showcasing Transformative Actions* (United Nations publication, 2024b).

Moreover, SDG 11 on Sustainable Cities and Communities most directly addresses urban issues. However, data availability for SDG 11 is low in Asia and the Pacific, with only 31 per cent showing sufficient data (figure 3.12). It is important to note that many indicators for SDG 11 have sufficient data for cities but not for countries. This highlights the challenge in data collection for all cities in a country and in data coordination for local level data to be standardized and communicated to the national and global levels.

For example, Indicator 11.3.2 on civil society participation in urban planning and management has no data for any country in the Asia-Pacific region. Half of the indicators of SDG 11 have less than 20 per cent sufficient data, including 11.2.1 on convenient access to public transport, 11.3.1 on land consumption rate, 11.4.1 on expenditure on preservation of cultural and natural resources, 11.6.1 on urban waste collected, 11.7.1 on urban open space for public use and 11.7.2 on physical or sexual harassment.

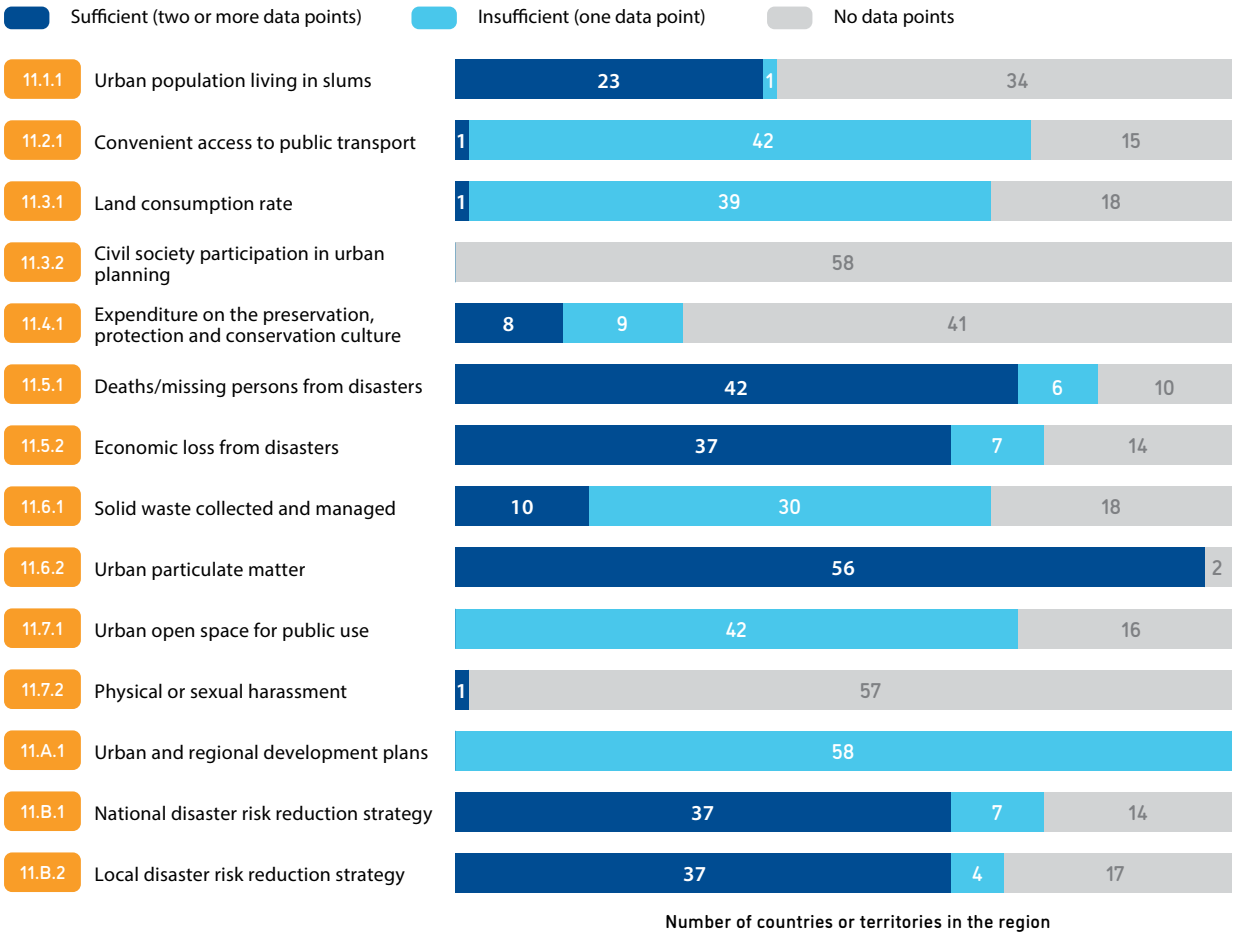
Ultimately, Asia and the Pacific must improve its ability to collect subnational statistics in order to engage in effective urban planning as well as strengthen the use of traditional data sources, such as surveys and administrative records. National statistical offices need to prioritize data coordination and collection for key urban SDG metrics. Opportunities for improvement include adapting the ESCAP Progress Assessment Methodology at the local level (ESCAP, 2024f). This exercise would present an opportunity for local governments to assess their current data landscape and contributions to the SDGs, while identifying areas for targeted improvements. Finally, inclusive data practices that engage communities in the collection, production and usage of data could contribute to the achievement of more robust indicators of SDG 11. Examples of community-based data partnerships are featured in the *Asia and the Pacific SDG Progress Report 2025* (ESCAP, 2025).

