2026 Asia-Pacific SDG Partnership Report

Inclusive Urban Futures: From Inequality to Opportunity

ESCAP
Economic and Social Commission for Asia and the Pacific

ADB

UNDP

Asia-Pacific SDG Partnership

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Inclusive Urban Futures: From Inequality to Opportunity

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Foreword

Rapid urbanization continues to reshape the economies and societies of Asia and the Pacific, creating new opportunities for the region's people, while putting increasing pressure on the systems that support urban life. In many cities, infrastructure and services have expanded, but access remains uneven. Deep divides persist, which curtail the opportunities of tens of millions of urban residents and risk perpetuating inequality across generations.

About 65 per cent of all SDG targets are estimated to depend on the involvement and action of local and urban governments. This underscores the importance of local government capabilities for urban planning, service delivery and governance in achieving sustainable development outcomes.

This report focuses on how cities can decisively transition from a state of unequal development towards becoming engines of inclusive and sustainable development. Nearly 700 million people in the region—almost two-thirds of the global total—live in slums or informal settlements, lacking access to basic services. Over 65 per cent of urban workers are engaged in informal, low-paid and often unsafe jobs. Environmental risks, from extreme heat to poor air quality, disproportionately affect those with the fewest resources to cope. Today, air pollution, for example, is causing deadly harm to millions in the big metropolises of Asia. Critical "greening" choices–for instance, banning the polluting practices of industry and agriculture or providing affordable alternatives for clean energy and transport–are no longer "sustainability" luxuries but actions that save lives.

Evidence shows that addressing these challenges is not only possible but that solutions are also often scalable. Elements of new technology, systems and skills can drive accelerated change. These transformations are being facilitated by a growing business sector. However, governments must play their part as policymakers to incentivize change. Where transformation is happening, cities are expanding clean public transport, experimenting with nature-based solutions to manage air and water quality, investing in digital and financial public infrastructure, expanding housing options and extending affordable basic services.

Jobs are the primary magnet for the millions of people who keep moving to cities. Attracting private sector investments to create multiple pathways to decent and productive employment in urban centres will be the key to benefit from the urban demographic dividend. Where city governments work with the business sector and communities to plan and deliver in these economic, environmental and social service areas, a thriving urban future looks attainable.

Good practices in the region highlight a powerful lesson: inequality in cities is not an inevitable consequence of urbanization. It is a development challenge that can be addressed through coordinated, people-centred policy choices and sustained public and private sector investments that strengthen urban systems and institutions, ensuring that growth also benefits those most at risk of being left behind. However, such solutions do not occur organically but must be designed and delivered with intent.

For more than a decade, ESCAP, ADB and UNDP have worked together through the Asia-Pacific SDG Partnership to support evidence-based analysis and dialogue on the region's most pressing development challenges.

We reaffirm our commitment to supporting countries and cities across Asia and the Pacific in translating evidence into action. Together with our partners, we will continue to advance the policies, financing, governance, technology and partnerships needed to build inclusive and sustainable urban futures.

The direction of peoples' movement in the region is clear–cities will be hosting growing populations at an accelerated speed and scale. The choices made today will determine whether our cities become drivers of shared prosperity or sites of growing exclusion, crime and despair. We urge all stakeholders to act with ambition and purpose to make positive choices that will foster a thriving urban future.

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Executive Summary

The Asia-Pacific region has urbanized rapidly over the past century and is now home to more than half of the global urban population—over 2.2 billion people. Although population growth is slowing, an estimated 1.2 billion people, or roughly 48 million annually, are expected to move to the region's urban areas by 2050. Urbanization has spurred economic growth, expanded infrastructure, and created opportunities. However, it has also laid bare inequalities that prevent hundreds of millions of people from fully benefiting from urban development.

Urban inequality has economic, spatial, and social dimensions. They are evident in three interconnected areas: urban residents' access to affordable housing and basic services, decent and inclusive employment, and environmental liveability. These inequalities shape how people, especially those from low-income groups, access basic services and housing, secure livelihoods and earn their living, and navigate environmental liveability challenges. Such disparities persist because, among other factors, services and exposure risks are unevenly distributed. They disproportionately affect groups already at risk of marginalization, such as women, youth, older persons, migrants, persons with disabilities, and low-income informal workers. Crucially, these imbalances reinforce exclusion and frame the conditions in which people live and work in cities and towns throughout the region.

Centred on Sustainable Development Goal (SDG) 11, which sets out the ambition to make cities and communities inclusive, safe, resilient and sustainable by 2030, the *2026 Asia-Pacific SDG Partnership Report* examines how persistent urban inequalities can be narrowed to pave the way for more inclusive urban futures. Aligned with the focus of the 2026 High-Level Political Forum on Sustainable Development (HLPF), this report analyzes the interlinkages of SDG 11 with key SDGs such as clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), industry, innovation and infrastructure (SDG 9), and partnerships for the goals (SDG 17). Furthermore, it outlines three priority areas for action: housing and basic urban services, urban employment, and access to a safe, healthy, and liveable urban environment.

A lack of affordable housing and access to basic services affects millions of people. Slums and informal settlements in urban areas remain one of the biggest challenges in the region. Although the share of slum dwellers has been falling in some countries, the total slum population in the region continues to grow. Asia and the Pacific is home to 697 million slum residents, or 62 per cent of the global total. These communities face overlapping deprivations including insecure land tenure, inadequate housing, poor sanitation, unreliable energy access, and heightened health risks. Analysis using ESCAP's leave-no-one-behind methodology shows widening disparities. In many countries, households identified as the "furthest behind"[i] are twice as likely to live in slums than the average household. Low-income households, women, older persons, persons with disabilities, informal workers, and migrants are among the "furthest behind" groups. They are most likely to live in slums, have the lowest access to clean cooking, digital technology, and transport, face the highest exposure to pollution and climate risks, and have the weakest job security and least social protection.

i 'Furthest behind' groups are identified using the Classification and Regression Tree (CART) approach, which pinpoints population groups most at risk of exclusion. In the context of slums, this refers to the group with the highest proportion of households living in slums. For basic services, it refers to the group with the lowest access.

Governments have expanded basic urban services, narrowing gaps in access to basic drinking water, sanitation, and electricity among different population groups. However, access to clean cooking fuel, digital connectivity, financial services, and affordable and safe public transport still varies greatly. Women, older persons, persons with disabilities, and low-paid informal workers are disproportionately affected by these service deficiencies, which limit mobility, productivity, safety, and access to jobs, health care, and education.

Urban workers in the region continue to grapple with persistent and significant deficits in decent work. More than 65 per cent are engaged in low-paid and insecure informal work, particularly in the services, construction, and small-scale manufacturing sectors. Informal enterprises and home-based producers in urban areas play a crucial role in supply chains, but they often do not have legal and regulatory protection and lack income security.

There are multiple factors that contribute to labour market inequalities in the region's urban areas. Low levels of education and limited access to skills training hinder upward mobility, reinforcing wage and social protection gaps. Environmental pressures, including air pollution and extreme heat, heighten occupational risks for informal workers such as street vendors, construction workers, and waste pickers. Digitalization presents both opportunities and exclusions. For example, platform-based employment is growing, but workers often lack social protection and bargaining power. Those without connectivity or digital skills are often left behind. Marginalized groups face numerous disadvantages, with more than four out of five of the youngest and oldest workers in informal employment.

Environmental challenges, such as air pollution, disaster risks, and limited green space are both symptoms and drivers of urban inequality. More than 2.3 billion people in the region are exposed to unsafe air quality according to WHO standards, with two-thirds of global premature deaths from air pollution occurring in Asia and the Pacific. Informal workers engaged in outdoor or manual occupations, including women, children and older persons, face heightened environmental risk exposure and limited access to affordable health care.

Waste generation is on the rise due to urban growth and higher incomes. Despite this, waste recycling rates remain low. Informal waste pickers, who play a crucial role in the region's recycling systems, often work in unsafe and unregulated conditions. Cities in low- and lower-middle-income countries generate less waste but also have less efficient waste management systems, leading to increased environmental and health risks.

Geophysical and climate change-related disaster risks, such as earthquakes, tsunamis, floods, landslides, cyclones, and droughts, affect millions of people living in hazard-prone areas such as unstable slopes, riverbanks, coastlines and other low-lying regions. These risks worsen inequalities by disproportionately impacting low-income communities and increasing losses in housing, livelihoods, and assets. Although many cities are investing in green spaces and nature-based solutions to improve resilience and liveabilty, coverage is still limited in some subregions.

Current governance and policies for inclusive urban development are still lacking. A review of national urban policies shows that they tend to focus on services, housing, and basic infrastructure, such as slum upgrading. However, government policies often do not adequately integrate housing, services, employment, environmental resilience, and local governance. Despite its significant scale and importance in urban economies, informal employment is not sufficiently addressed. Other shortcomings include a lack of decentralization, fiscal devolution, empowerment of local governments, and public participation mechanisms. Intersectional inequalities related to gender, age, and other social identities are often not adequately addressed. Local governments in the

Asia-Pacific region face difficult policy trade-offs under tight resource constraints. They must balance investment in affordable housing and slum upgrading with the development of business districts and allocate scarce urban land between commercial uses (e.g., malls) and green spaces. Local authorities are also increasingly facing demands to implement "low emissions zones", especially in central business districts, which bring long-term health and environmental benefits but may hurt businesses in the short-term.

Solutions for inclusive urban futures

The report highlights several practical approaches used in countries in the region, focused on:

(i) addressing urban inequality in housing and access to basic services:

Community-led solutions have been shown to effectively complement sectoral policies and top-down approaches to upgrading slums. These solutions empower communities to collectively take action, design, implement, and monitor slum upgrading projects. By combining local knowledge with technical support and access to finance, these initiatives deliver cost-effective results. Additionally, they provide opportunities for local employment, entrepreneurship, and skills development.

Housing programmes that combine the provision of affordable housing with improved access to basic amenities and support services have the potential to create synergies across economic sectors. These holistic approaches help to break down institutional barriers, encourage coordinated investment and promote shared accountability among institutions. When designed to be inclusive and welcoming of community and private sector involvement, this integration can enhance service delivery and resource efficiency.

Bridging last-mile access to basic services and infrastructure is necessary to reach marginalized groups. This goal can be accomplished by expanding infrastructure and service networks to underserved areas, ensuring that these systems are inclusive and accessible, and aligning infrastructure development with proper resource management and environmental safeguards.

(ii) promoting decent and inclusive urban employment:

Integrated labour market approaches that connect productivity, protection and participation are crucial for improving urban jobs. Specifically, outcome-based skills training programmes that are disability-inclusive and gender-responsive, along with financial assistance for informal workers, enhance employability and livelihoods. When combined with sectoral upgrades, these measures help boost productivity and establish pathways for transitioning to formal employment in urban areas.

Extending social protection coverage, especially for urban informal and platform-based workers, is essential. By providing developed land with basic services, vending areas, markets and safe work zones, local governments and urban planning agencies can significantly improve working conditions for informal MSMEs, street vendors and other informal economic units. Strengthening registration systems for informal workers, including the use of digital technologies, helps broaden access to social protection. Stronger occupational safety and health measures protect informal workers, particularly those vulnerable to worsening climate impacts. Legislative reforms that outline rights and protections for platform workers, home-based workers and domestic workers enhance representation, benefit women, youth and migrant workers and create an enabling environment for more inclusive labour markets.

(iii) improving urban environmental liveability:

Many cities in Asia and the Pacific are tackling air pollution by transitioning from coal to cleaner energy sources, promoting renewables, expanding electric and zero-emission transport, and establishing urban green belts.

Waste management can be improved through digital platforms for waste segregation, community-led "waste banks", and by promoting the formalization of informal workers through public-private partnerships to improve resource efficiency and livelihoods.

Enhancing disaster resilience requires conducting citywide studies on long-term disaster risks, such as climate-induced flood simulations. It is crucial to implement disaster risk reduction mechanisms and improve cities' emergency responses and capacity. Developing territorial and urban land use plans that provide spaces for people to live while also incorporating nature-based solutions—such as flood plains and green belts—can reduce flood risks and expand urban green spaces to create liveable cities.

To shape inclusive and sustainable urban futures, four critical enablers stand out:

Governance. Governments require coherent national urban policies, strong governance systems, integrated urban and territorial planning, and cross-sectoral approaches to coordinate land use, service provision, housing, and balance economic opportunities with environmental protection. When combined with community-led processes that effectively address local needs, significant inclusion gains are achieved. These approaches also facilitate coordinated action across neighbouring local governments and city-regions, enabling urban infrastructure and services to straddle administrative boundaries.

Financing. Cities and towns need substantial investments to address the increasing demand for resilient infrastructure and essential services. This is particularly crucial in the context of rapid urbanization and the escalating impacts of climate change. This requires making use of a range of innovative financing options to help close persistent funding gaps. Providing access to sustainable debt instruments such as green, social, sustainability, and municipal bonds will be important for directing both public and private capital towards climate-resilient and inclusive urban projects. Blended finance models, which combine public, private, and multilateral resources, along with risk-reduction tools such as first-loss credit enhancements, partial credit guarantees, and disaster risk financing mechanisms (including parametric insurance), are essential to attract significant private sector capital and de-risk investments. Strengthening the fiscal autonomy of local governments will also be important to free up much needed financial resources that can be directed towards inclusive and climate-smart urban development.

Science and technology. Advances in science and technology, especially in fields such as artificial intelligence, data analytics, the Internet of Things, geoinformatics, and remote sensing, can act as powerful catalysts for transforming urban planning, management, and service delivery across Asia and the Pacific. These tools can enable precise, anticipatory solutions to key challenges such as climate adaptation, waste management, mobility, public services, and disaster risk management. Without targeted investments in digital literacy, affordable connectivity, and the integration of safeguards against algorithmic biases, these innovations risk widening existing socioeconomic disparities, concentrating benefits in well-connected urban cores while leaving informal settlements and low-income groups behind. In order to promote more inclusive, liveable, and greener cities, technology deployment must prioritize people-centred strategies, strong governance frameworks, and active partnerships with the private sector that prioritize equity, transparency, and broad societal participation.

Partnerships and community engagement are essential for inclusive urban transformation. This process relies on collaboration among various stakeholders, including government at all levels, communities, civil society, the private sector, research and knowledge institutions, and international organizations. Community-led initiatives are particularly effective in upgrading slums, improving service delivery, and enhancing resilience. Regional cooperation allows cities to share best practices, pool resources and address cross-border issues such as climate change and air pollution.

Looking ahead: A transformative urban agenda

The region can unlock inclusive and sustainable urban futures by tackling inequalities across spatial, economic, social, and environmental dimensions. Since the region is particularly vulnerable to disaster risks, city and local governments must anticipate and adapt to new risks and opportunities, as well as the evolving needs of the urban population. Achieving this goal requires aligning governance, finance, science and technology, and multilateral and multi-stakeholder partnerships with a shared commitment to ensure that no one and no place is left behind.

By strengthening affordable housing and service delivery systems, promoting decent and inclusive urban employment, and enhancing environmental liveability, national, sub-national and local governments can create cities and towns that are more equitable, productive, resilient, and sustainable. This will ensure that the region's dynamic urban transition improves the lives of all its inhabitants in the 21st century.

WHY SUSTAINABLE URBANIZATION MATTERS IN ASIA AND THE PACIFIC

Asia and the Pacific has the world's fastest growing cities.

65% of SDG targets are relevant to cities.

Development gains are uneven and urban inequalities are deepening.

CITIES ARE DRIVERS OF PROGRESS ON THE SDGS BUT URBAN INEQUALITIES ARE DEEPENING IN THREE INTERCONNECTED AREAS

THREE DIMENSIONS OF URBAN INEQUALITY IN ASIA AND THE PACIFIC

ACCESS TO HOUSING AND BASIC SERVICES

697

million slum dwellers in 2022

(62% of the global slum population).

South and South-West Asia have the highest concentration of slum dwellers in the region.

43%

of urban population

2X "Furthest behind" households are twice as likely to live in slums than average urban households in many countries.

Drinking water and sanitation

Over 50%

of urban populations lack safely managed access in many countries.

Electricity and clean energy

Urban electricity access is near-universal, yet challenges remain in quality, reliability and affordability.

93% of urban residents have access to clean cooking

64% have access in rural areas

Internet access

- Disparities are stark between "furthest behind" and "furthest ahead" households.
- Affordability, service quality, digital skills and literacy are key barriers.

Financial services

- Access is increasing but highly uneven across households.
- Financial literacy and connectivity is limited for the most vulnerable.

Access to transport

- Many secondary cities rely on informal, fragmented networks with limited coverage.
- High costs and unsafe travel conditions create obstacles for the most vulnerable.

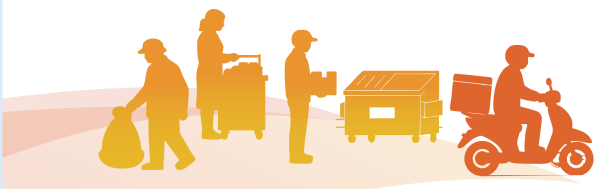
INFORMAL EMPLOYMENT

Over 65% of urban workers are engaged in the informal economy.

- Over **80%** of youth and older workers informally employed.
- Persons with disabilities and migrants are highly exposed.
- Women are overrepresented in more vulnerable informal jobs such as domestic work.

Most informal jobs involve labour-intensive and service-related activities.

Outdoor urban informal jobs expose workers to environmental hazards.



Digitalization and AI can expand opportunities, yet informal employment challenges remain.

95% of workers without formal education have informal jobs.

ENVIRONMENTAL LIVEABILITY

Air pollution

- Region has **6 out of 10** of world's most severely air-polluted countries.
- Over **2.3** billion people in the region exposed to unsafe air quality.
- Region accounts for two-thirds of premature deaths from air pollution globally.

Solid waste

- Municipal waste growing faster than cities can manage.
- Cities lack waste management infrastructure.
- Informal waste pickers lack basic protections.

Disasters and climate risks

- Region has **7 out of 10** most disaster-prone countries.
- The most exposed to risks are the least equipped to adapt.
- Flood-induced displacements heavily impact the urban poor.

Green spaces

- Green spaces reduce urban heat and flood risks.
- Access to urban green spaces is unequal.
- Many urban green spaces have been lost in recent decades.

SOLUTIONS TO ADDRESS URBAN INEQUALITIES IN ASIA AND THE PACIFIC

Expanding affordable housing and basic services

Community-led slum upgrading:

- Bottom-up programmes guided by local needs.
- Organizing residents, action plans, joint implementation and monitoring.

Implementing holistic planning and cross-sectoral collaboration:

- Linking housing with infrastructure and financial assistance.
- Enhanced resource efficiency and financing.

Bridging last-mile access to basic services:

- Expanding services and infrastructure to underserved areas.
- Ensuring infrastructure is accessible to marginalized groups.
- Integrating pollution and resource control into service expansion.

Advancing decent and inclusive urban employment

Promoting better and more secure jobs:

- Demand-driven skills and livelihood opportunities.
- Business support and upgrading of key sectors.

Improving working conditions and well-being:

- Expanded social protection for informal and platform workers.
- Stronger occupational safety and health measures.

Fostering gradual and inclusive transitions to formality:

- Legal reforms to extend rights and protections.
- Simplified registration for informal workers and businesses.
- Social dialogue and integrated approaches for gradual formalization.

Improving urban environmental liveability

Reducing urban air pollution:

- Policy interventions to support clean air zones and electric vehicles.
- Citizen-led legal action.

Improving solid waste management:

- Building stakeholder capacity.
- Introducing digital solutions.
- Supporting informal waste-pickers.

Strengthening urban resilience:

- Engaging communities.
- Combining modern planning with grassroots action.
- Investing in nature-based solutions and green spaces.