FIGURE 3.11 **Distribution of data across five dimensions with sufficient data for the progress assessment**



Source: *Asia and the Pacific SDG Progress Report 2024: Showcasing Transformative Actions* (United Nations publication, 2024b).

FIGURE 3.12 **Data availability for SDG 11 in Asia and the Pacific**



Source: United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), "Data availability of indicators by Goal (since 2015) (Goal 11)", Asia-Pacific SDG Gateway, n.d.b. Available at https://data.unescap.org/data-analysis/sdg-data-availability (accessed on 11 December 2024).

Collaborative urban networks

The Asia-Pacific region is rife with examples of peer-to-peer exchange, city networks, technical assistance and other forms of urban collaboration. Starting within countries, national associations of local governments have proved to be instrumental for the multilevel governance approach and knowledge exchange, especially for Tier II and III cities that have less access to international exchanges and financial opportunities. For example, Dhulikhel, Nepal, which published its first VLR with the support of ICLEI in 2022, was instrumental in designing capacity-building opportunities for local government in Nepal (Dhulikhel Municipality, Nepal, 2022). The VLR preparation process linked the National Planning Commission, the Kathmandu Metropolitan City and the Municipal Association of Nepal. Many cities in the region have a long tradition of city-to-city collaboration for sustainable development (ESCAP, 2024e).

Collaboration is a hallmark of ESCAP's approach to sustainable urbanization. In 2022, ESCAP launched the Regional Cooperation Mechanism on Low Carbon Transport and conducts consultations and capacity-building workshops with subregions (ESCAP, 2023c). That same yar, ESCAP also launched the Asia-Pacific Initiative on Electric Mobility to support the accelerated transition to electric mobility in the region through peer learning, regional cooperation and capacity-building (ESCAP, n.d.a). The multilateral system also matches mentor and mentee cities, like the United Nations Development Programme's Social Innovation Platform, which paired Yokohama, Japan with Baguio City, the Philippines to share experience on the VLR reporting progress (ESCAP, 2024e).

Broader capacity-building opportunities are also available in the region. Recognizing the significant role of mayors to develop and champion sustainable urban solutions and contribute to national climate strategies and the SDGs, the Asia Pacific Mayors Academy in 2019 was launched by ESCAP along with UN-Habitat, UCLG ASPAC, United Nations University Institute for the Advanced Study of Sustainability, Association of Pacific Rim Universities and the Institute for Global Environmental Strategies. The Academy convenes

annually and provides capacity-building to new leaders, better positioning them and their cities to implement localization efforts and undertake VLRs.

Other multilateral institutions embrace these efforts as well. The Asian Development Bank is supporting cities in Indonesia in aligning their masterplans with the SDGs while building on their first generation of RLDCs launched at COP28. The RLDC emphasizes the need to reduce carbon emissions and energy intensity in the development of the new Indonesian capital.

National and regional urban forums

While narrowly-targeted thematic learning is important, there is also value in big-tent approaches that bring together the full spectrum of urban stakeholders. Productive dialogue can spark from such hypothetical encounters as a water specialist meeting a transport engineer. National and regional urban forums are the ideal venue for this type of engagement. In the last four years, Azerbaijan, Malaysia, Nepal and the Marmara Municipalities Union (Türkiye) have all held at least one national urban forum that brings together urban stakeholders from across a national geography. Cities within the same country operate under the same legal and financial system, which makes policy transfer potentially easier than between countries. International cooperation, meanwhile, is the most longstanding scale for urban forums in the region. The eighth Asia-Pacific Urban Forum and the fifth Pacific Urban Forum were both held in 2023, while Asia and the Pacific has hosted the World Urban Forum twice (Nanjing in 2008, Kuala Lumpur in 2018) and will host the 13th World Urban Forum in Baku in 2026.

Global leadership

Mayors are taking an ever increasing role in global affairs. Local and regional governments received explicit acknowledgment in the United Nations Pact for the Future, building on their recognition in a suite of global agreements over the last decade, including the 2030 Agenda for Sustainable Development, Paris Agreement, Addis Ababa Action Agenda, Sendai Framework for Disaster Risk Reduction and New Urban Agenda.

Local and regional governments participate in intergovernmental and multilateral processes, make pledges toward sustainable development and climate action, and track their progress toward the global goals (table 3.4). This profound level of commitment is a testament to the catalysing role that cities can play for the benefit of people and planet.

Urban leadership emanating from Asia and the Pacific is increasingly visible on the global stage. The region holds 66 seats on the World Council of United Cities and Local Governments (UCLG), and another 23 seats on the Executive Bureau (UCLG, 2024). Two of three UCLG executive presidents are from the region, as are two of the six co-presidents. Three urban leaders from Asia and the Pacific serve on the steering committee for C40.

Cities in Asia and the Pacific are significant global players, showing leadership and dedicating resources to promote regional and global cooperation. For example, Guangzhou, China endowed the International Award for Urban Innovation in 2012, whose sixth cycle of winners was announced in 2023, as an incentive for cities to share innovative policies and initiatives that could benefit their peers (Guangzhou International Award for Urban Innovation, n.d.).

TABLE 3.4 **Local and regional government (LRG) participation in the preparation of Voluntary National Reviews (VNRs) in Asia and the Pacific for the period 2016–2024**

	ASIA-PACIFIC REGION		WORLD	
LEVEL OF LRG PARTICIPATION IN THE PREPARATION OF THE VNR	NUMBER OF COUNTRIES	SHARE (PERCENTAGE)	NUMBER OF COUNTRIES	SHARE (PERCENTAGE)
Medium to high degree of LRG consultation	21	34	146	42
Low degree of LRG consultation	19	31	70	20
No LRG consultation	13	21	108	31
No elected LRGs	9	15	24	7
Total	62	100	348	100

Source: ESCAP elaboration based on UCLG World Council Members 2022–2024, 2024. Available at https://uclg.org/wp-content/uploads/2024/10/composition_uclg_governing_bodies_2022_2026.pdf