ENABLERS OF URBAN SOLUTIONS

- Additional and innovative financing
- Science and technology for urban solutions
- Effective governance
- Multilateral and multi-stakeholder partnerships

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Abbreviations

ADB	Asian Development Bank
AHP	Affordable Housing in Partnership
AI	Artifcial Intelligence
ANOVA	Analysis of Variance
ARH	Affordable Rental Housing
ASCN	ASEAN Smart Cities Network
ASEAN	Association of Southeast Asian Nations
ATM	Automatic Transfer Machine
BIM	Building Information Model
BLC	Beneficiary Led Construction
BRT	Bus Rapid Transit
CAP	Community Action Planning
CART	Classification and Regression Tree
Cat-DDOs	Catastrophe Deferred Drawdown Options
CCS	Centre for Climate Studies
CCTV	Closed-Circuit Television
CDIA	Cities Development Initiative for Asia
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CODI	Community Organisation Development Institute
COMPED	Cambodian Education and Waste Management Organisation
CPF	Central Provident Fund
DHS	Demographic and Health Surveys
DRM	Disaster Risk Management
ELVs	End-of-Life Vehicles
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
EUR	Euro
FRUGA	Flood Resilience for Ulaanbaatar Ger Areas
FSI	Floor Space Index
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIS	Geographic Information System
GSSS	Green, Social, Sustainability and Sustainability-linked
GWSP	Global Water Security and Sanitation Partnership
HBWs	Home-based Workers
HDPE	High-density Polyethylene
HLPF	High-Level Political Forum on Sustainable Development
HUCE	Hanoi University of Civil Engineering
ICEM	International Centre for Environmental Management
ICT	Information and Communication Technology
IDMC	Internal Displacement Monitoring Centre
IDR	Indonesian Rupiah
IFIs	International Financial Institutions
IFMS	Integrated Flood Management System
ILO	International Labour Organization
INR	Indian Rupee
IoO	Inequality of Opportunity
IoT	Internet of Things
ISS	Interest Subsidy Scheme
LGAs	Local Goverment Associations
LPG	Liquefied Petroleum Gas
LTMP	Land Transport Master Plan
MCDUP	Metro Colombo Urban Development Project
MICS	Multiple Indicator Cluster Surveys
MOUs	Memorandums of Understanding
MRT	Mass Rapid Transit
MSMEs	Micro, Small, and Medium-sized Enterprises
NbS	Nature-based Solution

NCA	North and Central Asia
NDCs	Nationally Determined Contributions
NEA	North-East Asia
NOx	Nitrogen Oxide
NUA	New Urban Agenda
NUPs	National Urban Policies
OECD	Organisation for Economic Co-operation and Development
OSH	Occupational Safety and Health
PCDIP	Philippine City Disaster Insurance Pool
PCRAFI	Pacific Catastrophe Risk Assessment and Financing Initiative
PHP	Philippine peso
PM	Particulate Matter
PMAY-U	Pradhan Mantri Awas Yojana-Urban
PPP	Public-Private Partnership
SDGs	Sustainable Development Goals
SEA	Southeast Asia
SEWA	Self-Employed Women's Association
SIDS	Small Island Developing States
SMEs	Small and Medium-sized Enterprises
SOx	Sulfur Oxide
SSWA	South and South-West Asia
TDR	Transfer of Development Rights
TVET	Technical and Vocational Education and Training
UCLG ASPAC	United Cities and Local Governments Asia-Pacific
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
US$	United States Dollars
VLRs	Voluntary Local Reviews
VND	Vietnamese Dong
WASH	Water, Sanitation & Hygiene
WHO	World Health Organization
WSUD	Water Sensitive Urban Design

Explanatory Notes

The Asia-Pacific region, unless otherwise specified, refers to the group of members and associate members of the Economic and Social Commission for Asia and the Pacific (ESCAP) that are within the Asia and the Pacific geographic region (the Asian Development Bank and the United Nations Development Programme, partners in this publication, have differing regional compositions). Some countries are referred to by a shortened version of their official name in the figures, as indicated in brackets in the listing below.

Geographic subregions in this report are defined (unless otherwise specified), as follows: East and North-East Asia: China, Democratic People's Republic of Korea (DPR Korea), Japan, Mongolia, and Republic of Korea; South-East Asia: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic (Lao PDR), Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, and Viet Nam; South and South-West Asia: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Maldives, Nepal, Pakistan, Sri Lanka, and Türkiye; North and Central Asia: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, Turkmenistan, and Uzbekistan; Pacific: American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

Least developed countries: Afghanistan, Bangladesh, Cambodia, Kiribati, Lao People's Democratic Republic, Myanmar, Nepal, Solomon Islands, Timor-Leste and Tuvalu.

Landlocked developing countries: Afghanistan, Armenia, Azerbaijan, Bhutan, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Mongolia, Nepal, Tajikistan, Turkmenistan and Uzbekistan.

Small island developing States: Cook Islands, Fiji, Kiribati, Maldives, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Singapore, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu. Developing Asia and the Pacific: ESCAP region, excluding Australia, Japan and New Zealand. Developed Asia and the Pacific: Australia, Japan and New Zealand. The classification of countries into income groups is from the World Bank.

Symbols and units: References to dollars ($) are to United States dollars, unless otherwise stated. The dash (–) between dates signifies the full period involved, including the beginning and end year.

Introduction

Asia and the Pacific experienced rapid urbanization[ii] throughout the 20th century, a trend that has continued into the 21st century.[1] The region is home to more than 2.2 billion urban residents, accounting for 54 per cent of the global urban population, with an additional 1.2 billion people projected to live in the region's urban areas by 2050.[2] While urban population growth has slowed, the magnitude and complexity of rural-to-urban population shifts continues to shape the region's social, economic, and environmental dynamics.

Urbanization has unlocked transformative opportunities for economic growth, improved living standards, and social mobility. Many countries in the region have provided affordable housing and expanded access to basic urban services, while simultaneously generating better opportunities for employment, trade and entrepreneurship. Growing investments in sustainable urban development, climate resilience and green infrastructure have also begun to enhance urban environmental liveability.

However, the benefits of urban growth and development in the region have not been equally distributed. They are characterized by structural inequalities across human settlements, basic services, and economic opportunities. The rapid pace of urban growth has often left behind those least able to adapt, including women, children, migrants, refugees, ethnic minorities, older persons, indigenous peoples, persons with disabilities and informal workers. In many urban areas, people living in poverty and other marginalized groups are disproportionately concentrated in slums and informal settlements. They experience insecure land tenure, inadequate access to basic services, job insecurity, and are vulnerable to environmental risks and hazards, including environmental pollution. The impacts of climate change, air pollution, and various geophysical and hydro-meteorological disasters, combined with rising living costs, growing economic uncertainty and technological divides, are amplifying the risk of systemic exclusion from the opportunities and benefits of urbanization. Without urgent and coordinated action to promote inclusive urban growth, cities risk becoming centres of entrenched poverty and inequality.

At the same time, many of these inequalities are influenced, and sometimes reinforced, by policy trade-offs embedded in countries' growth strategies. To illustrate, efforts to promote urban densification can raise affordability concerns for low-income groups, large-scale infrastructure investments may create displacement pressures, and urban upgrading initiatives can disrupt informal livelihoods if not carefully planned. These tensions highlight the practical challenges faced by cities and local governments and underscore the importance of integrated and people-centred policies in achieving SDGs and implementing the United Nations New Urban Agenda.

Promoting inclusion is at the core of the 2030 Agenda for Sustainable Development, and its commitment to leave no one behind and create a just, equitable, and inclusive world that meets the needs of the most vulnerable. Cities play a crucial role in achieving this vision as around two thirds of the 169 SDG targets rely on local action.[3]

ii In this report, the terms "urban" and "urbanization" cover the full spectrum of urban settlements from small- and medium-sized towns to metropolitan and mega cities.

Reiterating this point, the New Urban Agenda makes three transformative commitments to fully harness the potential of sustainable urban development: (i) promoting sustainable urban development for social inclusion and poverty eradication; (ii) fostering sustainable and inclusive urban prosperity and creating opportunities for all; and (iii) ensuring environmentally sustainable and resilient urban development from 2016 to 2036.[4] The year 2026 serves as the midpoint in the implementation of the New Urban Agenda, providing an opportunity to accelerate progress and reaffirm the commitment to leave no place behind.

Governments at all levels—national, sub-national and local—play a crucial role in shaping the direction of sustainable urbanization. Key stakeholders, such as urban residents, community-led organizations, utility providers, the private sector, civil society, research and knowledge institutions, and development practitioners also have a significant role to play. It is essential for them to ensure balanced development in both rural and urban areas.

When sustainable urbanization is properly planned and managed,[5] it can drive economic growth, reduce poverty, and promote equity by providing access to decent housing, basic services, employment, and a liveable environment for all. Conversely, unplanned or poorly governed urbanization can worsen deprivation and exclusion, creating lasting divisions within cities. To prevent urban inequality from becoming a permanent feature of the region's future, governments must strengthen urban governance, align urban policies with equality goals, and allocate resources to narrow persistent gaps.

The *2026 Asia-Pacific SDG Partnership Report* focuses on a people-centred, leaving no one-behind and leaving no place behind approach to sustainable urban development that prioritizes economic, social and environmental inclusion (See Figure 1). The report examines urban inequalities in the Asia-Pacific region across three interrelated dimensions: (i) access to housing and basic services; (ii) employment; and (iii) environmental liveability. Drawing on data-driven evidence, the report highlights solutions and enablers that help policymakers take action to address urban inequalities and advance progress across the five dimensions of sustainable development: people, planet, prosperity, peace, and partnerships.

The report is organized into three chapters. Chapter One on *Urban Divides* provides data-driven evidence on urban inequalities that manifest as (a) gaps in housing and urban services, (b) urban informal employment, and (c) unequal access to urban environmental liveability. Chapter Two, entitled *Addressing Urban Inequality: Good Practices from the Region*, explores solutions and enablers that have helped reduce inequalities and advance liveability and sustainability in urban areas in the region. Chapter Three comprises conclusions and actionable policy recommendations as a call to action.

The report uses the five SDGs that will be reviewed at the High-Level Political Forum on Sustainable Development in July 2026 as anchor points for discussing urban inequality in the region. The discussion primarily focuses on SDG 11—sustainable cities and communities—as the starting point and explores its connections with the other four SDGs under review: SDG 6 on clean water and sanitation, SDG 7 on affordable and clean energy, SDG 9 on industry, innovation and infrastructure, and SDG 17 on partnerships for the goals. Through this approach, the report highlights coordinated, multi-level action to bridge urban inequalities and achieve inclusive and sustainable urban development for all, underscoring that "leaving no one behind" requires "leaving no place behind."

Figure 1: The framework for addressing urban inequality and the key features of inclusion discussed in this report.

CHAPTER 1

Urban Divides

This chapter examines the multidimensional nature of urban inequality in Asia and the Pacific. The key domains discussed are affordable housing and access to basic services, urban informal employment, and urban environmental liveability and resilience. The theme of the first section is disparities in access to affordable housing and basic services in the region. It highlights the challenges related to urban slums and informal settlements as well as the uneven distribution of basic services. In the second section, the state of urban informal employment is examined, including sectoral patterns and the socio-economic and demographic factors that shape labour market outcomes. The third section on urban environmental liveability centres on the interplay between environmental risks, urban sustainability, resilience challenges, and social and spatial inequalities. It does this by taking stock of common urban environmental challenges, such as pollution, disaster risks, and limited green spaces, that are both symptoms and drivers of urban inequality, and by making the point that greener cities are more inclusive and resilient. The last section of the chapter provides an overview of urban governance and policy initiatives.

1.1. Urban inequality in access to housing and basic services

Key messages

- Asia and the Pacific continues to experience growth in people living in slums and informal settlements, where overlapping deprivations are widespread. Households in the "furthest behind" groups are twice as likely to live in slums than the average urban household.
- Basic urban services have expanded markedly. Access to basic drinking water, basic sanitation, and electricity is near universal in most countries, with inequalities across population groups narrowing. However, access to clean cooking fuel, digital connectivity, financial services, and affordable, safe public transport remains largely unequal.

Urban inequality in access to housing and basic services remains a persistent challenge across Asia and the Pacific, despite sustained urban economic growth and major investments in urban services and infrastructure. The region is home to the world's largest concentration of slum dwellers living in conditions of insecurity and deprivation. While access to basic services such as water, sanitation, energy, transport, and digital and financial services has expanded, large gaps still exist, especially for marginalized groups and residents of informal settlements. These disparities, caused by structural barriers amid rapid urbanization, threaten to undermine the benefits of urban transformation and reinforce cycles of exclusion unless addressed through urban policies that promote inclusive and coordinated action. This section examines these inequalities, using ESCAP's "leave-no-one-behind methodology" drawing on the Classification and Regression Tree (CART) analysis of Demographic and Health Surveys (DHS) and the Multiple Indicator Cluster Surveys (MICS) survey data from 2010 to 2024 (see Annex 1).

1.1.1. Housing: slums and informal settlements

Affordable and adequate housing remains elusive for many people in Asia and the Pacific, with many low-income urban residents compelled to live in slums and informal settlements. These areas are characterized by substandard housing, insecure land ownership, and limited access to essential services.[6] Slums serve as a physical manifestation of urban inequality, typically located in areas where various disadvantages converge, such as lack of water supply, lack of sanitation,

overcrowding (defined as an occupancy rate of over three persons per room), poor quality of dwelling, and lack of secure land tenure.[iii] Figure 2 demonstrates the differences between slums, informal settlements and inadequate housing.

Figure 2: Criteria used in defining slums, informal settlements and inadequate housing

	Slums	Informal settlements	Inadequate housing
Access to water	✓	✓	✓
Access to sanitation	✓	✓	✓
Sufficient living area, overcrowding	✓		✓
Structural quality, durability and location	✓	✓	✓
Security of tenure	✓	✓	✓
Affordability			✓
Accessibility			✓
Cultural adequacy			✓

Source: UN-Habitat (2019).[7]

Despite significant economic growth and rapid urban transformation, the Asia-Pacific region continues to account for the largest share of the global urban population living in slums or informal settlements. In 2022, an estimated 697 million people, accounting for 62 per cent of the global total, lived in such settlements in the region.[8] Although the percentage of urban slum dwellers as a proportion of the total population decreased from 32 per cent to 30 per cent between 2013 and 2022, the absolute number continues to increase. The main factors driving this trend are rapid urbanization, insufficient urban planning, weak governance, ineffective land and housing policies, climate impacts, and a limited supply of affordable housing.[9] The subregions of South and South-West Asia, as well as South-East Asia, have the highest number of slum dwellers in the region, with nearly 43 per cent and 25 per cent, respectively, of their urban populations living in slums. Similar to the overall trend in the region, the proportion of the slum population is decreasing while the number of people living in slums is on the rise.

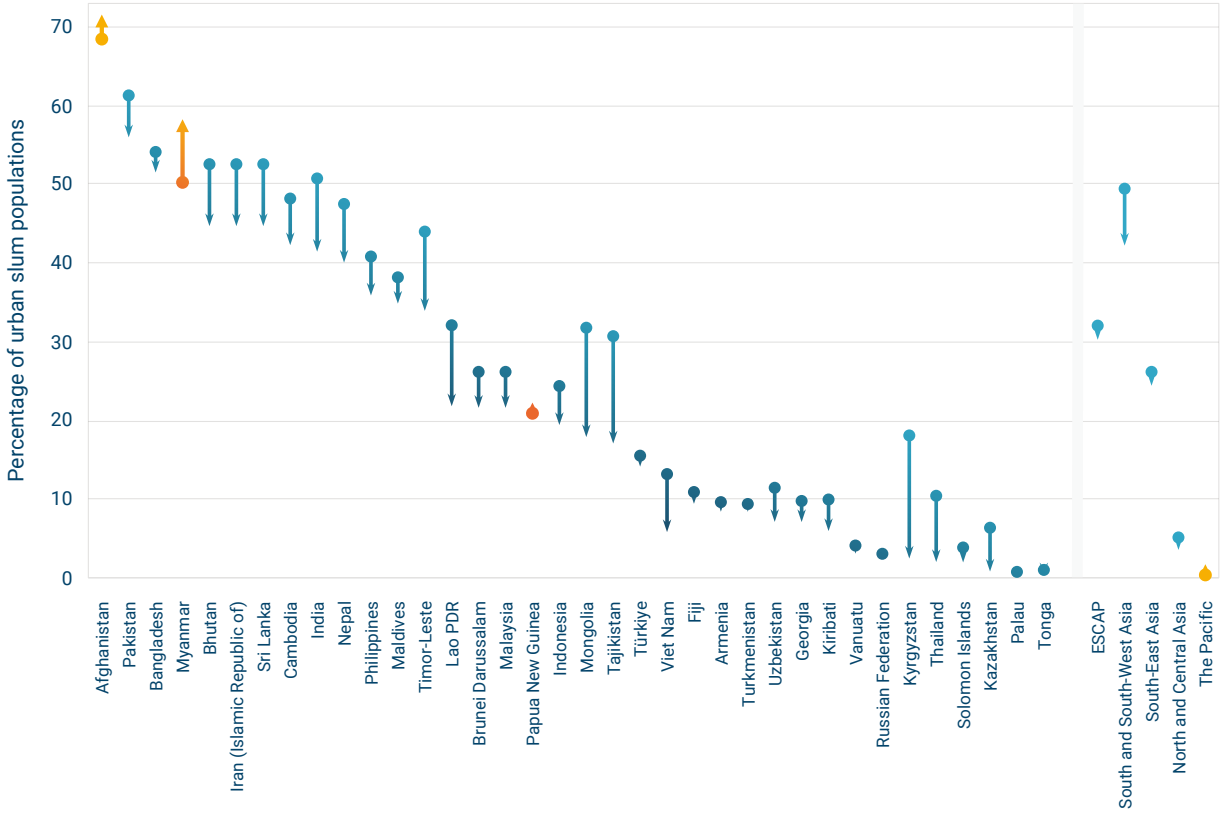
At country level, most countries in the region have made progress in reducing the share of the population living in slums.[iv] However, the pace and scale of progress made vary considerably (see Figure 3). For example, in Mongolia the share declined notably from 32 to 18 per cent, in Tajikistan from 30 to 17 per cent, and in Kyrgyzstan from 18 to 2 per cent during 2013-2022. In other countries, progress has been more gradual, with only marginal changes observed. In a limited number of countries, the share of the population living in slums increased during the same period, underscoring the impact of diverse national circumstances and external shocks on urban development trajectories.

iii Although the definition of a slum household also includes "lack of security of tenure", this indicator is often not used due to the lack of information from a larger number of countries.

iv "Slum" household is defined if inhabitants of that household suffer from one or more of the following household deprivations: (1) lack of access to improved water source, (2) lack of access to improved sanitation facilities, (3) lack of sufficient living areas, (4) lack of housing durability and (5) lack of security of tenure. Due to lack of data availability on security of tenure through nationally representative surveys, this component is not considered in the calculation of proportion of slum households by UN-Habitat.

Among households living in slums, inequality is significant and persistent, and in some cases, it is increasing. Analysis using the Classification and Regression Tree (CART) approach,[v] based on Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) covering the period 2010-2024, shows that in several countries including Bangladesh, India, the Lao People's Democratic Republic (Lao PDR), the Philippines, Thailand, and Viet Nam, households identified as the "furthest behind"[vi] were twice as likely to live in slums than the average urban household (see Annex 2). In some countries, including Bangladesh and Lao PDR, the share of the "furthest behind" living in slums increased, even as the share among average urban households declined. This suggests that economic growth and improvements in housing access are not reaching the most disadvantaged, potentially deepening intra-urban inequality.

Figure 3: Proportion of urban slum population in Asia and the Pacific, percentage, 2013 and 2022



Source: UN-Habitat (n.d)[10]

Note: The changes cover the period 2013-2022, with the exception of Lao PDR and Viet Nam, where the changes are between 2013 and 2020. The East and North-East Asia subregion is missing, as data are only available for Mongolia.

v The classification and regression tree (CART) approach is used to determine the circumstances that shape the groups most likely to be left behind. Through this approach, an algorithm splits the sample into groups with significantly different situations, and rates of access to *services*. The following circumstances are used: household wealth (belonging to the bottom 40 or the top 60 of the wealth distribution); educational attainment of the household head (lower education, secondary education, or higher education); gender (male- or female-headed household), and age of household head (34 years old or younger, between 35-54, and 55 years or older). The CART approach employed in this Report is inspired by the ESCAP Leaving No One Behind Platform available online at https://lnob.unescap.org/. See Annex 1 for methodological details.

vi "Furthest behind" groups are identified using the classification and regression tree (CART) approach, which pinpoints population groups most at risk of exclusion. In the context of slums, this refers to the group with the highest proportion of households living in slums. For basic services, it refers to the group with the lowest access.

Slums and informal settlements face deep-rooted challenges due to chronic underinvestment in urban infrastructure and basic services, insecure land tenure, and heightened exposure to geophysical and climate-induced hazards. For most slum residents, access to drinking water, basic sanitation, electricity, clean fuel and transport remains lacking, perpetuating multidimensional poverty within slum communities (see Table 1). This situation exacerbates vulnerabilities for women and girls, persons with disabilities, and older persons, impacting their safety, freedom of movement, and ability to access basic services. Additionally, slum dwellers face a raft of compounding hardships. These include poor quality and overcrowded housing in environmentally hazardous locations, insecure land tenure with eviction risk, elevated health burdens, unemployment, food insecurity, and social stigmatization.[11] Environmental degradation significantly compromises health outcomes, as exposure to household air pollution, unsafe water, and inadequate sanitation is a leading cause of infant and child deaths worldwide. These interconnected deprivations make slum residents highly vulnerable to external shocks and economic stresses, further worsened by unequal access to affordable, quality health services and limited social protection coverage.

The prevalence of slums in developing countries is influenced by various factors that reinforce each other. These include rapid urbanization (including rural-to-urban migration), ineffective urban planning resulting in unplanned and haphazard spatial growth, a lack of affordable housing for low-income households, dysfunctional urban and housing policies, and widespread poverty.[12] The scale of this challenge is significant, as a one per cent increase in urban population growth can lead to a 5.3 per cent increase in slum incidence in Asia.[13] If current trends persist, there is a risk of vast "mega slums" emerging, where deprivation becomes entrenched and intergenerational, and inequality deepens.

Socio-economic factors such as wealth, education, gender, and age also play a role in influencing the prevalence of slums and inequality within these communities. While gender and age play a role in shaping outcomes, wealth and education generally have a more significant impact (see Annex 2). In fact, wealth and education are the strongest predictors of vulnerability. Poorer households often cannot afford high land and rental costs, leading them to settle in slums where living conditions are substandard. Additionally, households led by individuals with lower levels of education—a factor often associated with limited earning potential and informal work—are significantly more likely to reside in slum areas.