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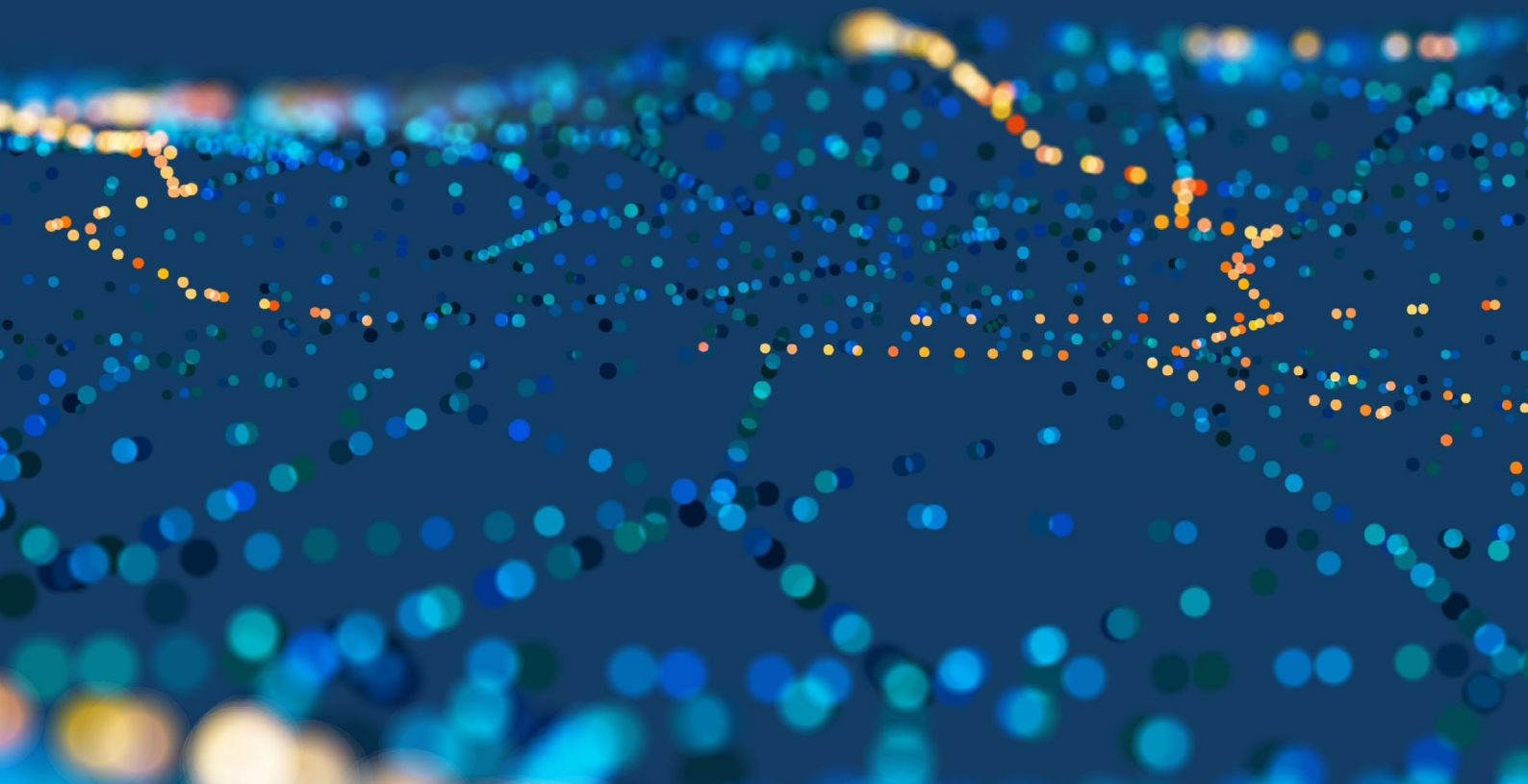
CHAPTER 4

Recommendations for transforming vision into action



By working together, Asia-Pacific cities can leverage their collective strengths to tackle common challenges, enhance their resilience and drive sustainable development across the region.

As the 2030 Agenda for Sustainable Development makes clear, all of society has a vested interest in the future of cities. While local governments typically oversee day-to-day affairs in human settlements, from small villages to megacities, national governments are critical enablers and protagonists who can set the course for sustainable urbanization. The New Urban Agenda is directed to United Nations Member States for precisely this reason; elevate the importance of cities in policymaking circles.

The following are five recommendations for national governments and their partners to promote sustainable urbanization for the benefit of people, planet, prosperity, peace and partnerships.

4.1 Enhance regional cooperation for resilient and sustainable urban development

Governments should enhance regional cooperation to effectively and jointly respond to environmental and socioeconomic vulnerabilities by developing collaborative urban networks that facilitate the sharing of knowledge and best practices among cities, thus enabling them to act as catalysts for regional leadership for the attainment of the Sustainable Development Goals and the objectives of the Paris Agreement. This can be achieved by: (a) supporting and contributing to peer-to-peer platforms for cities to exchange innovative solutions and experiences; (b) promoting joint initiatives that translate regional urban visions into actionable investments; and (c) fostering partnerships between national and local governments to ensure that local priorities align with national strategies, including through the use of innovative tools, such as voluntary local review reports. Cooperation can also be enhanced by organizing regular regional and subregional urban forums and integrating urbanization issues into existing intergovernmental and multi-stakeholder processes and institutions. By working together, Asia-Pacific cities can leverage their collective strengths to tackle common challenges, enhance their resilience and drive sustainable development across the region.

4.2 Adopt integrated national urban policies to bolster multilevel governance

Governments should adopt national urban policies as a tool to enhance multilevel governance, ensuring that urban development aligns with national economic, social and environmental goals. National urban policies focus the Government's attention on integrated urban development to promote climate action, disaster risk reduction and inclusive growth by establishing a clear vision grounded in stakeholder engagement and evidence-based planning. Such national urban policies should be aligned with existing national development plans and policies, as well as sectoral initiatives and strategies on issues like housing, transportation, infrastructure, energy and climate change. Key elements include equitable resource allocation, robust governance frameworks and alignment with broader national and global goals, including the Sustainable Development Goals. Regular monitoring, evaluation and adaptation of national urban policies would ensure responsiveness to emerging challenges, fostering dynamic, liveable cities that enhance the quality of life of all residents.

4.3 Strengthen subnational and local data collection and reporting to promote evidence-based urban policies

Governments should prioritize the development of subnational and local capacities to collect, interpret and utilize disaggregated data with a view to effectively localizing the Sustainable Development Goals. Investing in data collection, analysis and management systems at the local level can improve the quality, availability and timeliness of urban-specific data. Building capacity among local government officials and stakeholders to analyse and utilize data for evidence-based decision-making, in particular in areas related to Sustainable Development Goal implementation and climate action, can accelerate the implementation of the 2030 Agenda. By strengthening subnational and local data ecosystems and capacities, member States can empower local governments to play a more active role in achieving the Goals and addressing climate challenges. Finally, Voluntary Subnational and Local Reviews are useful tools for integrating national and local governments as they help to align local priorities with national Goal strategies and provide a framework for tracking progress at the subnational and local levels.

4.4 Plan for urban demographic changes with strengthened spatial planning and inclusive social policies

Governments should bolster their planning capabilities to address demographic changes, including population ageing, youth outmigration and international migration, in urban areas. Parallel growth in intermediary cities and large metropolitan areas is crucial to making progress towards achieving the Sustainable Development Goals and enhancing urban resilience. Cities experiencing demographic shifts face unique challenges, including rising demand for age-friendly infrastructure, evolving public service needs and fluctuating tax revenues. These trends also present opportunities to build more inclusive and sustainable urban environments. For example, adapting infrastructure and improving access to services, to support an ageing population and persons with disabilities, and fostering youth engagement through education and employment initiatives can enhance both intergenerational cohesion and social inclusion. Expanding green and public spaces, and investing in nature-based solutions – such as urban agriculture and green corridors – can improve health, increase climate resilience and generate new economic opportunities. Furthermore, promoting inclusive urban planning processes that engage a diverse range of demographic groups enables knowledge-sharing and innovation and enhances safety, social protections and equity. By proactively managing demographic transitions and focusing on inclusive urban policies and participatory planning, cities across the Asia-Pacific region can ensure no one and no place is left behind.

4.5 Pursue a diversified and innovative approach to urban financing

Governments should pursue diversified and innovative approaches to urban financing to address the financing gap in sustainable urban development across the region. While intergovernmental transfers, including revenue-sharing tax assignments between local and national governments, remain a cornerstone of municipal funding, they must be made more predictable, timely and adaptable to local priorities. Strengthening municipal own-source revenue collection, including through taxation, and in particular through property tax reforms, is crucial; governments should focus on improving property tax administration, expanding valuation capacities and aligning taxation with urban policy goals. For smaller cities, pooled financing mechanisms can enable cost-effective access to financing solutions. In addition, land value capture is a complementary tool to recover infrastructure investment costs, utilizing fiscal instruments such as betterment charges and public land leases. Furthermore, given the increased impacts of climate change, it is essential to create enabling environments at the national and local levels to improve cities' access to climate finance and strengthen their capacity to deliver sustainable development at scale. Combining traditional mechanisms with these innovative approaches will empower cities to meet their infrastructure investment needs while fostering accountability and resilience in urban governance.

For further information on this publication, please address your enquiries to:

Chief
Communications and Knowledge Management Section
Office of the Executive Secretary
Economic and Social Commission for Asia and the Pacific (ESCAP)
United Nations Building, Rajadamnern Nok Avenue
Bangkok 10200, Thailand
Tel: 622 288-1234
Fax: 662 288-1052
Email: escap-ckms@un.org

In this report, ESCAP explores the future of urbanization in Asia and the Pacific, focusing on the dynamic shifts in the region's urban landscape. It highlights the region's demographic transformations, including population ageing, and the persistent challenges of urban poverty and inequality. The analysis covers urban areas of all sizes, from megacities to smaller towns, and emphasizes the need for innovative governance models and sustainable development strategies to meet the region's unique urban needs. Key vulnerabilities, such as economic volatility, climate risks and social disparities, are addressed, as are opportunities for cities to serve as testing grounds for new solutions.

ESCAP underscores the critical role of regional cooperation in overcoming the challenges faced by cities and identifies shared approaches to localizing global goals, enhancing multilevel climate action and fostering inclusive urban growth. It also emphasizes the importance of data, digital transformation and innovative financing in supporting sustainable urban development and ensuring cities are equipped to navigate the complex future ahead.

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