Limited availability and accessibility of schools and education services in slums and informal settlements further disadvantages residents in terms of education outcomes compared to higher-income households in urban areas. This restricts social mobility and perpetuates intergenerational poverty.[14] The disadvantage is intensified for the growing number of rural-urban migrants and their children who are disproportionately concentrated in slums and informal settlements. They have notably worse education and performance outcomes than their local counterparts and face significant obstacles in accessing urban public services.[15] For example, in China, the household registration (hukou) system, despite a gradual easing of restrictions in several cities, tends to influence access to public services, with studies pointing to implications for the enrolment of internal migrant children in urban public schools.[16] In Viet Nam, registration requirements similarly shape access to public education, health care, and other essential services for internal migrants.[17] These administrative frameworks can result in varying levels of access depending on registration status.

Table 1: Proportion of populations with access to essential services: slums vs. non-slums

Country	Year	Clean water		Basic sanitation		Electricity		Clean fuel		Internet		Bank account	
		Slum	Non-slum	Slum	Non-slum	Slum	Non-slum	Slum	Non-slum	Slum	Non-slum	Slum	Non-slum
Afghanistan	2022	94.1	98	90.8	97.4	95.2	98.5			37.9	69.3		
Bangladesh	2022			84	98.1							33.8	64.8
Fiji	2021											88.8	97.5
Indonesia	2017			82.5	92.3			79.5	93.9				
India	2019	98.4	98.8	67.5	87.4	97.6	99.7	84.1	95.4	54.7	64.7	94.3	95.9
Cambodia	2021			93.4	99.5	97.4	99.9	67.4	92.2			32 1	58.1
Kiribati	2018			68.1	97.8	71.6	93.4						
Lao PDR	2023	95.7	99.1	89.7	99.8					67	85.3	48.3	77.2
Myanmar	2015	91.5	96.6	57.3	82.7	89.1	98.7	53.9	76.9			14.1	33 .4
Mongolia	2018	98.9	99.9	98.2	99.6					55.3	77.7	96	97.7
Nepal	2022	98.1	99.4	87.7	99.2	95.3	99.6					70.1	89-7
Pakistan	2017			85.3	95.1			82.7	96.8	10.2	21.1	28.2	49.7
Philippines	2022			95.6	99.8	94.4	98.9	72.7	90.5			30.6	43.5
Turkmenistan	2019									46.6	64.5		
Vanuatu	2019	97.7	99.1			79.4	97			86.2	94.1		
Uzbekistan	2021									90.7	93.4	62.3	80
Samoa	2019									75.2	81.3		

Source: Calculations based on the Classification and Regression Tree (CART) using DHS/MICS survey data from 2010 to 2024.

Note: Empty cells imply either data are not available or there is no statistical difference in access between slum and non-slum groups.

1.1.2. Access to drinking water and sanitation

Drinking Water

In the Asia-Pacific region, basic[vii] drinking water services are generally well distributed in urban areas, with most countries achieving near-universal coverage and narrowing inequalities across population groups. Countries that previously had low access have significantly expanded services, and in many cases, over 95 per cent of the "furthest behind" groups now have access to basic drinking water services (see Figure 4.a). However, progress on higher quality services, such as safely managed and piped drinking water,[viii] is lagging. More than half of urban populations in many countries still

vii *basic' drinking water refers* to drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing. Source: WHO and UNICEF (2025). *Progress on household drinking water, sanitation and hygiene 2000–2024: special focus on inequalities.*

viii "Safely managed" Drinking water from an improved source that is accessible on premises, available when needed and free from faecal and priority chemical contamination. "Piped": Piped on premises (WHO and UNICEF 2025).

lack access to safely managed drinking water, with declines observed in Kyrgyzstan, Nepal and Sri Lanka over the past decade (see Annex 3). In some countries, piped water coverage has stagnated or even fallen. Women and girls continue to be primarily responsible for water collection, limiting their time for education and paid work, thereby reinforcing gender gaps in economic participation.[18]

Expanding and upgrading water services often lag behind the pace of urbanization, particularly in developing countries, due to financial, institutional, and technical constraints. For example, in Nepal, weak coordination between housing and utility authorities has led to the construction of homes without guaranteed water access.[19] In Pakistan, urban water tariffs are relatively low and infrequently adjusted, contributing to limitations in cost recovery and system maintenance.[20] Indonesia faces challenges of aging infrastructure, underinvestment, and inefficient water distribution networks,[21] while in many Central Asian countries resource and technology constraints affect the modernization of water systems.[22] In the Pacific, capital maintenance is frequently underfunded and insufficiently prioritized. Furthermore, climate change and natural disasters exacerbate water scarcity and undermine resource sustainability, putting hard-won gains in water security at risk of reversal. The region requires an estimated $4 trillion to meet its water, sanitation and hygiene needs from 2025 to 2040. However, current national budgets meet only about 40 per cent of that need, leaving an annual shortfall of over $150 billion.[23] Addressing these barriers to ensure safe and sustainable access for all urban residents requires improved urban governance, targeted investments, and climate-resilient water management.

Sanitation

Over the past decade, access to basic[ix] sanitation services has improved across much of the region, with some countries reaching universal coverage. However, inequalities persist in some other countries and have even widened in a few. For example, disparities in access between the groups with the least access (those "furthest behind") and the average population have grown in Bangladesh from 20 to 27 per cent from 2014 to 2022, in Cambodia, from 10 to 16 per cent between 2014 and 2021, and in Nepal from 8 to 12 per cent from 2019 to 2022 (see Figure 4.b). This highlights the importance of interventions that reach marginalized groups, including women, children, migrants, refugees, older persons, and persons with disabilities.

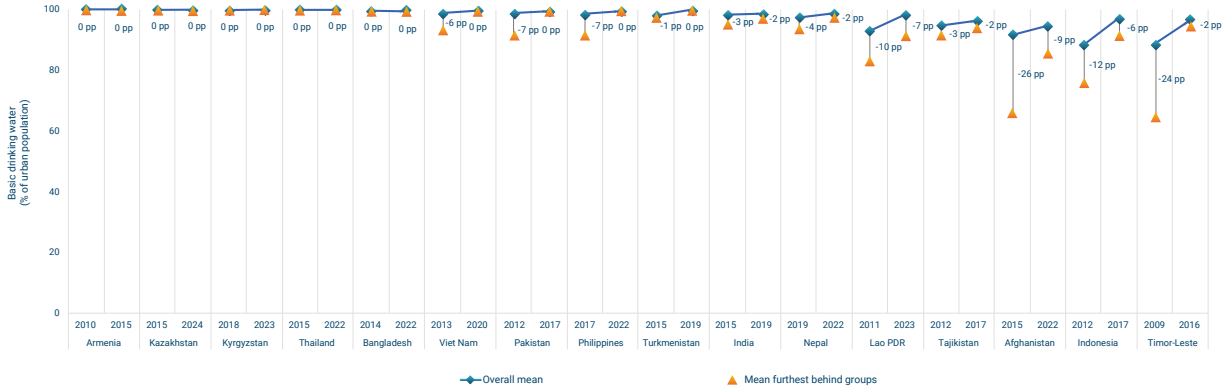
Furthermore, progress in higher level sanitation services, including safely managed sanitation,[x] wastewater treatment and sewer connections, remains uneven. In 2024, less than half of urban residents in several countries had access to safely managed sanitation services, and over 80 per cent of wastewater was discharged untreated, contaminating key water sources used for drinking and daily use (Annex 3). Despite growing demand, in many countries, sanitation—particularly wastewater management—remains a low policy priority, constrained by weak institutional capacity, high costs, and limited public awareness. Advancing urban sanitation requires a shift from a "no return, no investment" mindset to a solution-oriented approach, recognizing sanitation as a public good essential for public health, environmental quality and sustainable urban development.[24]

ix "Basic" service: Use of improved facilities that are not shared with other households. Source: WHO and UNICEF (2025).

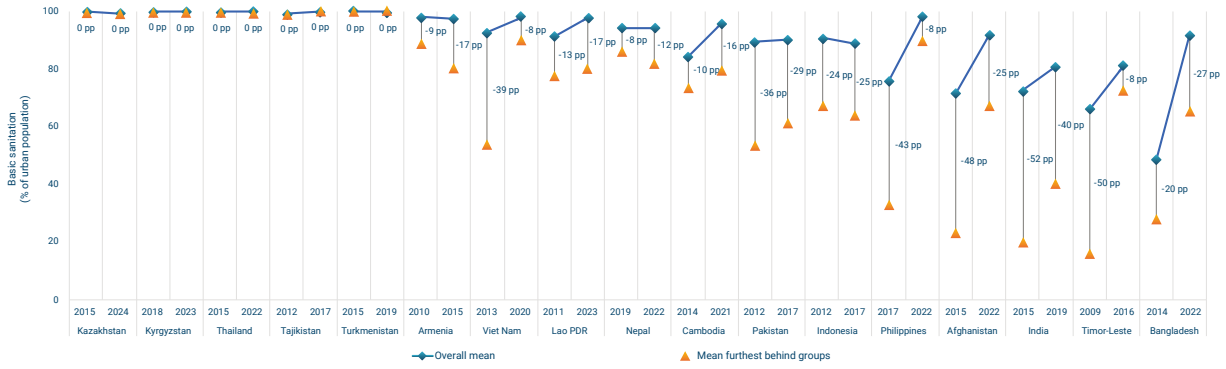
x "Safely managed" sanitation: Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated off-site (WHO and UNICEF 2025).

Figure 4: Proportion of urban basic drinking water and basic sanitation services in Asia and the Pacific, percentage

(a) Basic drinking water



(b) Basic sanitation



Source: Calculations based on the Classification and Regression Tree (CART) using DHS/MICS survey data from 2010 to 2024.

Note: Blue markers show the national average. Orange markers show the mean for the furthest behind groups, defined as the population with the lowest access. The gap reflects the difference, in percentage points, between the national average and the furthest behind group in each country. Survey years are indicated below each country. The complete list of countries and years is available in the methodological annex.

1.1.3. Access to electricity and clean energy

The Asia-Pacific region has made remarkable progress in expanding access to electricity, with urban areas nearing universal coverage and rural areas not far behind. Most countries now report urban access rates above 99 per cent, reflecting decades of sustained investment in energy infrastructure.[25] Achieving universal energy access under SDG 7.1 has been possible even amid rapid urbanization and growing population pressures. Moreover, disparities in access to electricity have narrowed significantly, as gaps between households with the least access ("furthest behind") and the average urban households have diminished, showing notable improvements in energy inclusion (Figure 5).

However, there are challenges in ensuring the quality, reliability, and affordability of energy services.[26] Many urban households connected to the grid continue to experience frequent load shedding and unstable supply due to aging infrastructure and underinvestment in maintenance. For low-income households, especially those in informal settlements, the cost of electricity—whether through electricity tariffs, connection fees, or equipment costs—can be prohibitively high. This highlights that even after universal physical electricity connection is achieved, improving the various dimensions of energy access must remain a priority to address remaining inequalities.

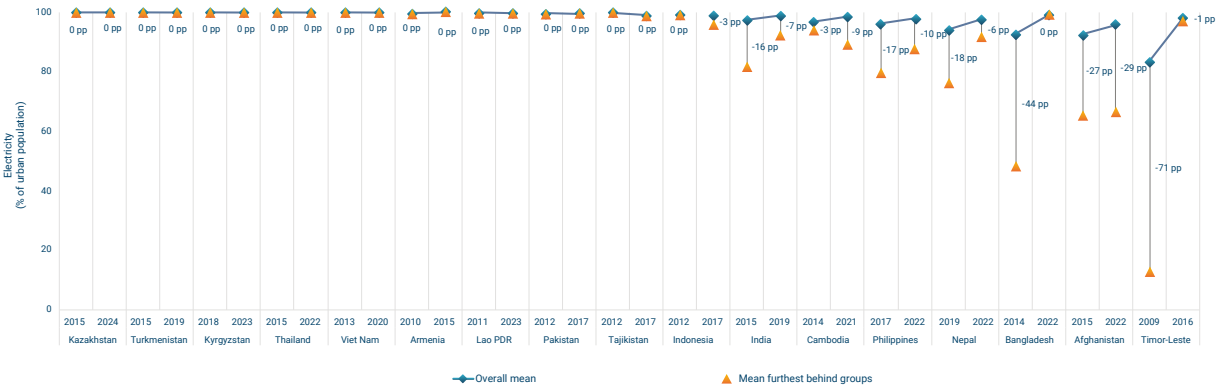
Progress in adopting clean cooking fuels and technologies has not kept pace with the expansion of electricity access. Around 93 per cent of urban residents in the region have

access to clean cooking solutions, compared with only 64 per cent in rural areas.[27] Despite this urban advantage, there are still significant inequalities within urban areas. In many countries, such as Afghanistan, Bangladesh, Cambodia, Lao PDR, Myanmar, Nepal, Papua New Guinea and Viet Nam, the gaps in access between households identified as "furthest behind" and those "furthest ahead" could be more than fourfold (Figure 6).[28] These differences reflect a combination of structural, geographic, and socio-economic factors that continue to influence inclusive access to clean cooking solutions.

Clean cooking is the most underfunded and overlooked aspect of SDG 7, despite its significant positve impacts on health, gender equality, and household emissions. In the Asia-Pacific region, around 1 billion people still rely on biomass, charcoal and kerosene, putting households, especially women and girls, at risk of harmful indoor air pollution that contributes to millions of premature deaths each year.[29] Furthermore, the time and effort spent gathering fuel or cooking with inefficient stoves restrict women's and girls' access to education, employment, and overall wellbeing, perpetuating cycles of poverty and exclusion.

Several structural, financial and behavioural barriers continue to impede the adoption of clean cooking technologies. Limited policy prioritization has been a major hindrance, as several countries have yet to incorporate specific clean cooking targets into their national strategies. The high upfront costs of stoves and fuels, combined with high inflation and rising fuel prices, have made clean energy options less affordable, especially for low-income households. Traditional cooking practices deeply rooted in cultural norms further discourage the transition to cleaner and safer alternatives.

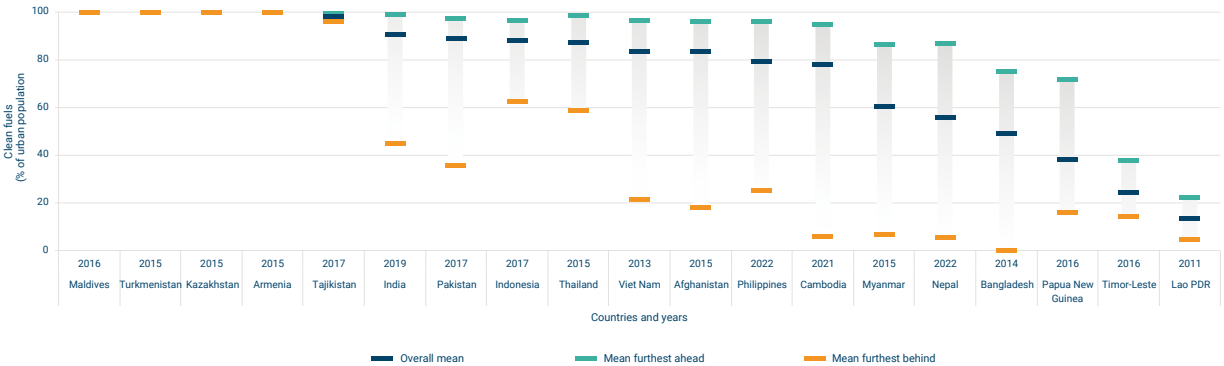
Figure 5: Proportion of electricity coverage in urban areas of Asia and the Pacific, percentage



Source: Calculations based on the Classification and Regression Tree (CART) using DHS/MICS survey data from 2010 to 2024.

Note: Same as above.

Figure 6: Proportion of urban population with access to clean fuel in Asia and the Pacific for "furthest behind" and "furthest ahead" groups, percentage



Source: Calculations based on the Classification and Regression Tree (CART) using DHS/MICS survey data from 2010 to 2024.

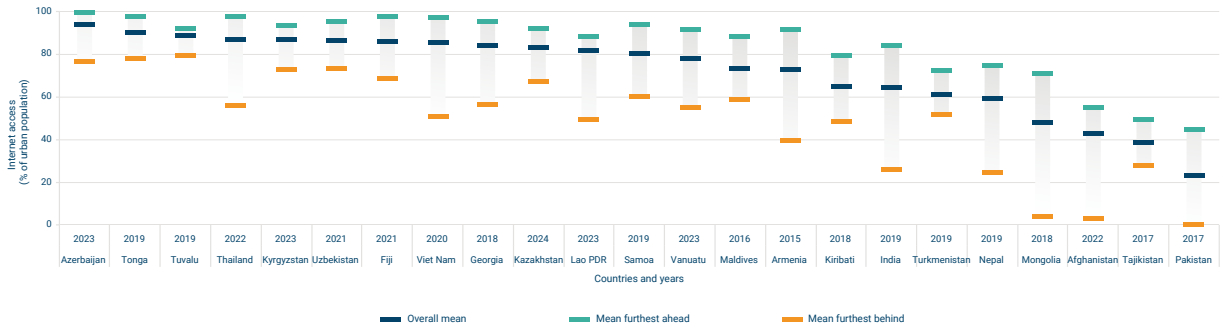
Note: Black markers show the national average. Blue markers show the mean of the furthest ahead groups. Orange markers show the mean of the furthest behind groups, defined as the population with the lowest access. The vertical bars represent the gap between the furthest ahead and furthest behind groups within each country. Survey years are the latest available. The complete list of countries and years is available in the methodological annex.

1.1.4. Access to the Internet

Digital transformation has become a cornerstone of inclusive and sustainable urban development, with Internet connectivity a prerequisite for participation in modern societies. Cities across the region are increasingly relying on digital platforms for education, public services, finance, governance, and social interaction. They are also integrating smart city[xi] innovations to enhance urban efficiency, sustainability and quality of life.

Uneven access to the Internet, however, risks deepening inequalities. In 2024, one-third of the region's population remained offline. Around 17 per cent of urban residents did not have Internet access, compared to 51 per cent in rural areas.[30] Figure 7 shows that while more than 80 per cent of urban residents are connected to the Internet in many countries, less than half are connected in a few others. Disparities are also stark between the "furthest behind" and "furthest ahead" groups.

Figure 7: Proportion of urban population with Internet access in Asia and the Pacific for "furthest behind" and "furthest ahead" groups



Source: Calculations based on the Classification and Regression Tree (CART) using DHS/MICS survey data from 2010 to 2024.

Note: Same as above.

The digital divide is a result of broader socio-economic inequalities, disproportionately affecting low-income households, women and girls, older persons and persons with disabilities. According to CART analysis, in Thailand, Internet access among urban households that are poorer (bottom 40 per cent) and headed by individuals aged 55 or older is only 56 per cent, compared to 97 per cent among wealthier, younger-headed, male-led households in 2022 (see Annex 4). In Viet Nam, low-income women-led households have significantly lower access compared to other households. Similarly, women with functional disabilities show notably lower mobile (81 per cent) and Internet (35 per cent) use compared to women without such disabilities (92 per cent and 48 per cent, respectively, in 2020).[31]

While mobile broadband is generally affordable, fixed broadband remains unaffordable in most developing economies.[32] Urban informal settlements often lack reliable connections, despite widespread 4G coverage.[33] Another significant barrier is the lack of digital skills. Gaps in digital literacy persist in the region, with data from 15 Asia-Pacific countries showing that large segments of the population lack even basic ICT skills. In low-income countries, this share can exceed 90 per cent.[34]

Achieving digital inclusion requires more than just expanding connectivity. Policies must also focus on strengthening digital capabilities, promoting affordability for marginalized groups, ensuring universal design and digital accessibility, and encouraging safe use of technology.

xi Smart cities are defined as urban areas where technology and data collection help improve quality of life as well as the sustainability and efficiency of city operations. Source: Vinod Kumar, T.M. and B. Dahiya. (2017). "Smart Economy in Smart Cities", in: Vinod Kumar, T. (ed.) *Smart Economy in Smart Cities. Advances in 21st Century Human Settlements*. Springer, Singapore. https://doi.org/10.1007/978-981-10-1610-3_1

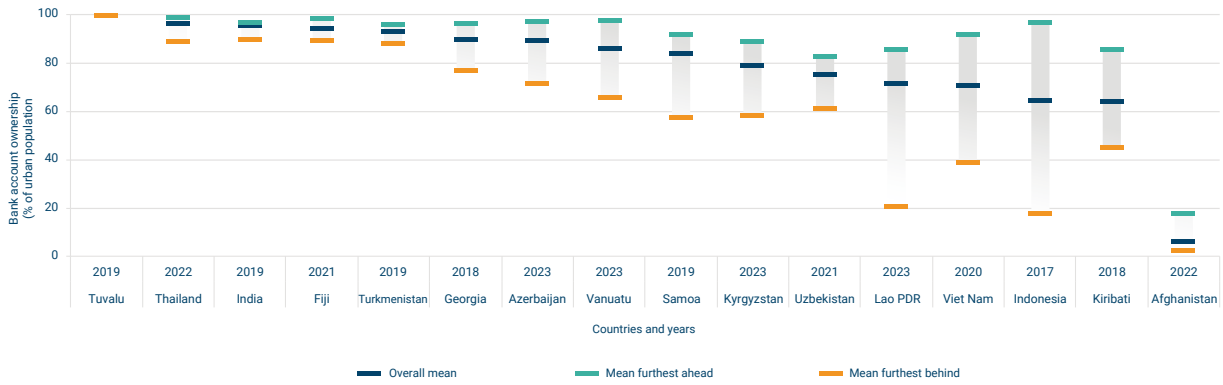
1.1.5. Access to finance

Access to financial services is crucial for addressing urban inequality, promoting inclusive urban development, and achieving financial empowerment. It enables people to save, borrow, manage risks, invest in education or businesses, and reduce vulnerability to income and unemployment shocks.

The Asia-Pacific region has made significant progress in expanding financial access, particularly in urban areas. This growth is fuelled by increasing incomes and technological advancements. Using ownership of bank accounts as a measure of financial access, Figure 8 shows a high share of urban households with bank accounts in most countries. In countries such as Azerbaijan, Fiji, Georgia, India, Thailand, Turkmenistan and Tuvalu, over 90 per cent of urban households have a bank account. However, there are still notable disparities in many countries. For example, in Indonesia, Lao PDR and Viet Nam, less than 40 per cent of urban households in the "furthest behind" category have a bank account. This is more than 30 percentage points below the figure for the average urban household. Disparities are also evident in access to digital payment services. In 2024, over 80 per cent of urban residents in China, Kazakhstan, Malaysia, Mongolia, and Thailand reported using digital payments, while adoption remains lower, at around one-third of urban residents, in Bangladesh, Nepal, and Pakistan.[35]

The rapid growth of mobile money and digital payments has brought millions of people, particularly those working in the urban informal economy, into the financial system. However, unless it is designed inclusively, financial digitization can lead to greater exclusion. Exclusion is deepened when vulnerable populations lack the necessary digital and financial literacy and reliable connectivity required to transact digitally.[36] For many low-income groups in developing countries, high smartphone and data costs remain major barriers, although basic feature phones can facilitate some functions of digital payments and savings.[37] Accessibility gaps remain, as digital banking services and facilities (e.g., ATMs) rarely incorporate assistive features, such as voice-activated, visual, and tactile tools that support persons with different disabilities.[38] Furthermore, the algorithms that power digital lending and credit scoring can inherit and amplify existing societal biases, denying credit access to marginalized groups and reinforcing historical discrimination.[39]

Figure 8: Ownership of bank accounts in selected countries in Asia and the Pacific



Source: Calculations based on the Classification and Regression Tree (CART) using DHS/MICS survey data from 2010 to 2024.

Note: Same as above.

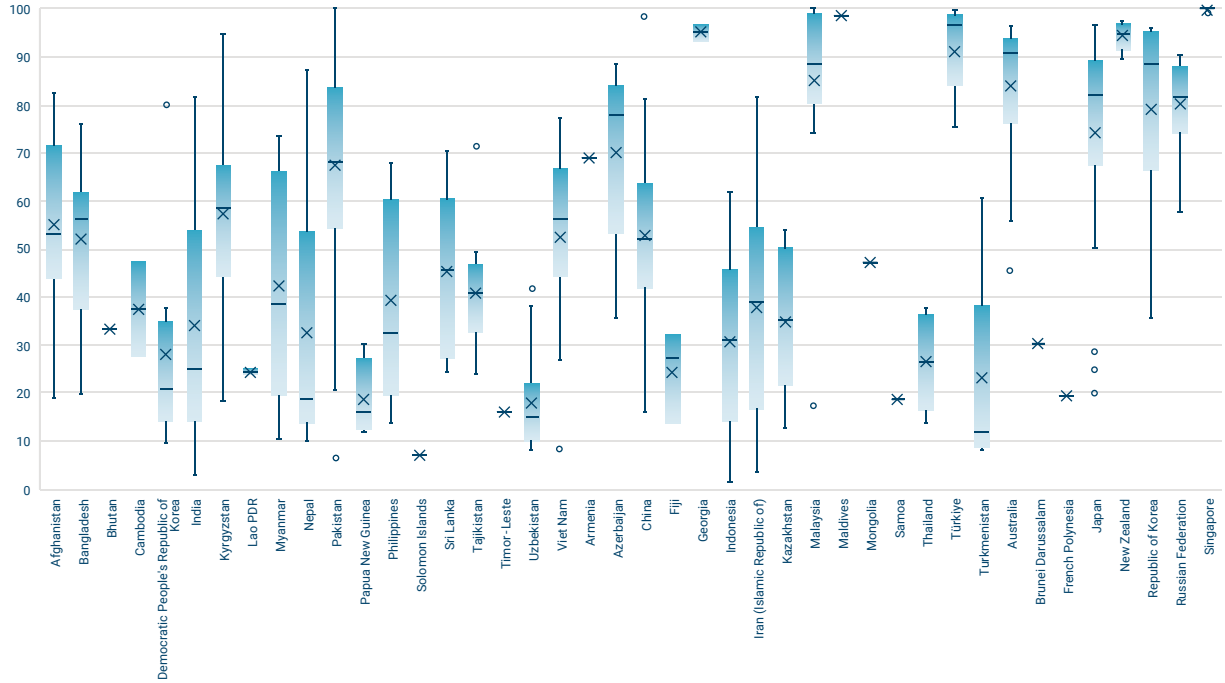
1.1.6. Access to public transport systems

Public transport plays a central role in reducing urban spatial and economic inequalities in Asia and the Pacific. With rapid urbanization, it has become increasingly important to provide inclusive access to safe, affordable, and reliable public transport to connect urban residents to jobs, education, health services and markets. In the past two decades, many cities have invested in mass rapid transit systems, bus rapid transit networks, and digital mobility solutions, thus improving mobility for millions of city residents and supporting more productive and connected urban economies.[40]

Despite the progress made, access to urban public transport remains uneven across and within countries. Leading metropolitan systems in developed and developing countries provide frequent, affordable and accessible services. However, many secondary cities in developing countries rely on informal, fragmented networks with limited coverage.[41] In many of them, less than half of urban residents have convenient access to public transport (see Figure 9). Within countries and cities, residents of peripheral low-income neighbourhoods and informal settlements often face long commutes, multiple transfers, and poor service reliability.[42]

Vulnerable groups disproportionately bear the cost of service gaps, facing high costs and unsafe travel conditions. For low-income households, high transport fares can be a significant burden, leading to trade-offs between essential expenditures on food, housing and education. Physical barriers, such as unsafe pedestrian environments, crowded sidewalks, and a lack of ramps, tactile paving and audible information, restrict independent mobility for older persons, children and persons with disabilities.[43] Safety is a major concern for women and girls, who often experience harassment and violence on public transport and in transit spaces.[44] These risks are worsened by the lack of policies tailored to women's travel patterns, such as trip-chaining related to care responsibilities, and by inadequate infrastructure such as lighting, seating, and safe waiting areas. These factors discourage the use of public transport and perpetuate gender disparities in mobility.

Figure 9: Share of urban population with convenient access to public transport across countries in Asia and the Pacific



Source: UN-Habitat (n.d)[45]

Governments face numerous constraints in improving urban public transport connectivity, affordability, accessibility, and safety. Inadequate and unstable financing is one of them, as limited fiscal space and competing development priorities often restrict investment in urban transport infrastructure and maintenance.[46] Most Asia-Pacific countries lack national accessibility standards for urban public transport, and few governments conduct regular accessibility audits of their systems.[47] Local transport agencies often lack the autonomy and resources needed to enforce inclusive service standards or upgrade safety infrastructure. Additionally, a lack of disaggregated data on transport access, usage, accessibility, and affordability among vulnerable groups hinders evidence-based policymaking.[48] Rapid informal urban growth complicates network expansion, as formal transport systems struggle to efficiently serve sprawling peripheral areas where low-income populations increasingly reside.[49]

1.2. Urban informal employment

Key messages

- Informal employment is deeply embedded in the functioning of urban economies across the region, but it also entrenches economic inequality. Many workers experience low and unstable incomes, struggle to access social protection, work in unsafe conditions, and lack representation. This situation hinders productivity growth and weighs on public revenues.
- Varying intersecting inequalities play a role in determining who is most exposed to informality. Women, young and older workers, migrants and persons with disabilities are often concentrated in the least protected urban economic activities. Rapid digitalization, demographic changes and environmental shifts are transforming these jobs and associated risks at a pace that outstrips the ability of policies and programmes to provide adequate support and protection to those most affected.

Urban areas across Asia and the Pacific are hubs of economic activity, offering job and income opportunities to millions of people. They serve as important connections between workers, businesses, and markets, playing a vital role in boosting productivity. Urbanization in the region is driven by both internal and cross-border migration, as people move from rural areas or other countries in search of work, education and improved living standards. Despite the allure of cities, more than 65 per cent of the region's urban workforce is engaged in the informal economy, often working in low-paying and unstable jobs.[50] Informal employment is defined here following ILO (2003) Guidelines.[xii] In urban areas, the main sectors with informal employment include construction, transportation, domestic work, and food vending. These activities provide a livelihood for millions of people and underpin the functioning of the region's cities. However, informality thwarts progress towards achieving decent work and inclusive urban economies, by limiting access to social protection, safe working conditions and fair representation. High levels of informality also undermine the growth of productive businesses and public revenues. It is essential to address the challenges posed by informality in urban areas to create a more equitable and prosperous environment for all.

Reducing vulnerability and exclusion is crucial, and in many cities, informal jobs can be transformed through skills development, improved working conditions, and stronger

xii Informal employment is defined as employment that leaves individuals in employment relationships without labour and social protection through their work, or without entitlement to employment benefits, whether or not the economic units they operate or work for are formal enterprises, informal enterprises or households. Source: ILO (2003). "Guidelines Concerning a Statistical Definition of Informal Employment" in Seventeenth International Conference of Labour Statisticians (Geneva 24 November – 3 December 2003), Report of the Conference (Geneva, doc. ICLS 17/2003/R.).

linkages to formal firms and value chains. Some workers may gradually transition into more secure or formal employment, while others may experience improved job quality and income security in informal or hybrid arrangements. Recognizing these different pathways is essential for creating inclusive urban labour markets that offer immediate protection and support longer-term economic transformation.

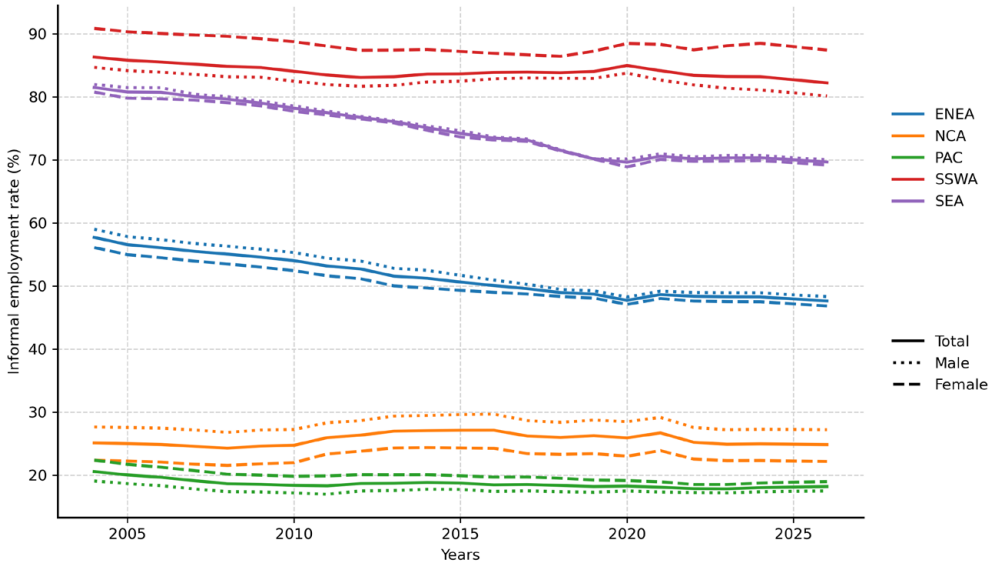
1.2.1. Trends in urban informal employment

Two-thirds of workers in the Asia-Pacific region are engaged in informal employment, a situation often associated with low productivity and deficits in decent work. A small number of informal workers choose this path, especially amid emerging digital opportunities, and earn a good income. However, most workers continue to work in low-paid informal jobs. Regional data show that informal employment rates decreased from 73 per cent in 2004 to 66 per cent in 2024.[51] This gradual progress reflects gains in education, productivity and governance. It also highlights that for most internal migrants and low-skilled workers, informal employment continues to be the default entry point into urban labour markets.

The size and characteristics of informal labour markets vary across subregions (see Figure 10). East and North-East Asia have experienced the largest declines in informality, primarily due to a shift towards higher productivity sectors and improved social protection coverage. In contrast, South and South-West Asia and South-East Asia continue to have the highest rates of informal employment. In South Asia, women face higher rates of working poverty, informality and domestic work than in other subregions.[52] This heterogeneity reflects differences in economic structure, demographic and sectoral composition and labour market institutions. It is also driven by labour market constraints related to skills, education, and access to business support and finance.

These regional and subregional trends hide significant country-specific differences. For example, in Bangladesh, India, Indonesia and Lao PDR, three out of four or more workers are engaged in informal work.[53] On the other hand, the total informal employment rate in Thailand (from 75.8 per cent to 63.2 per cent) and Viet Nam (from 76.8 per cent to 67 per cent) dropped by nearly 10 percentage points, during 2014-2024. This decrease was a result of structural transformation, trade integration, an increase in foreign direct investment, and a shift towards higher-productivity manufacturing sectors.[54] These trends have been supported by advancements in education and skills, business improvement, and labour market and social protection policies that have promoted the transition from informal to formal employment.

Figure 10: Total informal employment rates, by subregion and sex, 2004-2026



Source: Authors based on data from ILOSTAT (n.d.)[55]

Some workers are more likely to be engaged in informal work than others. On average, younger and older workers, as well as own-account workers or workers in small economic units,[xiii] are more likely to have informal jobs, whether in urban or rural areas. Regional data show total informal employment rates for younger and older workers of 82 per cent and 83 per cent, respectively.[56] Informality among the former group is a function of skills mismatches and limited support for better school-to-work transitions. It is important to note that population ageing is advancing rapidly in several countries in the region, while the population momentum remains steady.[57] In the Asia-Pacific region, the ratio of the population above 65 years of age and those between 15-64 is projected to rise.[58] As the average age of the labour force increases, the prospects for older workers will need to improve. Current trends across the subregions show that they are vulnerable to informal employment because of ageism and age-based discrimination. The lack of social protection poses a particular risk for older workers in informal employment.

On average, women in the region are less exposed to informality than men. However, women tend to be overrepresented in some of the most vulnerable segments of the informal economy, such as domestic work, home-based work and contributing family work. Such work often lacks legal recognition and protections, making the women engaged in it more vulnerable to exploitation and insecure incomes. Across the region, a range of structural socioeconomic factors and cultural norms can restrict women's access to formal jobs. These influences vary significantly depending on the context. In Afghanistan, the most recent available data from 2021 already showed a significantly higher rate of informality among women (81.9 per cent compared to 63.9 per cent of men). Since then, the operating environment for women has undergone substantial changes, with severe restrictions on education, mobility and participation in public and economic life, none of which are reflected in these figures. In other countries, high informality among women largely reflects structural factors such as access to skills, childcare, mobility constraints and sectoral composition. For example, in Bangladesh, the informality rate was 88.6 per cent for women compared to 69.6 per cent for men in 2024, and in India, it was 76.3 per cent for women compared to 73.8 per cent for men in 2024.[59] Persons with disabilities tend to have higher informality rates than other groups. They also face wage and education gaps that reinforce exclusion alongside barriers such as inaccessible workplaces, discrimination, and a lack of targeted training programmes.[60]

These patterns highlight that exposure to informal employment is not evenly distributed but is shaped by intersecting socioeconomic and demographic factors. The factors that funnel certain groups into more precarious and lower-paid segments of the urban economy include age, gender, disability, migration status, and employment type.

1.2.2. Sectoral and supply chain linkages

The breakdown of informal employment by economic sector provides valuable insights into the development and evolution of the region's economies. While rural areas continue to have the highest rates of informal employment, urban labour markets are also characterized by informality, largely due to rapid urbanization and the limited capacity of formal sectors to accommodate the expanding workforce. Certain sectors, such as agriculture, domestic work and construction, consistently exhibit high levels of informality. Additionally, work that is conducted from home or in non-traditional work settings is more likely to be informal.[61]

At the country level, urban informal employment is most concentrated in the services sector, including trade, transport, accommodation and food (Figure 11). These economic activities have low entry barriers for women and young

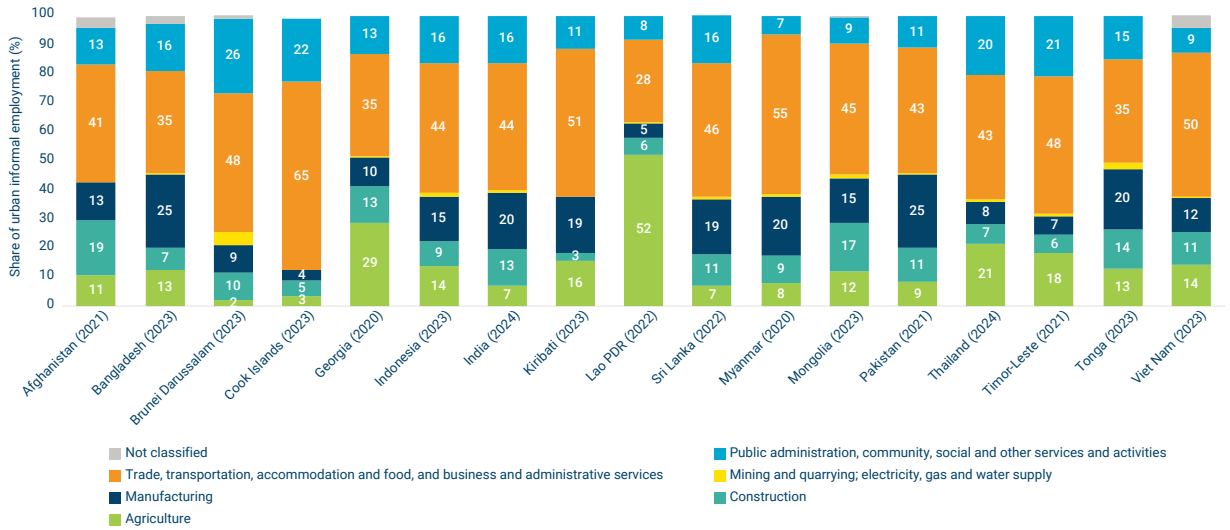
xiii The term economic units refers to: a) units that employ hired labour; b) units that are owned by individuals working on their own account, either alone or with the help of contributing family workers; and c) cooperatives.

workers but are often characterized by casual arrangements and weak regulatory oversight. Construction accounts for a significant portion of male urban informal labour in the region, at 86.7 per cent in 2019,[62] and relies heavily on daily-wage or subcontracted labour. While manufacturing has a smaller relative share, it still supports many informal enterprises and home-based producers in urban areas, particularly in textiles, garments and small machinery repair, including those linked to formal supply chains. In comparison to other regions of the world, Asia and the Pacific has the highest share of informal workers engaged in the manufacturing sector.[63]

Another aspect of informality is the type of production unit in which informal workers are engaged. Informal jobs can be found not only in the informal sector, but also in the formal sector and household production units located in urban areas. While most urban informal workers in the region are in the informal sector, a significant portion work informally within the formal sector, often as casual, temporary, subcontracted or unregistered workers. In Bangladesh, Fiji, Georgia, Indonesia, Kiribati, Marshall Islands, Mongolia, Palau, and Tonga, more than a third of urban informal workers are engaged in the formal sector (see Figure 12).

Small and home-based producers provide goods and services to registered firms through subcontracting or piece-rate arrangements, but without formal employment contracts. This blurred line between formality and informality in urban employment is also seen in export-oriented industries such as apparel, electronics, and houseware, where women often face low pay, inadequate safety standards, and limited representation despite their crucial role in supplying formal firms. Enforcing legal protections for homeworkers is a significant challenge due to their scattered, unseen, and informal nature. This challenge is especially evident in supply chains, where homeworkers mainly interact with intermediaries who assign tasks and lack effective ways to protect their rights, including fair compensation for their work.[64]

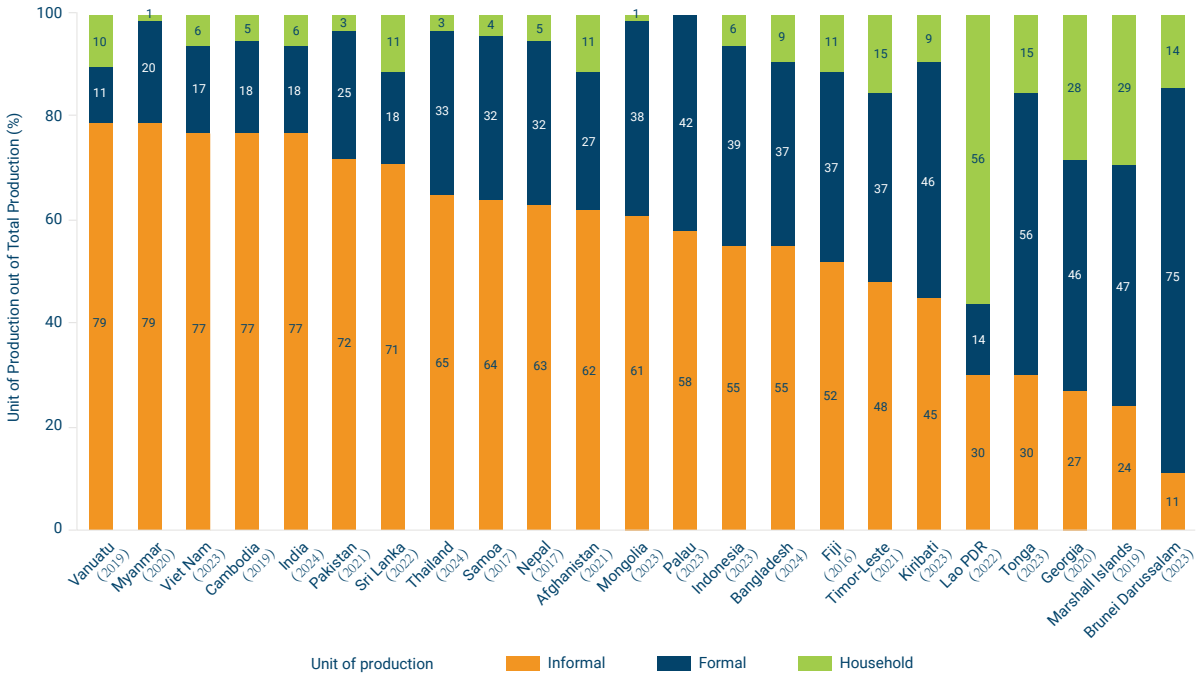
Figure 11: Distribution of urban informal employment by economic activity, percentage, latest year



Source: Authors based on data from ILO (n.d.)[65]

Note: The sum of the values may not add up to 100 due to rounding.

Figure 12: Distribution of persons in urban informal employment by informal sector, formal sector, household sector, percentage, latest year



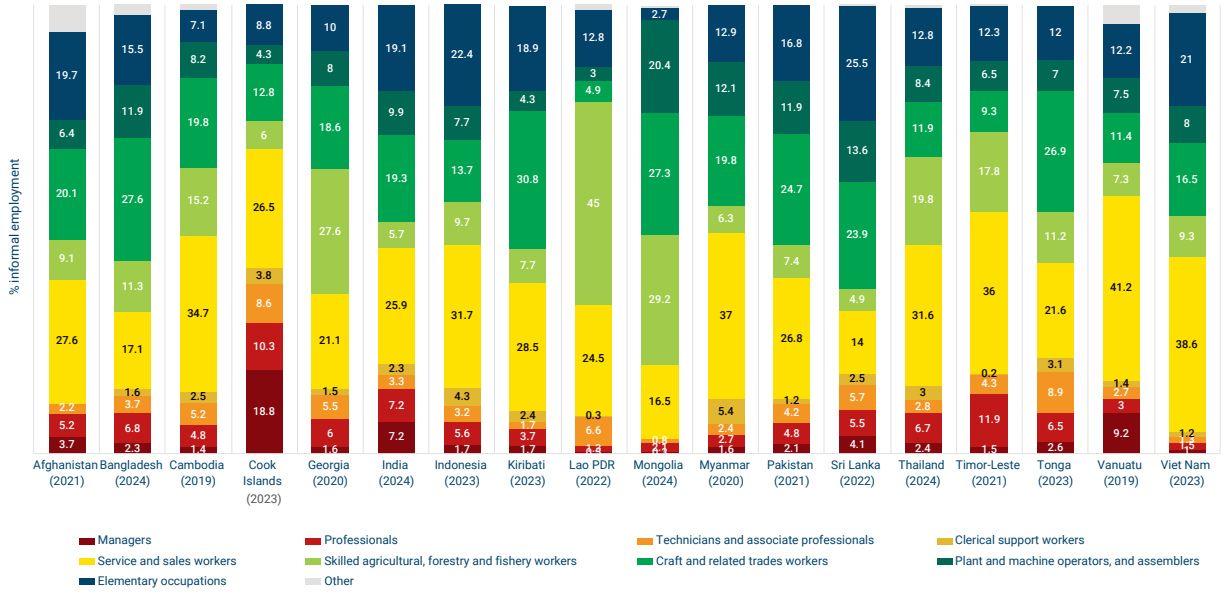
Source: Authors based on data from ILO (n.d.)[66]

1.2.3. Occupational structure, skills and education

Urban informal employment encompasses a wide range of occupations, not just those at the lowest skill levels[xiv] (see Figure 13). Although urban informal jobs are most prevalent in roles such as street vending, domestic work, and manual labour, large numbers of urban informal workers are engaged in medium-skilled positions within services, machine operation, sales, and hospitality. The persistence of urban informality in medium-skilled roles indicates that simply expanding technical and vocational training may not be sufficient to accelerate the formalization of work in the cities of the region. Additional policy measures are necessary to strengthen labour regulations and support the gradual shift towards formality.[67] While basic technical and vocational skills are common in medium-skilled roles, the employment terms are often casual or short-term.

xiv The skill levels of occupations are defined in the International Standard Classification of Occupations (ISCO-08). Low-skilled cover elementary occupations. Medium-skilled occupations include clerical support workers, service and sales workers, skilled agricultural, forestry and fishery workers, craft and related trades workers, plant and machine operators and assemblers. High-skilled occupations include technicians and associate professionals, professionals and managers.

Figure 13: Distribution of urban informal employment by occupation, percentage, latest year



Source: Authors based on data from ILO (n.d.)[68]

Note: The sum of the values may not add up to 100 due to rounding.

Domestic and care work is one of the largest and most feminized segments of the urban informal labour market. In the Asia-Pacific region, on average more than 4 out of 5 domestic workers (urban and rural) have informal jobs. In South Asia, this figure was above 95 per cent in 2019.[69] Typically, this large pool of informal workers lacks labour protections, such as minimum wage coverage and maternity benefits, making them more vulnerable to violence and harassment. The undervaluation of domestic work suppresses wages and limits opportunities for professional mobility. This undervaluation reflects the common view that sees care work as part of women's unpaid household duties rather than as productive employment deserving of rights and protections. Another concern in this regard is the limited availability of affordable, quality childcare and eldercare services, which pushes many women into informal or home-based work to manage unpaid care responsibilities at home, reinforcing a situation in which care work and informal employment sustain one another.

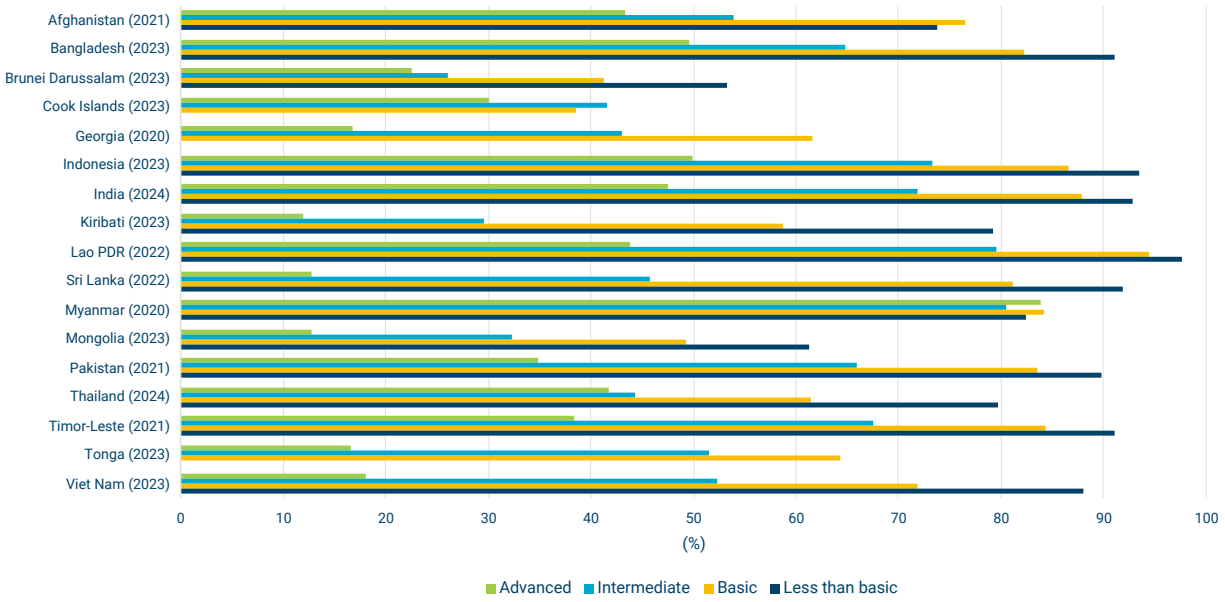
Street vending is a common informal occupation in urban areas throughout the region, offering affordable goods and services. This benefits low-income groups and helps sustain local economies and urban food systems. Despite their important economic and social contributions, street vendors are among the least protected and most vulnerable groups of urban workers. Due to inadequate legal recognition, vendors are often subject to harassment, eviction and confiscation of their goods.[70]

Environmental hazards and the impacts of climate change play a significant role in determining the risk levels of many urban informal occupations. Street vending, waste collection, construction, and transportation all heavily rely on outdoor work, making them highly vulnerable to extreme heat, rainfall, air pollution, flooding, and other urban environmental hazards (see Section 1.3). In Asia and the Pacific, approximately 75 per cent of the workforce is exposed to excessive heat in the workplace, a figure higher than the global average.[71] Workers in the informal economy are among the workers most at risk from climate change hazards, as they often lack necessary occupational safety and health protections, essential services, and infrastructure.[72] Due to financial limitations, informal workers often cannot afford to stop working even when their health is at risk due to extreme climate events.[73] South Asian countries have the highest number of workers affected by heat stress, including millions of urban informal workers.[74] Urban informal workers living in informal settlements face a double burden, as they are susceptible to environmental risks and have limited ability to cope due to lower incomes and a lack of social protection.

Digitalization is reshaping the occupational structure in urban areas of Asia and the Pacific. Digital platforms such as ride-hailing, food delivery, and online freelancing are expanding rapidly. These platforms are attracting many young people, migrant workers, and persons with disabilities, providing them with opportunities to overcome barriers and stereotypes that may hinder their economic participation. The increase in platform work and informalization seems to be happening in lockstep, as most platforms register their businesses as technological intermediaries and digital platform workers are typically self-employed. The lack of regulatory frameworks tailored to the gig economy adds to the challenge.[75] Furthermore, the rapid pace of technological change, along with uneven progress in inclusive skills development and digital infrastructure, poses a risk of excluding low-skilled informal workers from higher-value digital opportunities. Artificial intelligence (AI) may further amplify these dynamics. While the overall impact of AI on labour markets remains uncertain, AI-enabled digital tools, such as digital payments, credit assessment, and banking platforms, can help formalize certain aspects of informal employment and boost economic activity among informal workers, provided such tools are developed to be accessible and equitable.[76]

Across the region, the incidence of urban informal employment declines with higher levels of educational attainment (see Figure 14), highlighting the strong connection between education and obtaining a job in the formal sector. While 95 per cent of all workers in the region without formal education have informal jobs, the rates are 64 per cent and 31 per cent for those with secondary and tertiary education, respectively.[77]

Figure 14: Urban informal employment rate by level of education, percentage, latest year



Source: Authors based on data from ILO (n.d.)[78]

In urban areas of Lao PDR, Timor-Leste and Viet Nam, informal employment among individuals with less than basic education exceeds 80 per cent, but is below 50 per cent among those with advanced education. Even in countries with generally high urban informal employment, such as Bangladesh, education still has a strong mitigating effect. Promoting educational attainment, which drives skills acquisition and productivity, can serve as an important entry point to formality. However, biases can undermine the benefits of higher educational attainment for persons with disabilities. Many individuals with disabilities who have higher education are rejected from formal employment opportunities and forced to turn to informal work due to widespread stereotypes and discrimination rooted in ableism.[79]

Urban informal workers in low-skilled and medium-skilled occupations often face challenges in finding decent work. This can lead to lower earnings, longer hours, and a lack of safety measures and social protection. Engaged in low-paying jobs, these workers face the threat of unstable incomes. In lower-middle income countries, urban informal workers are usually self-employed and earn less than others. This underscores the link between informal work and poor working conditions.[80] Furthermore, these workers frequently do not have access to social protection, making them susceptible to a range of risks, including those related to climate change.[81]

The extent and composition of informality in the urban labour markets of the Asia-Pacific region highlight both the dynamism and inequalities present in ongoing urban transformations. Advancing decent and inclusive urban employment requires integrated strategies and policies that connect productivity, protection and participation. Strengthening skills systems, upgrading sectors, providing business support, expanding social protection and occupational safety measures and granting fuller rights to new and informal forms of work are all crucial. Simultaneously, creating an enabling environment for a gradual and inclusive transition to formality will enable countries to move towards ensuring decent work for all.

1.3. Urban environmental liveability

Key messages

- Urban environmental risks are deeply unequal, with air pollution, solid waste, and disaster risks exacerbating existing social and economic inequalities.
- The region bears a disproportionate air pollution burden. PM2.5 exposure causes premature deaths, undermines human capital and traps the most vulnerable in cycles of poor health, lost income and rising medical costs.
- Rapid urbanization overwhelms waste systems, with middle-income urban areas generating the most waste per capita.
- Climate and disaster impacts fall hardest on the poor. Slums and informal settlements, often located in high-risk zones, face rising exposure to floods, storms, and other disasters due to unplanned urban growth and climate change, while declining green spaces further erode resilience and deepen urban inequality.

The urban environment represents a third dimension of inequality that is closely linked to the first two: inadequate housing, access to services and infrastructure, and informal employment. Cities in Asia and the Pacific are increasingly experiencing hazards and vulnerabilities that are unequally distributed, stemming from various environmental stressors. This section focuses on the impacts of air pollution, solid waste, natural disasters, and other factors that affect the quality of urban life for people in the Asia-Pacific region.

1.3.1. Air pollution and urban inequality

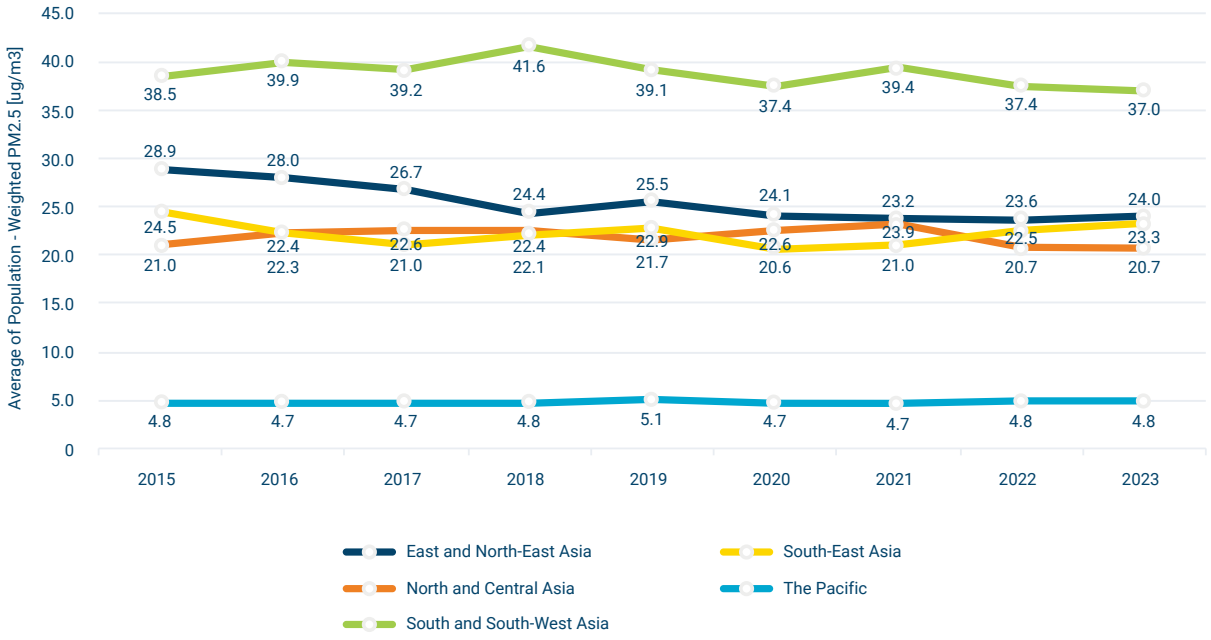
In the Asia-Pacific region, approximately four billion people, accounting for 92 per cent of the total population, are exposed to high levels of air pollution that pose a significant risk to their health.[82] Six out of the top ten countries with the most severe air-pollution are located in the Asia-Pacific region, and the number of people exposed far exceeds those in other parts of the world.

Air pollution is caused by a variety of pollutants, including sulfur oxide (SOx), nitrogen oxide (NOx), carbon monoxide (CO), and other greenhouse gases. However, the most harmful pollutants are fine particulate matter (PM), which includes black carbon and tropospheric ozone. PM2.5 air pollution is most prevalent in densely populated urban and industrial areas. In 2023, out of 7.9 million deaths worldwide caused by air pollution, 4.9 million were attributed to ambient PM2.5 exposure.[83] The main sources of this pollution are vehicle emissions, industrial activities, trash and agricultural burning, as well as residential cooking and heating.[84] Children and older persons often experience a higher burden of respiratory diseases due to air pollution.[85,86]

While air pollution is a major concern in many urban areas across the region, it is also a transboundary issue as pollutants travel through the atmosphere. However, not all Asia-Pacific subregions are affected equally. Figure 15, which shows the annual average exposure to PM2.5, illustrates that urban areas in the South and South-West Asian subregion are the most affected by PM2.5 air pollution, with levels ranging from 35 to 40 µg/m³. This is followed by urban areas in East and North-East Asia, and South-East Asia with PM2.5 levels

between 20-30 µg/m³. Urban areas in North and Central Asia, as well as the Pacific are the least affected. The World Health Organization's air quality guidelines classify PM2.5 levels above 5 µg/m³ as "unsafe" and those above 35 µg/m³ as "hazardous".[87] At this limit and beyond, the general population may begin to experience health impacts that warrant the use of masks or air-purifiers.

Figure 15: Historical trends of PM2.5 in Asia and the Pacific, by subregion



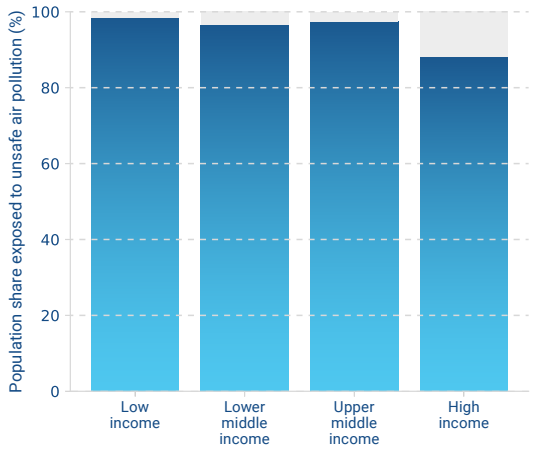
Source: Authors based on data from Washington University (2025)[88]

Air pollution affects everyone in urban areas in the Asia-Pacific region, but people living in cities and towns in lower income countries are exposed to the most dangerous and harmful air quality. This is particularly true for unsafe and hazardous air, especially in lower-middle-income countries, followed by upper-middle-income and low-income countries (Figure 16). As mentioned in section 1.2, people working in the urban informal economy and those involved in manual and outdoor labour are typically more exposed to and disproportionately impacted by air pollution. This is because they are more likely to rely on jobs that require outdoor physical labour, and when they suffer from pollution-related illnesses, they frequently lack access to adequate and affordable health care, leading to higher mortality rates.[89] Consequently, exposure to air pollution diminishes people's income-earning potential, making it more challenging for them to break free from poverty and increasing the likelihood of premature death. This further intensifies income inequality within countries,[90] including in urban areas.

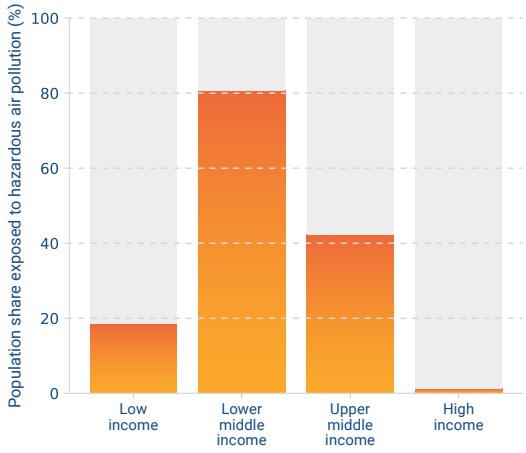
The variation in air pollution exposure in urban areas by income group reflects a broader trend: poorer areas tend to have fewer polluting activities such as large-scale construction, and industrial production. However, as urban economies grow, these polluting sectors expand geographically, and their activities increase. This trend, known as the "grow-first, clean-up-later" path of economic development, is not set in stone. Smart governance and the use of technology can help urban areas achieve economic development and poverty reduction while limiting air pollution[91] and preserving environmental quality (for examples refer to Chapter 2).

Figure 16: Air pollution exposure across income groups measured as the proportion of exposed urban populations to the total urban population

(a) Exposure to unsafe air pollution



(b) Exposure to hazardous air pollution



Source: Authors based on data from Rentschler and Leonova (2023)[92]

Note: The income groups used in this analysis (e.g., low-income, lower-middle-income, etc.) are classifications assigned at the national level by the World Bank. While this provides valuable macro-economic context, it may not reflect the specific economic conditions of individual cities within countries. Therefore, the analysis should be interpreted as a comparison of cities situated within different national economic contexts, rather than a direct comparison between cities of equivalent income levels.

1.3.2. Solid waste and urban inequality

Rapid urbanization, accelerating economic development and changing patterns of consumption have led to significant increases in municipal solid waste in cities and towns throughout the Asia-Pacific region. This growth has outpaced the capacity of many governments to develop appropriate waste management strategies,[93] including the allocation of land, human resources, and finances. The result has been disorganized development and municipal solid waste management.[94]

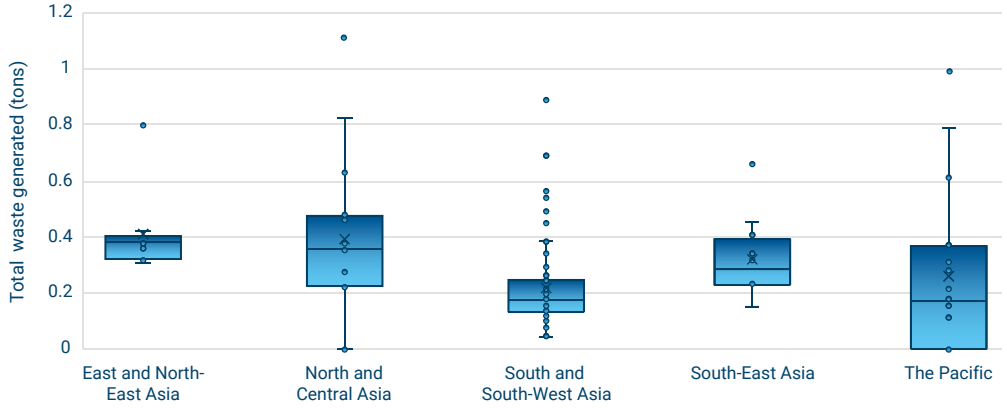
Slums and informal settlements, where urban low-income groups, in-migrants and other marginalized social groups live, often lack regular solid waste collection services. The irregular collection of solid waste leads to garbage piling up in streets and open areas, creating breeding grounds for vector-borne diseases. In many instances, uncollected solid waste is burned, contributing to air pollution that reduces urban liveability and harms human health.[95] Waste pickers play a crucial role in filling gaps in waste management systems in many of the region's urban centres. However, these workers are often excluded from formal labour markets, lack basic protections and face occupational safety and health risks, as well as stigmatization.

Due to their increasing populations, urban areas are producing more waste, which often poses challenges for local governments in terms of how to effectively collect and manage it. In many developing countries, local governments lack the financial resources and technical expertise needed for proper waste management. This lack of investment leads to infrastructure limitations such as a shortage of waste collection vehicles for waste collection and transportation, and the development of transfer stations and sanitary landfills. Improper disposal of waste poses environmental and health risks, including contamination from leachate, methane emissions from disposal sites, the spread of vector-borne diseases, and respiratory issues. These risks impact informal waste pickers and low-income communities living near disposal sites.

According to World Bank data,[96] the amount of waste generated varies across subregions. In the Pacific, some 85,000 tonnes of waste are produced annually. In the urban areas of South-East Asia, annual waste generation stands at around 235,000 tonnes, while in the cities and towns of East and North-East Asia, it is slightly lower. The urban areas in North and Central Asia produce slightly more than 100,000 tonnes of waste annually. In the urban areas of South and South-West Asia, average waste generation is lower on average than in other subregions, but still falls within the range of 100,000-300,000 tonnes per year.

Per capita figures reveal a different perspective. Globally, the average annual waste generation per person was around 288 kilograms in 2020.[xv] As shown in Figure 17, North and Central Asia leads with nearly half a ton of waste generated per person per year, followed closely by East and North-East Asia and South-East Asia, each producing around 400 kilograms of waste. The Pacific subregion generates almost 400 kilograms of waste per person each year, while the South and South-West Asian subregion produces slightly above 200 kilograms of waste per person.

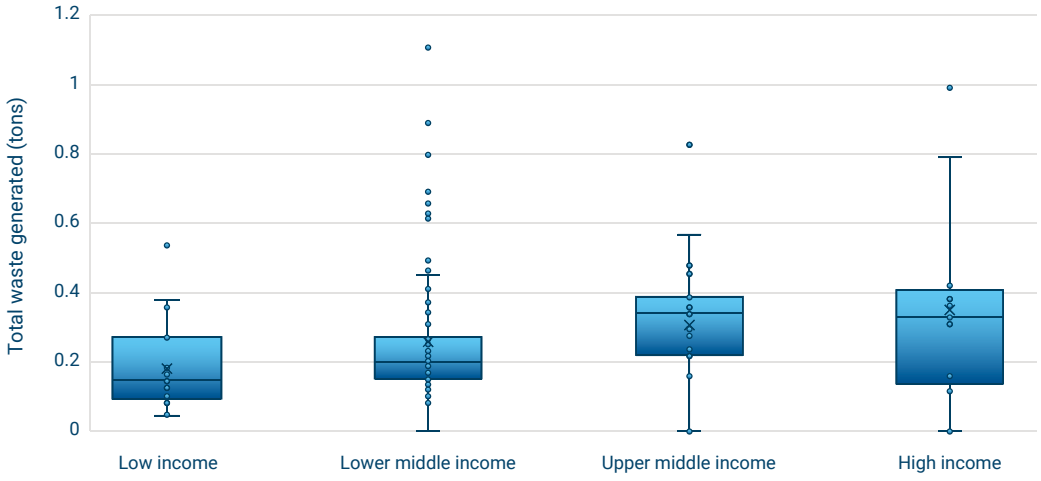
Figure 17: Waste generated in Asia and the Pacific, by subregion, per capita



Source: Authors based on data from World Bank (2025)[97]

When examining the distribution of waste generated by income levels, it is evident that urban areas in high-income and upper-middle income countries produce the most waste, followed by those in lower middle-income countries and low-income countries. This "inverted U" pattern of waste generation mirrors what is seen in the middle-income category for air pollution, suggesting that waste generation correlates with economic activities typical of middle-income locations and then gradually decreases as the locations move up the income ladder. This insight can guide policy interventions to control and reduce waste generation while also aiding in strategic planning for urban areas on the cusp of reaching middle-income status.

Figure 18: Waste generated by income level, per capita



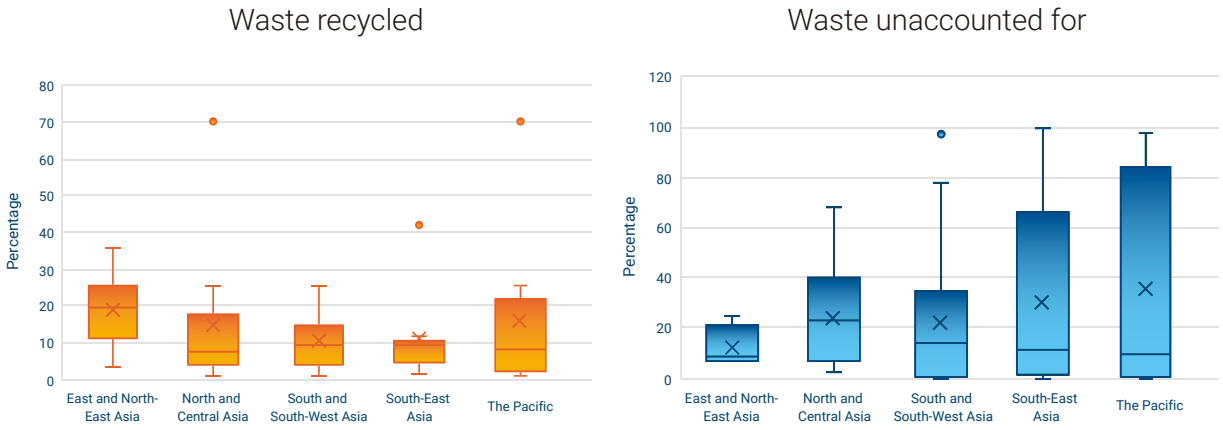
Source: Authors based on data from World Bank (2025)[98]

Note: Income groups used in this analysis (e.g., low-income, lower-middle-income, etc.) are classifications assigned at the national level by the World Bank. While this provides valuable macro-economic context, it may not reflect the specific economic conditions of individual cities within countries. Therefore, the analysis should be interpreted as a comparison of cities situated within different national economic contexts, rather than a direct comparison between cities of equivalent income levels.

xv Based on an estimated 0.79 kilogram of waste generated per capita per day. Source: Kaza, Silpa; Shrikanth, Siddarth; Chaudhary, Sarur. (2021). *More Growth, Less Garbage*. Urban Development Series. © World Bank. http://hdl.handle.net/10986/35998.

Examining the share of urban waste that is recycled compared to that which is unaccounted for provides an in-depth perspective. In the Pacific and East and North-East Asia, up to a quarter of waste is recycled, while other subregions recycle less. On the other hand, South-East Asia and the Pacific have higher rates of unaccounted for waste, but other subregions, except East and North-East Asia, also generate substantial amounts of waste that are unaccounted for.

Figure 19: Recycled and unaccounted for waste



Source: Authors based on data from World Bank (2025)[99]

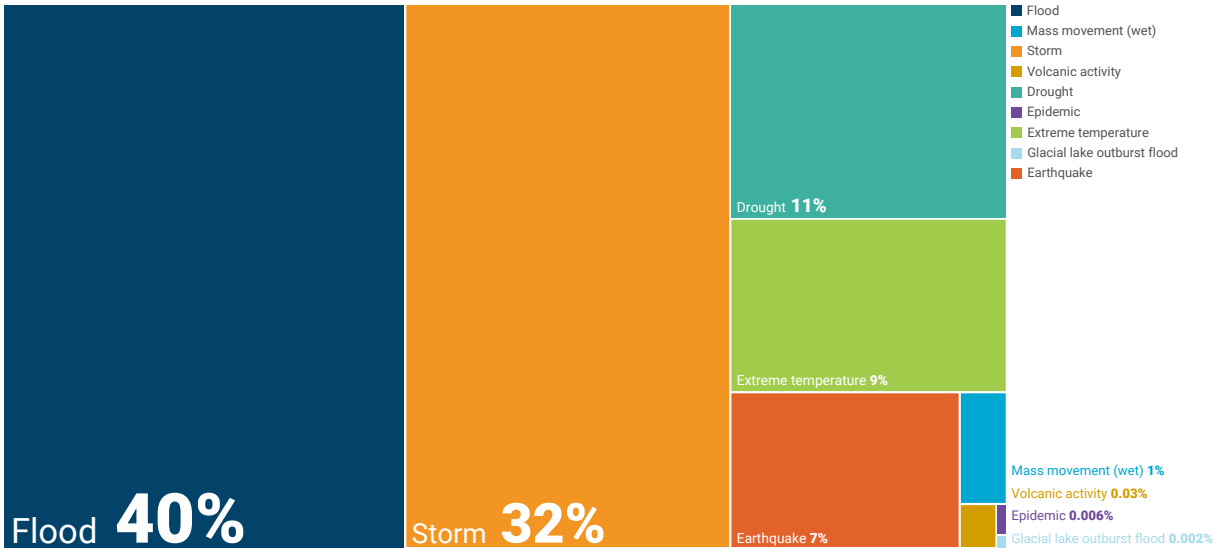
Solid waste statistics are usually collected by city and municipal governments. Compiling this data can be time-consuming and cumbersome. The lack of reliable data on solid waste management is an area where urban governments may require support. Collecting data should include documenting the quantity and composition of solid waste, as well as the circumstances of waste pickers involved in formal or informal solid waste management activities.

1.3.3. Disasters, risks, and urban inequality

People living in slums and informal settlements are disproportionately vulnerable to geophysical and hydro-meteorological disasters, as well as climate-related slow-onset events. Displacements caused by earthquakes and floods deepen urban inequalities–further negatively affecting urban poor and marginalized groups in both urban and peri-urban areas throughout the Asia-Pacific region. The specific type of disaster vulnerability differs across subregions, highlighting the necessity for targeted policies aimed at reducing disaster risks for the most vulnerable populations in the region's cities.

SDG 11.5 focuses on reducing the adverse effects of natural disasters. This goal applies not only at the national level but also includes urban centres. The Asia-Pacific region is the most disaster-prone in the world, with seven of the top ten countries most prone to disaster risks located in the region: China, India, Indonesia, Myanmar, Pakistan, the Philippines and the Russian Federation.[100] The Pacific and other small island developing States (SIDS) face unique challenges from tropical cyclones, sea level rise, coastal flooding, and saltwater intrusion, which compound the vulnerability of their small urban populations and pose an existential threat to low-lying atoll nations such as Kiribati and Tuvalu.[101] This situation is exacerbated by SIDS' limited economic diversification[102] and logistical challenges in responding to sea level rise.

Figure 20: Proportion of people affected by disaster types in Asia and the Pacific (2010-2025)

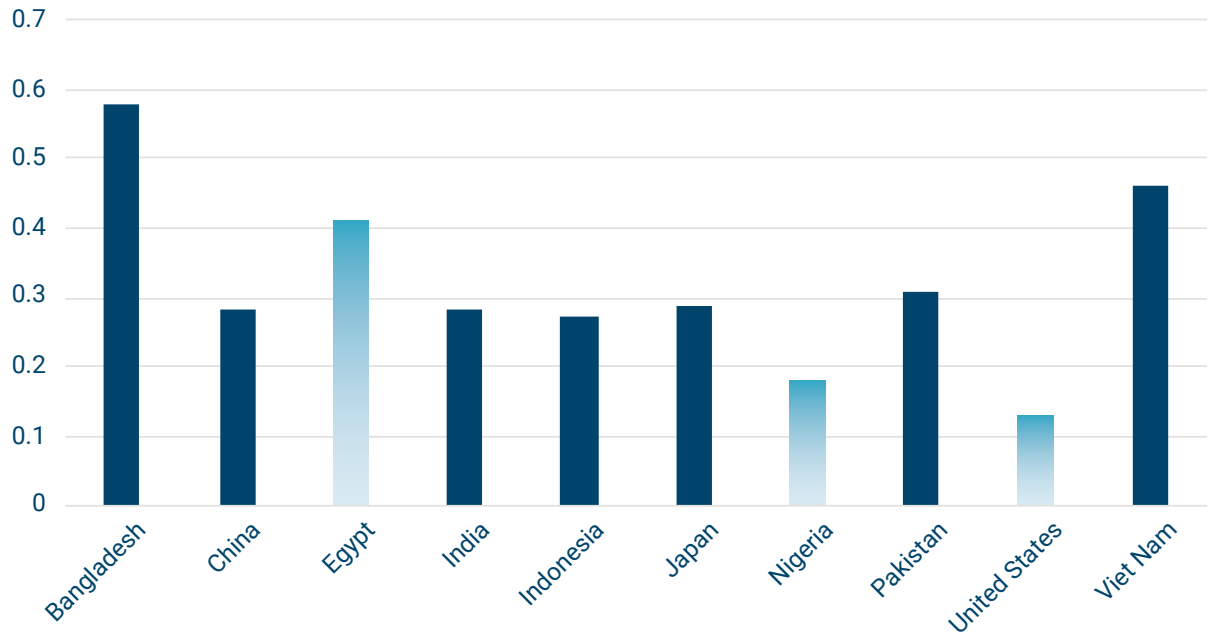


Source: Authors based on data from EM-DAT (n.d.)[103]

People in the Asia-Pacific region are most affected by floods, storms, drought, extreme temperatures, earthquakes and wet mass movements (Figure 20). Primary impacts vary across subregions, with storms being the biggest disaster type for South-East Asia and the Pacific, and floods impacting most across South and South-West Asia, North and Central Asia, and East and North-East Asia.[104] While these data capture impacts at the national level, the human and material impact is highest in urban centres and densely populated areas, indicating the need to place climate resilience and disaster preparedness at the centre of urban planning. Notably, integrating public health service provision into climate-resilient urban planning and development is critical. Public health services and infrastructure in many urban centres, despite being better resourced than in rural areas, remain ill-equipped to respond to intensifying environmental stressors and shocks.[105] The urban poor and marginalized groups are disproportionately affected, as they often reside in hazardous locations including riverbanks, steep slopes, coastal regions and flood-prone low-lying areas.

Flood exposure risk is particularly high in the region. Figure 21 shows that almost 58 per cent of Bangladesh's population was exposed to high flood risk, followed by Viet Nam with 46 per cent of the population at risk. Other countries have around one-third of their population exposed. The three largest flood displacement events in the region were in China (15.5 million people) and Pakistan (11 million), both in 2010, and India (8.9 million in 2012).[106] These displacements directly affect the poorest and most marginalized groups, who face higher exposure but have weaker coping capacity due to substandard housing, limited access to finance, and a lack of insurance or social protection. The risk is not static but is exacerbated by unplanned urban growth and more frequent extreme weather events, which sometimes force poorer residents into informal settlements on marginal, high-risk land such as floodplains. This leads to disproportionately high flood exposure for marginalized groups, including women, children, ethnic minorities, older persons, indigenous peoples, persons with disabilities, migrants, and refugees.

Figure 21: Population exposed to disaster risk, percentage



Source: ESCAP, ADB and UNDP (2024)[107]

Flood displacement is expected to continue as urbanization and infrastructure development increase. According to the Internal Displacement Monitoring Centre (IDMC) global disaster displacement risk model, 17.8 million people worldwide are at risk of being displaced by floods every year, with 80 per cent of them living in urban and peri-urban areas. This risk is mainly concentrated in South Asia, East Asia, and the Pacific.[108]

At least 26 countries and territories in the region have developed disaster risk reduction frameworks that are inclusive of persons with disabilities. Some countries, such as China, Indonesia and Thailand, have formulated disability-specific disaster risk reduction laws and policies. However, only a few countries, including Fiji, Mongolia and Thailand, have included specific modules related to disability in their disaster risk reduction training. Data on emergency shelters and disaster relief sites accessible to people living with disabilities remain sparse and exist for only a few countries in the region.[109] The number of countries with a national disaster risk reduction strategy aligned with the Sendai Framework for Disaster Risk Reduction 2015–2030[110] is another indicator of the availability of inclusive disaster risk reduction frameworks in the region. Data on SDG indicators 1.5.3, 11.b.1 and 13.1.2 show that 12 countries in Central and South Asia, 10 countries in East and South-East Asia and 14 countries in Oceania have such national disaster risk reduction strategies.[111]

1.3.4. Green spaces in cities[xvi]

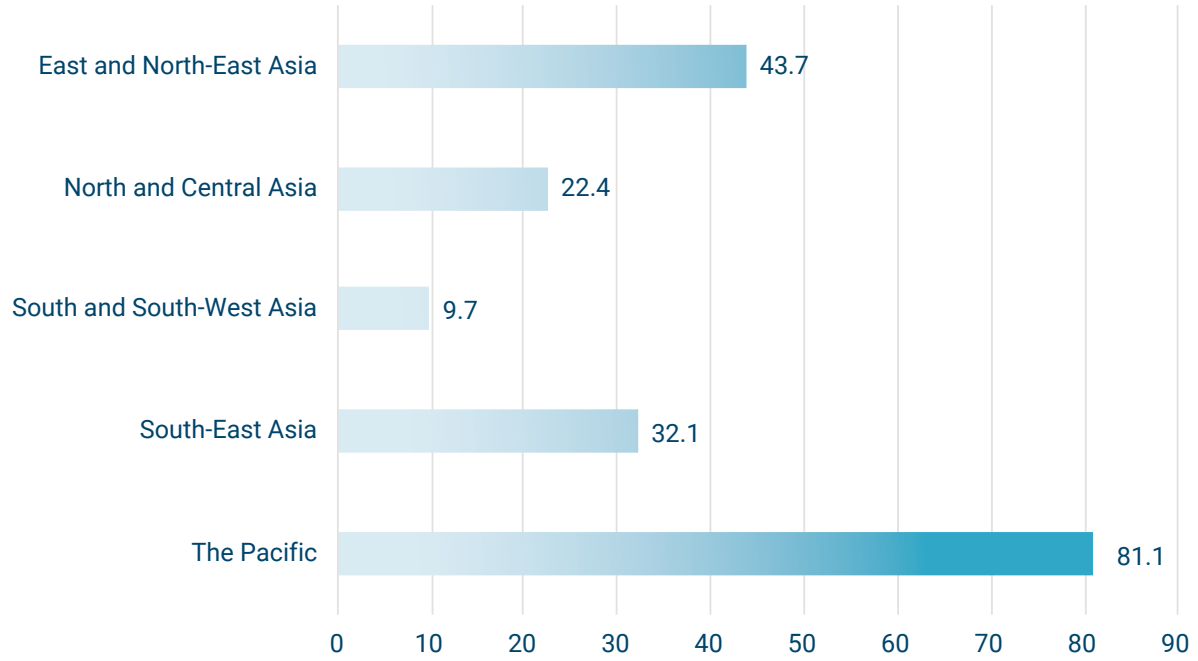
Safe, inclusive, and multi-functional public spaces are crucial for urban environmental liveability as they facilitate social interaction, promote gender inclusion, support civic life, ensure safety, and stimulate economic activity. Green areas within urban centres play a vital role for several reasons. They help maintain ecological balance in urban environments by reducing the urban heat island effect, improving air quality, enhancing underground water

xvi This section mainly summarizes the regional situation with regard to urban green spaces, which is only one part of SDG 11.7.

recharge, and providing habitats for flora and fauna. Additionally, green areas such as parks serve as recreational spaces for people and communities to gather, thereby contributing to overall urban liveability and social cohesion. Moreover, in some urban centres, green spaces also function as emergency congregation areas during disasters such as fires or earthquakes.

The average green area per person varies across the subregions of Asia and the Pacific. Figure 22 shows that in the Pacific, urban centres have almost double the average green space compared to those in North and Central Asia. South and South-West Asia have the least green areas with only around 10 square meters per person, while in South-East Asia this figure stands at around 30 square meters.[112]

Figure 22: Average green area per capita across subregions, square meters

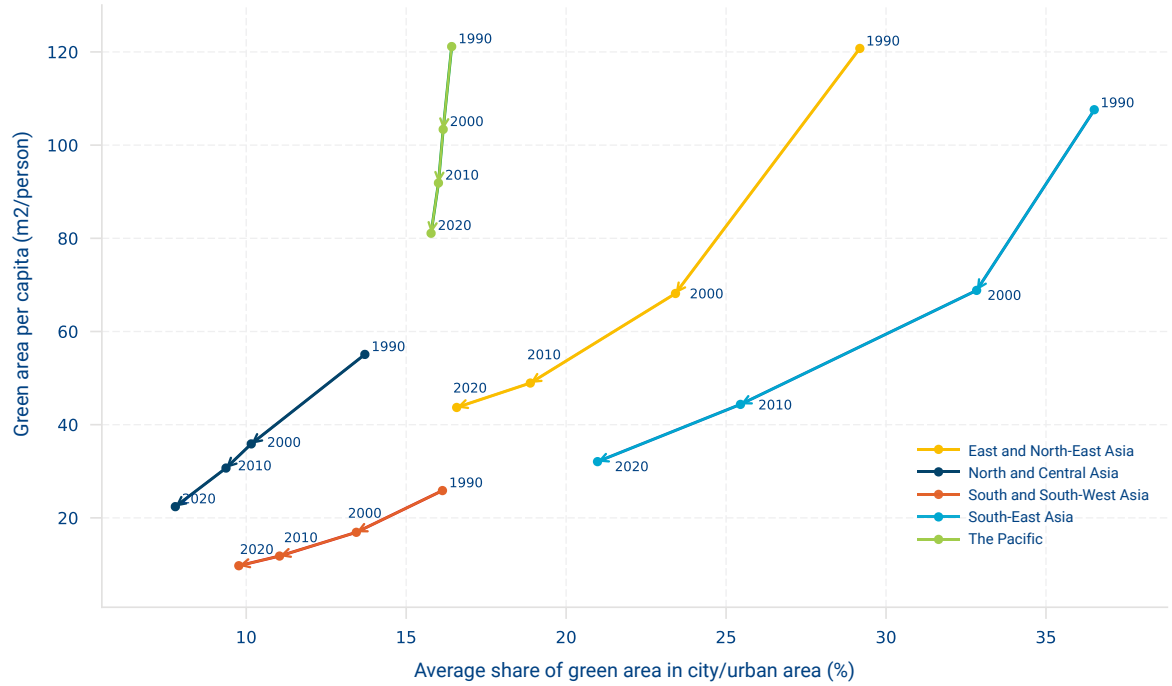


Source: Authors based on data from UN-Habitat (2024)[113]

While the availability of green spaces varies across different urban centres and subregions, a common trend is observed. Comparing data from 1990, 2000, 2010, and 2020, the region's urban centres have seen a decline in green spaces (see Figure 23). This trend could be attributed to the growth in urban populations and the use of urban land for activities that provide a higher economic return. Additionally, urban policies, planning and development priorities in many countries may not fully recognize the value of green spaces, as their economic, social and environmental importance may not be immediately apparent.

It is challenging for local governments to maintain, invest in, and protect green, blue, or public spaces amid competing land-use pressures and privatization. The decline of green areas in urban centres to an extent reflects this reality. Moreover, centrally located high-income urban areas have a higher concentration of green spaces but lack accessible and affordable public transport. As a result, these green spaces are often less accessible to people with lower incomes, families with young children, persons with disabilities, older persons, and migrants.

Figure 23: Green spaces in cities over time: 1990-2020



Source: Authors based on data from UN-Habitat (2024)[114]

1.4. Governance and policies

There are several policy instruments available for governing cities and towns, which help shape inclusive, sustainable and resilient urban development at the local level. This section discusses some of the most relevant instruments, highlighting their connections to the SDGs, the New Urban Agenda, and the topics covered in this report.

Most governments in the Asia-Pacific region are signatories to the New Urban Agenda adopted in Quito, Ecuador, in 2016. The New Urban Agenda (2016-2036) identifies two effective means of implementation: (i) building urban governance structures, and (ii) planning and managing urban spatial development.[115] Under these, governments have committed to strengthening institutional frameworks, promoting participatory planning, and ensuring inclusive and gender-responsive urban policies.

National urban policies (NUPs) play a crucial role in promoting sustainable urban development. The UN-Habitat's National Urban Policy Platform serves as a hub for hosting NUPs, offering the opportunity to analyze their content.[116] The development of NUPs is beneficial for four main reasons: (i) identifying urban development priorities, (ii) providing guidance for future development, (iii) improving coordination and direction for actions, and (iv) increasing and coordinating investments.[117]

The NUPs available on the National Urban Policy Platform from countries in the Asia-Pacific region vary in terms of comprehensiveness. Services and infrastructure are usually a priority within the policy documents, while digital infrastructure, smart city initiatives, IoT and big data are less frequently addressed. Informal employment and livelihoods also receive limited attention, with references to informal workers lacking concrete measures for legal recognition, social protection, and tailored skills development.

Intersectional inequalities are seldom comprehensively addressed, with only a few of the NUPs referencing gender, children, and older persons. However, there is limited discussion of differences related to social identity within urban development. This gap exists partly because people's location within cities determines their access to services, opportunities, and exposure risks to geophysical and climate-related disasters and stressors.

In terms of governance, NUPs sometimes outline well-established systems with mechanisms for public participation, ranging from institutionalized community committees

to principled statements on transparency. However, many lack concrete mechanisms for local revenue generation or borrowing. More generally, urban policies are often dispersed across various documents and linked to a range of global and multilateral processes, creating a fragmented urban policy landscape. In this context, governance systems capable of utilizing technology have not yet been systematically integrated into most urban governance structures across the region. This integration requires stronger policy prioritization, including dedicated investments in data infrastructure, institutional capacity building, and inclusive digital strategies to ensure equitable benefits for all.

The lack of NUPs in some countries may be due to several factors.[118] These include a lack of clear policy directions and an uncoordinated approach to managing urbanization, without addressing its negative impacts, or advocating for an "urban paradigm shift". Additionally, there is fragmentation of responsibilities and mandates for urbanization across various government departments. Furthermore, there is limited comprehension of the significance of cities in national development and the potential structural changes that urban growth can catalyze.

Role of city and local governments: Despite national-level commitments to the SDGs, Nationally Determined Contributions (NDCs under the Paris Agreement), and the New Urban Agenda, there is often limited involvement of city and local governments in national policy making and implementation. City-level implementation is crucial for meeting most international commitments, yet local governments are not always fully included and engaged in national and international agenda setting, decision-making, funding options, or implementation strategies.[119] This represents a missed opportunity as greater involvement can enhance local capacity and improve policy outcomes.

In this context, local government associations (LGAs) play several important roles. They advocate for and represent urban local governments, addressing the challenges they face. LGAs also promote collaboration and networking, implement capacity development programmes, coordinate crisis management responses during emergencies, and act as information hubs. In the Asia-Pacific region, CityNet and United Cities and Local Governments Asia-Pacific (UCLG ASPAC) support local governments at the regional level. Additionally, national-level LGAs in various countries across the region provide support to local governments in their respective jurisdictions.

SDG localization: Many cities in the Asia-Pacific region have developed and implemented Voluntary Local Reviews (VLRs) to 'localize' the SDGs at the city level. VLRs help integrate urban policies, planning, and governance interventions at the local level to implement the 2030 Agenda and the New Urban Agenda. By 2025, 60 VLRs had been completed in the region, with 30 from megacities in 12 countries, covering more than 150 million people.[120]

Urban policy trade-offs: The high concentration of people and the complex nature of urban areas pose complex challenges for policymakers in the Asia-Pacific region when it comes to achieving SDGs and implementing the New Urban Agenda. Addressing these challenges often involves trade-offs between promoting economic development, addressing urban inequality, and improving the urban environment. For example, when faced with limited financial resources, policymakers must decide between investing in adequate housing and slum upgrading or investing in business districts to stimulate urban economic development. Similarly, high land values in urban areas force policymakers to choose between allocating land for commercial areas to create jobs or preserving land for green spaces to enhance the urban environment and quality of urban life.[121] Another dilemma arises when implementing "low emissions zones", particularly in central business districts. Policymakers must weigh the benefits of controlling air pollution and promoting long-term health benefits for urban residents against the potential short-term negative impact on retail sales for businesses within these zones.

Navigating these trade-offs requires urban policymakers to consider various factors related to overall inclusive, sustainable and resilient urban development and identify policies that unlock benefits while minimizing negative impacts. The next chapter provides examples from the region where such synergies have been unlocked.

CHAPTER 2

Addressing Urban Inequality: Good Practices from the Region

This chapter discusses approaches aimed at reducing urban inequalities in the Asia-Pacific region. It highlights scalable policies, strategies, plans, programmes, and digital and technological solutions that have shown potential in reducing urban inequalities. These approaches are aligned with the principles of "leaving no one behind" and "leaving no place behind" and fall into three areas: (i) addressing urban inequality in informal settlements, affordable housing, and access to basic services; (ii) promoting decent and inclusive urban employment for all; and (iii) improving urban environmental liveability.

2.1. Addressing urban inequality of housing and access to basic services

Key messages

- Community-led approaches offer cost-effective, locally grounded solutions for upgrading slums, empowering residents to plan, deliver, and monitor their progress. These approaches also contribute to skills development, job creation, and improved livelihoods.
- Housing programmes that integrate affordable homes with basic services and support systems help address the past failures of siloed service delivery, unlock cross-sector synergies, and strengthen institutional accountability.
- Ensuring last-mile access to basic services is crucial for reaching vulnerable groups, necessitating expanded networks in underserved areas, inclusive and accessible systems, and alignment with sound resource management and environmental safeguards.

The challenges faced by people living in slums and informal settlements are numerous. They include limited access to improved housing and basic services such as clean drinking water, sanitation, electricity, clean energy, internet and mobile connectivity, financial services, and public transport. The policies and governance interventions used to address these challenges are presented below.

2.1.1. Supporting community-led solutions for informal settlement and slum upgrading

The upgrading of informal settlements and slums is typically most successful when government programmes are combined with community-led approaches to ensure that planning and service delivery are tailored to local needs. Top-down policies often overlook the multiple deprivations faced by people living in slums and informal settlements, including insecure tenure, inadequate housing, and limited access to basic services. Community-led solutions are an effective way to avoid these pitfalls and encourage residents to organize, identify priorities, and shape targeted interventions in their underserved neighbourhoods.

In the Asia-Pacific region, a few examples of scalable community-led solutions for informal settlement and slum upgrading are presented. The first is UN-Habitat's people-centred approach for sustainable urbanization, known as People's Process. This model has been adapted and implemented in several countries since the early 1990s. The second example is *Baan Mankong*, also known as the Secure Housing Programme, which has been implemented in Thailand since 2003.

The People's Process model is based on Community Action Planning (CAP), which enables low-income communities to organize, plan, and implement development initiatives in collaboration with local authorities (see Box 1). Adapted for national and local (urban) contexts, it has provided affordable housing and essential services to millions, even in post-disaster, post-conflict and other challenging situations. The model has not only helped tackle urban inequality but has also brought dignity to low-income groups, recognizing them as vital members of urban society. Its successful replication in countries such as Bangladesh and Mongolia demonstrates the model's effectiveness as a social and governance innovation for addressing the dual challenges of affordable housing and basic services.

Box 1: The People's Process: From grassroots to governance

Aligned with SDG 6, 7, 9, 11, and 17

The People's Process shifts development practice from authority-driven control to community-led planning and implementation, using a structured participatory methodology following five steps:

- *Step 1: Community mobilization*. This involves organizing low-income urban residents into primary groups and legally recognized community development committees.
- *Step 2: Community action planning.* In this step, the community takes the lead in identifying its needs, such as affordable housing and basic services, and prepares Community Action Plans.
- *Step 3: Community contracting:* The legally registered committees enter contracts with the donor agency or local government to implement the approved plans.
- *Step 4: Funds disbursement and implementation.* This step involves supporting the implementation of activities outlined in the plans.
- *Step 5: Participatory monitoring and public information.* In this last step, joint oversight and reporting of the results by the committees, local governments, and development partners.

Spillover effects: The People's Process approach combines local knowledge with technical inputs to deliver cost-effective results. It stimulates local economies, creates local entrepreneurial opportunities, and builds local capacity through skills training. Additionally, it fosters strong community ownership, participatory decision-making, and trust, enabling communities to efficiently implement large-scale upgrading with minimal environmental impact.

Implementation in the Asia-Pacific region: In Bangladesh, the approach has helped address urban poverty in the face of rapid urbanization and the growth of informal settlements. In Mongolia, it has improved access to basic services and community infrastructure in the Ger district of Ulaanbaatar.

Source: UN-Habitat (2016).[122]

Thailand's Baan Mankong programme has been providing support for community-led upgrading since 2003. It helps low-income groups secure land tenure, improve housing, expand access to basic services, and improve livelihoods. Its main features include mobilizing low-income communities, forming self-help savings groups to enable access to subsidized housing loans, and establishing community councils to coordinate programme implementation (see Box 2).

Box 2: Baan Mankong or Secure Housing Programme, Thailand

Aligned with SDG 6, 7, 9, 10, 11, and 17

Implemented by the Community Organization Development Institute (CODI) under the Ministry of Social Development and Human Security, the Secure Housing Programme has benefitted over 110,000 low-income households in 75 provinces. The programme offers financial assistance to low-income groups in the form of grants for infrastructure and basic services and low-interest loans for land and housing. Using an area-based approach, the programme strengthens community councils to drive local revitalization.

Communities report a range of long-term benefits, such as increased security of tenure, safer living environments, improved welfare, and reduced eviction risks. The programme has also boosted grassroots participation, expanded learning opportunities, and improved financial literacy and technical skills. These changes have led to stronger community ties, higher levels of civic engagement, and more empowered local organizations.

Source: CODI (2024).[123]

Interventions aimed at establishing affordable housing and improving access to basic services are most effective when implemented city-wide. Relying solely on small pilot projects has shown limited potential for replication. This underscores the necessity of developing comprehensive strategies at the city level to address housing and service gaps on a large scale.

City-wide approaches can involve the following steps: (i) mapping all slums and informal settlements; (ii) identifying land illegally occupied by low-income communities; (iii) identifying and categorizing vacant public or private lands; (iv) negotiating land tenure arrangements with land owners such as grants, leases or sales to low-income communities; and (v) providing government assistance for housing construction and the provision of basic services. These steps help secure land for low-income groups, which is an essential precondition for providing financial support for housing and services, and enable community-led upgrading to be scaled across the city.

2.1.2. Implementing holistic planning and cross-sectoral collaboration to provide affordable housing and basic services

The Cairo Call to Action, a significant outcome of the 12th session of the UN Habitat World Urban Forum in November 2024, presents a bold vision for urbanization. It calls for urgent action to tackle the global housing crisis, emphasizing that "it all starts at home". Addressing the global housing crisis is essential to speeding up the 2030 Agenda and achieving poverty eradication, climate action and crisis response and recovery. The document also highlights that access to basic urban services is crucial for adequate housing, and leveraging digital technologies can improve their delivery.[124]

Against the background of past failures of siloed service delivery and the multidimensional nature of urban poverty, holistic planning and cross-sectoral collaboration offer an effective

way of delivering affordable housing alongside essential services such as water, sanitation, electricity and clean energy. This approach often combines housing support with service provision. Many government programmes allow beneficiaries to construct their own homes. India's flagship mission "Pradhan Mantri Awas Yojana—Urban" (PMAY-U, which translates to "Prime Minister's Urban Housing Mission") applied such an integrated approach to deliver 8.8 million homes between 2015 and 2024.

Key features of PMAY-U include: (i) policy agenda setting at the national level with a commitment to provide housing for all; (ii) cross-sectoral coordination and integration of housing with water supply, sanitation, clean energy (liquefied petroleum gas or LPG), and electricity; (iii) long-term financial commitment of $22.67 billion (during 2015-2024); (iv) women's empowerment through sole or joint home ownership; (v) targeted support for low-income groups and slum dwellers including rural-urban migrants; (vi) beneficiary-led housing construction; and (vii) adoption of modern and sustainable construction practices (see Box 3).

Box 3: Prime Minister's urban housing mission, India

Pradhan Mantri Awas Yojana–Urban, or PMAY-U
Aligned with SDG 6, 7, 9, 10, 11, and 17

Launched in June 2015, PMAY-U aims to ensure dignified housing for the urban poor and rural-to-urban migrants.

Affordable housing for all. Led by the Ministry of Housing and Urban Affairs, the programme provides financial assistance for constructing "pucca houses" (built of bricks and mortar, as opposed to mud houses) with access to basic services for urban households from various socio-economic backgrounds, including economically weaker sections, low- and middle-income groups and slum dwellers.

Integrated service delivery. All PMAY-U homes are equipped with basic amenities, such as water-tap connections, toilets, LPG (liquefied petroleum gas), and electricity. Over 1.6 million houses were constructed using new technologies, highlighting the adoption of modern and sustainable construction practices.

Women's empowerment. Building on the government's efforts towards empowerment, PMAY-U introduced an innovative provision, mandating sole or joint ownership of homes by female heads of households, ensuring that women from low-income groups are given ownership and empowerment.

Inclusive targeting. PMAY-U prioritizes low-income and marginalized groups, including slum dwellers, lower caste groups, minorities, widows, persons with disabilities, and informal workers. By December 2024, 11.8 million houses were approved—9.9 million for economically weaker households, 1.3 million for the low-income group, and 600,000 for the middle-income group. To be eligible, beneficiary families or family members must not own a pucca house in any part of India.

Implementation Framework. The programme operates through four verticals: (i) beneficiary led construction, (ii) affordable housing in partnership, (iii) affordable rental

housing, and (iv) interest subsidy scheme. Financial assistance in the first two verticals is INR250,000 (approximately $2,800) per unit. Eligible beneficiaries can avail benefits under any one of the four verticals.

Financial Commitment. Over a ten-year period, PMAY-U committed INR2.0 trillion ($22.67 billion), with INR1.64 trillion ($18.62 billion) disbursed by December 2024. Of the 11.8 million homes approved, 8.8 million were completed and delivered in over 4,600 cities and towns.

Sources: Government of India, Press Information Bureau (2024a).[125]

Several other countries in the region have adopted holistic planning for affordable housing along with built-in access to basic services. In Indonesia, the "1-Million Housing Programme", which targets low-income groups through subsidized schemes, has been implemented as part of an effort to address the national housing backlog. From 2015 to 2024, 10.4 million affordable housing units were delivered with access to basic services.

In 2023, the Government of Viet Nam launched the "1-Million Social Housing Units Programme" to provide affordable housing, basic infrastructure and services to low-income earners and industrial park workers. The programme is set to be implemented until 2030. Most housing projects under the programme are typically developed through public-private partnerships (PPPs), with units being rented or sold below market rates. These projects are supported by preferential credit packages from state and commercial banks. As of July 2025, 104,000 units had been completed, 111,000 were under construction, and 418,000 were approved.[126] In October 2025, the Government issued a decree that raised the income cap for eligibility to VND20 million ($760) per month for individuals, VND40 million ($1,520) for married couples and VND30 million ($1,140) for single parents raising minor children.[127]

PPPs have also been used to provide and expand access to urban water and sanitation.[128] Under the "Tubig Para Sa Barangay" ("Water for the Community") project, Manila Water, the primary public water utility, has provided 24/7 clean water to almost two million people from urban communities in the East Zone of Metro Manila and Rizal province over the past two and a half decades.[129] The beneficiaries included informal settlers and low-income households who have benefited from 750 "Water for the Community" projects. These projects have also resulted in the reduction of water borne diseases and savings in terms of time and energy needed to fetch water every day. Moreover, Manila Water has been able to reduce water losses due to leaks and theft from over 65 per cent in 1997 to 13 per cent in 2022, which is considered "the biggest system loss reduction in the history of the country."[130]

2.1.3. Bridging last-mile access to basic services and infrastructure for marginalized and vulnerable groups

Bridging last-mile access to basic services and infrastructure is crucial, as many vulnerable groups are still underserved. This involves: (a) expanding networks of basic infrastructure and services to reach people living in slums, informal settlements, and peri-urban areas; (b) ensuring that urban infrastructure and services are accessible to marginalized and vulnerable groups; and (c) adopting approaches that integrate service expansion with broader improvements to urban infrastructure and management.

(a) Expanding networks of basic services and infrastructure to underserved areas. This involves expanding primary and secondary

networks (such as trunk water pipes, sewerage, power grids, and solid waste systems) to underserved parts of cities. Additionally, establishing tertiary connections to slums, informal settlements, and peri-urban areas is crucial, while addressing affordability barriers such as connection and metering costs.

In India, the mass rapid transit systems in 23 cities have expanded, increasing the operational metro network fourfold to 1,013 kilometres between 2014 and mid-2025. This expansion has led to a significant increase in daily ridership from 2.8 million to over 11.2 million.[131] In Papua New Guinea, the implementation of the National Water, Sanitation and Hygiene Policy has provided clean water access to over 13,000 residents in the town of Bialla in West New Britain Province. This progress was made possible by strengthening institutional capacity (see Box 4).

Box 4: Healthier lives through clean water supply in Bialla Town, Papua New Guinea

Aligned with SDG 6, 11 and 17

In Papua New Guinea, many communities lack a fresh and consistent water supply and proper sanitation. In 2015, the Global Water Security and Sanitation Partnership (GWSP), a trust fund administered by the World Bank, supported the adoption of the country's first "National Water, Sanitation & Hygiene (WASH) Policy". This policy guided the implementation of the World Bank-financed $70 million water supply and sanitation development project, aimed at strengthening institutional capacity and expanding water access in six towns.

One of these towns, Bialla, with a population of more than 13,000 people, previously experienced chronic water shortages that disrupted daily life and children's schooling. With project support, households now have consistent access to safe water, which has improved health, household hygiene, and children's school attendance.

Sources: World Bank (2023).[132]

(b) Making urban infrastructure and service systems accessible to all. Ensuring accessibility for marginalized and vulnerable groups, such as persons with disabilities, older persons, pregnant mothers and children, is essential for inclusive urban development. Public transport systems need to be designed to meet the needs of all users. Developing inclusive public transport systems requires a significant investment, a long-term vision, and a shift towards universal design to ensure usability for all. Indonesia's bus rapid transition system, Transjakarta, is a good example of a successful urban public transit system (see Box 5). The system provides first- and last-mile mobility to 82 per cent of Jakarta's population, maintains low fares for affordability, and integrates informal microbus services into the formal system through cooperative restructuring and contracted operations.

Box 5: Transjakarta, "first-mile" to "last-mile" public transport connectivity in Jakarta, Indonesia

Aligned with SDG 3, 7, 9, 11, and 13

To address severe congestion, long commute times, and deteriorating air quality, Jakarta launched Transjakarta, a Bus Rapid Transit (BRT) System, in 2013. This initiative has significantly expanded the city's public transport network, with Transjakarta now operating 13 BRT corridors and 255 routes, providing first- and last-mile mobility to four out of five city residents. Tickets remain affordable.[133]

Jakarta's public transport system JakLingko integrates the BRT, the Mass Rapid Transit, Light Rail Transit, and formalized Mikrotrans microbuses, allowing for seamless, multimodal travel. Rather than displacing informal services, the city chose to formalize them. This was accomplished, among other measures, by restructuring the operating model from independent operators to cooperatives, establishing contracts with microbus operators, developing inter-modal infrastructure and fare systems, and prioritizing and communicating inclusivity to encourage the use of public transportation.

In addition to improvements in mass transit, the city has invested in sustainable mobility infrastructure. This includes 63 kilometers of bike lanes, a bike-sharing programme, and low-emission zones. As a result of these efforts, the average travel time has been reduced by ten minutes and GHG emissions have decreased by 0.15 tons per passenger (compared to the 2012 baseline).

Affordability for low-income groups has been crucial to the success of Transjakarta. Government subsidies have helped keep fares low, with ticket prices increasing from IDR2,500 ($0.15) since its launch in 2004 to IDR3,500 ($0.21).[134] This has made Transjakarta one of the most affordable BRT systems globally.

Effective governance is another key factor in the success of Transjakarta. The system has seen improvements in governance, oversight, and the use of performance-based contracts. Through collaboration between the city government, operators and stakeholders, clear business plans, regulatory standards and monitoring frameworks have been established. Route consolidation and the creation of cooperatives have also helped to standardize services while maintaining operational flexibility throughout the network.

Sources: Institute for Transportation and Development Policy (2021);[135] C40 (2023).[136]

Singapore offers a strong example of inclusive transport planning, through its Land Transport Master Plan (LTMP) 2040. This plan outlines a fast, well-connected, and accessible public transport system designed to meet the needs of persons with disabilities, older persons, and other groups facing mobility barriers. Features such as barrier-free access across all MRT stations and buses, wheelchair-accessible routes, tactile paving, audible signals, and extended crossing times at over 1,000 pedestrian crossings help ensure safe and independent travel. Community-based support measures, such as designated "heart zones"

where commuters can assist those in need, further enhance accessibility and inclusion.[137]

(c) Making systemic improvements while extending basic services and infrastructure. Urbanization requires cities to not only expand basic services to underserved areas but also to manage natural resources and pollution. A combined approach that links service expansion with environmental management can strengthen resilience and improve outcomes for marginalized communities. An example of this is Sylhet City, which has successfully expanded access to drinking water and sanitation while addressing issues such as groundwater depletion and surface-water pollution (see Box 6).

Box 6: Providing drinking water supply and sanitation system in Sylhet city, Bangladesh

Aligned with SDG 3, 6, 9, and 11

Sylhet City, in northern Bangladesh, is experiencing rapidly rising demand for water. Currently only half of its water needs are being met through existing systems, with a heavy reliance on groundwater. The excessive extraction of groundwater has caused the water table to drop, resulting in increased environmental risks. In response, the city corporation is expanding its surface-water treatment capacity to reduce dependence on groundwater.

The city is integrating drinking water supply with groundwater conservation, drainage improvements, and pollution control. To address serious surface-water contamination from hanging and open toilets in slum areas, the city is renovating public sanitation facilities, building new public toilets, upgrading existing toilets, and renovating sanitation facilities.

Reaching marginalized and vulnerable groups is a priority for the project. It involves documenting slum areas during the design phase and improving sanitation access for low-income households. These measures aim to reduce waterborne disease risks, improve safety and privacy for women and children, and lower household costs related to water and health care.

Source: C40 (2024).[138]

2.2. Advancing decent and inclusive urban employment for all

Key messages

- Demand-driven and inclusive skills development, livelihood support, and enterprise and sector upgrading can help create better and more secure jobs, especially when skills are recognized, job matching is improved, and small businesses have access to finance and digital tools.
- Expanding social protection and implementing stronger occupational safety and health measures can improve working conditions and overall well-being. This includes creating safe operating spaces for urban street and market vendors and ensuring protections for platform-based workers.

- Legal recognition, clearer rules, and simplified registration processes can help extend rights and protections to informal workers. This can be achieved through social dialogue and integrated approaches that aim to reduce barriers and support a gradual, inclusive formalization process.

Urban labour markets in the Asia-Pacific region are evolving rapidly, creating new opportunities while leaving many workers without decent jobs and protection. In response, countries are advancing approaches to promote decent work as presented below.

2.2.1. Promoting better and more secure jobs

Promoting better and more secure jobs requires skills development, livelihood opportunities, sector upgrading, and enterprise support. These measures help workers transition from low-productivity and informal employment to more productive and better-protected jobs, while supporting businesses to grow and become part of the formal economy.

Building relevant and recognized skills is one of the most effective ways for informal workers to access more productive and secure livelihoods. In the Asia-Pacific region, workers often face barriers such as limited certification, mismatched training and a lack of job-matching services. Demand-driven, disability and age-inclusive, and gender-responsive training systems can enhance people's employability. For example, upskilling and digital skill cards for domestic workers in the Indian cities of Delhi and Noida have shown that recognizing competencies can strengthen bargaining power in undervalued occupations.[139] Similarly, Nepal's Employment Fund, which focuses on results-based training linked to verified employment outcomes, has improved labour market access for disadvantaged youth and women.[140] In Mongolia efforts to modernize the Technical and Vocational Education and Training (TVET) system and expand industry linkages have demonstrated how reforms can create pathways to formal employment (see Box 7).

Livelihood-focused initiatives play a crucial role in helping informal workers enhance their job and income security. The SVANidhi micro-credit programme in India serves as an example of how providing access to affordable working capital, along with incentives for timely repayment and digital payments, can significantly improve the livelihoods of urban street vendors.[141]

Box 7: Skills for employment project in Mongolia

Upgrading TVET for informal to formal job transitions
Aligned with SDG 4, 8 ,9, and 11

The Skills for Employment Project in Mongolia was implemented by the Ministry of Labour and Social Protection to modernize the national TVET system. The ADB-financed project was developed in response to persistent informality and rapid structural changes in the economy. With total financing of around $25 million, the project introduced industry-driven occupational standards, upgraded training facilities and expanded training in priority sectors such as construction, agriculture and transport. The project aimed to train over 15,500 individuals in skills development and enhanced industry partnerships. Gender-responsive design elements, including increased participation of women in teacher training and placements, were incorporated to address disparities in access

to skills development. By aligning skills with employer needs and formal job pathways, the initiative improved the prospects of informal workers transitioning into formally contracted, better-protected jobs.

Sources: Avdeenko et al. (2024);[142] ADB (2023).[143]

Individual-level skill gains alone are not sufficient to secure better jobs. Improvements at the business and sectoral levels are equally important. For instance, enhancing productivity in manufacturing and service sectors can have multiplier effects across local economies. In Viet Nam, structural transformation, supported by trade and industrial policies and foreign direct investment, facilitated the rapid growth of non-agricultural export-oriented sectors such as garments and electronics. This transition was complemented by investments in education and training to help the workforce take advantage of new opportunities and shift to formal employment.[144] In the cocoa sector of the Solomon Islands, the government and financial institutions worked together to address systemic gaps and enhance access to finance for small producers.[145] Thailand's SME Digital Coupon and Mini Transformation Voucher programmes, and Singapore's SMEs Go Digital initiative, have helped small businesses adopt digital solutions, enhance operations and increase their presence.[146]

Overall, promoting better, more secure and inclusive jobs requires investments in workers, businesses and sectors. When these approaches are incorporated into urban and national development strategies, they can broaden opportunities for productive, decent and formal work.

2.2.2. Improving working conditions and social well-being

Improving the working conditions and social well-being of urban informal workers requires public policies that integrate new forms of work, extend social protection coverage, and strengthen occupational safety and health measures.

In urban centres, improving working conditions for informal workers starts with providing developed land for street vendors. In India, under the National Policy on Urban Street Vendors (2004), Bhubaneswar city in Odisha state has implemented a public-private-community partnership model that established 54 vending zones in public spaces including fixed kiosks partially funded by formal businesses.[147] This approach has reduced tension between street traders and local authorities. In Bandung, Indonesia, the city issued regulations that designated green zones where street vendors are allowed to operate at any time, and yellow zones where they can operate at certain locations and times.[148]

Digital labour platforms are one of the most visible emerging forms of employment, especially in urban areas in the region. To harness the potential of platform work while addressing its risks, several countries in the region are introducing legal and policy frameworks. India's Rajasthan Platform Based Gig Workers Act of 2023 established a dedicated welfare board financed by a small levy on platform transactions.[149] In addition, China and the Republic of Korea have introduced measures to expand labour protection, social insurance contributions and union membership for platform workers.[150] In the Philippines, a popular ride-hailing platform has partnered with government agencies to provide access to a contributory social security scheme for registered drivers. This scheme covers social insurance for retirement, disability, death, funeral, sickness, maternity, and work-related contingencies, as well as health-care services such as assistance with hospital bills or medication, and savings programmes and affordable housing financing.[151] In Thailand, a public pension is available to self-employed workers, based on voluntary monthly contributions matched by government contributions of 50 to 100 per cent depending on the age of the worker.[152] Singapore's Platform Workers Act (2025) establishes a comprehensive framework for work injury protection, retirement, housing savings and collective representation (see Box 8).

Box 8: Singapore Platform Workers Act

Ensuring rights and protection in digital platform work
Aligned with SDG 8, 9, and 10

Singapore's Platform Workers Act (2025) establishes a framework to strengthen protections for platform workers. The Act mandates the government to:

(a) Ensure adequate financial protection for platform workers in case of work-related injuries. Under the Act, platform workers are entitled to the same scope and level of work injury compensation as employees under the Work Injury Compensation Act 2019.

(b) Improve platform workers' housing and retirement adequacy. Platform operators are required to deduct contributions to the Central Provident Fund (CPF), a compulsory comprehensive savings and pension plan for working Singaporeans and permanent residents, from platform workers' earnings and submit it to the CPF Board every month. The government plans to gradually increase CPF contribution rates for platform workers and platform operators to match those for employees and employers, in order to help platform workers achieve the same level of housing and retirement adequacy as employees. The increased CPF contributions are mandatory for platform workers born on or after 1 January 1995, while older platform workers can choose to opt into the increased CPF contributions.

(c) Enhance representation. Platform workers and platform operators can form their own platform work associations. Once recognized by platform operators, these associations can negotiate on behalf of workers to advance their interests and represent them in work-related disputes. Likewise, platform operators can also form and be represented by a platform work association.

Source: Government of Singapore, Ministry of Manpower (2025).[153]

Social protection enhances the resilience of urban informal workers in the face of economic and other shocks and supports life and labour market transitions, including those related to climate, demographic and technological change. Following the COVID-19 pandemic, there has been a significant push in the region to extend a combination of contributory and non-contributory social protection mechanisms to informal workers. Non-contributory mechanisms remain essential given the limited capacity to contribute among urban informal workers. These mechanisms, primarily financed by government revenue and external resources, help to protect workers from income insecurity and enhance access to healthcare and education. In Nepal, the Ministry of Labour, Employment and Social Security launched a scheme in 2023 extending social protection coverage to informal and self-employed workers across various industries, alongside a second scheme providing health coverage to Nepali migrant workers.[154]

Technology also plays an increasingly significant role in expanding social protection coverage. India's e-Shram platform has connected over 300 million informal workers to multiple social security schemes. Inclusivity has been further enhanced with the introduction of a multilingual feature in 2025, enabling workers to engage with the portal in 22 Indian languages.[155] Vanuatu's M-Vatu mobile application enables informal

and self-employed workers to make direct contributions to social security through their phones, extending coverage to 10,000 informal workers.[156]

In addition to expanding coverage, technology and AI-enabled approaches can improve the quality of jobs and facilitate transitions from informal to formal employment. Cities can use digital platforms for job matching, skills recognition, and guiding workers towards training. AI-based systems can assist in customizing social protection by monitoring work patterns and evaluating risk. For instance, in Indonesia, a popular multi-service tech platform leverages AI to evaluate gig workers' financial stability and offer personalised insurance plans.[157] However, these AI-powered solutions may lose effectiveness (or even exacerbate the existing digital divide) if not accompanied by significant efforts to enhance digital literacy and improve access to technology for marginalized workers.

Given the significant presence of migrants in urban labour markets, it is essential to extend protection to migrant workers. In Thailand, Migrant Worker Resource Centres provide support to undocumented workers from Cambodia, Lao PDR, and Myanmar in navigating registration and regularization procedures with the Thai government.[158] These processes help facilitate access to formal employment and social protection for migrant workers. In Malaysia, migrant workers, including domestic workers, have been included in the employment injury scheme since 2019 and the social security invalidity and survivors' scheme since July 2024.[159]

Improving occupational safety and health (OSH) for urban informal workers, including women, persons with disabilities, older persons, youth, and migrants, is a crucial aspect of enhancing well-being and guaranteeing decent work. Countries in the region are implementing practical steps to tackle OSH risks, linking them with mitigation and adaptation measures as well as community-based approaches. An example of this is the Extreme Heat Protection Initiative in India, which aims to enhance the resilience of women in informal employment who are disproportionately affected by rising temperatures (see Box 9).

Box 9: SEWA's extreme heat protection initiative in India

Building resilience to climate and occupational risks
Aligned with SDG 3, 5, 8, and 13

An initiative implemented by the Self-Employed Women's Association (SEWA) combines several strategies to mitigate the effects of extreme heat. The initiative focuses on risk reduction measures, early warning heat systems, and the provision of protective gear. It also provides a microinsurance product that offers payouts during extreme unsafe working conditions. In 2024, this insurance product was complemented by a cash assistance layer that is triggered at a lower temperature than the insurance product.

The pilot phase targeted 21,000 women in five districts in Gujarat. In 2024, the initiative was scaled up to 52,000 people in 22 districts. The cash assistance layer was triggered in all districts and members received a payout of INR400 ($4.5). The insurance layer was triggered in 17 districts, and 46,339 members received payouts ranging from INR151-1,651 ($1.70-18.5).

Sources: Atlantic Council Climate Resilience Center (2023);[160] Nanavaty and Saxena (2025).[161]

2.2.3. Fostering an enabling environment for a gradual and inclusive transition to formality

Creating an enabling environment for a transition to formality requires legal and regulatory reforms that extend rights and protections to workers in the informal economy and create conditions for businesses and workers to integrate into the formal economy. The ILO's Recommendation No. 204 provides guidelines for transitioning from the informal to the formal economy. Several countries in the Asia-Pacific region have taken steps to strengthen the legal foundations for formalization. For example, in Pakistan, the Sindh Home-Based Workers Act 2018 gives legal recognition and labour rights to home-based workers, many of whom are women earning less than one-tenth of the national minimum wage (see Box 10). In Thailand, new regulations extend key protections to Thai and migrant domestic workers, including special protections for pregnant women (see Box 11).

Box 10: Sindh Home-Based Workers Act 2018 in Pakistan

Legal recognition and equal rights for home-based workers
Aligned with SDG 5, 8, 10, and 11

Pakistan has an estimated 20 million home-based workers, most of whom are women earning low wages and lacking social protection. Sindh Province became the first location in South Asia to legally recognize home-based workers. The Sindh Home-Based Workers Act 2018 establishes a registration system linked to social security institutions and formally designates registered individuals as workers, granting them rights equivalent to those in the formal economy. These rights include equal treatment in wages, a minimum wage, skills training, credit and asset ownership, freedom of association, collective bargaining and social security benefits. Driven by the Home-Based Women Workers Federation, the Act has set a legislative precedent for other Pakistani provinces.

Sources: Asia Pacific Forum on Women, Law and Development (2021);[162] UNDP (2023).[163]

Box 11: Ministerial regulation to extend protection to domestic workers in Thailand

Expanding legal coverage and social dialogue
Aligned with SDG 5, 8, 10, and 11

In 2024, the Thai government implemented Ministerial Regulation No. 15 "Governing the Working Conditions for Domestic Workers". This regulation applies to both Thai and migrant workers and ensures minimum wage, limits on working hours, paid maternity leave, protection against termination due to pregnancy, and restrictions on night, overtime and holiday work for pregnant workers. Employers are required to inform labour inspectors when hiring or terminating workers, and young workers are entitled to paid educational leave.

These reforms were influenced by ongoing advocacy from worker organizations such as HomeNet and the Network of Domestic Workers in Thailand. This highlights the essential role of social dialogue in advancing labour rights for informal and migrant workers.

Source: ILO (2025).[164]

Social dialogue and cooperation play a crucial role in strengthening the rights and working conditions of informal workers. In Kyrgyzstan, a trade union representing 60,000 workers from over 20 trades at the Dordoi Market signed a Cooperation Agreement with the Dordoi Market Administration to protect the rights and improve working conditions of its members.[165] Countries are using technology to simplify administrative processes, improve accessibility, and support the transition from the informal to the formal economy. Mongolia's e-formalization initiative aims to create interoperable links between government systems to streamline the registration of informal enterprises and workers.[166] Malaysia's MyCoID online portal streamlines business registration procedures, reducing administrative burdens and promoting formalization.[167] Integrated solutions are another way to promote formalization. Cambodia's National Strategy for Informal Economy Development 2023-2028 takes a whole-of-government approach to formalization, involving over 60 national and subnational entities.[168] The strategy focuses on reducing entry barriers, streamlining regulations, extending protection, promoting capacity building and raising awareness of the benefits of formalization.

2.3. Improving urban environmental liveability

Key messages

- National and city-level policies such as clean air zones, renewable energy and electric vehicle promotion, and city greening initiatives are essential for reducing urban air pollution. Public interest litigation can also drive interventions in response to growing citizen demand for cleaner air.
- Building stakeholder capacity in waste management, for example through waste banks and digital tools that connect residents with recycling services, can make urban resource management more efficient and inclusive. Targeted support for informal waste-pickers such as links to recycling companies and entrepreneurship training can contribute to livelihood improvements in the sector.
- Building urban resilience requires coordinated policy action across governance levels, particularly involving local communities throughout the process. Integrating nature-based solutions such as wetlands, flood plains, forests, and urban green spaces into urban planning can deliver long-term environmental and social benefits.

This section presents approaches that countries and cities have taken to address the challenges outlined in Chapter 1 regarding the urban environment. The cases include methods to improve air quality, solid waste management, disaster resilience and urban green spaces.

2.3.1. Interventions to reduce urban air pollution

Chapter 1 established that the Asia-Pacific region is home to urban centres with some of the most severe air pollution globally. At least two major approaches have been followed to address the problem of urban air pollution. The first involves public policy interventions. The second one is public interest litigation that reflects the growing public demand by citizens for improved air quality.

(a) Policy interventions to reduce urban air pollution

The main policy interventions to reduce urban air pollution focus on aligning regulations with

WHO standards on urban air quality targets, monitoring air quality and identifying pollution priorities; enacting clean air zones to target vehicle pollution; shifting to public transport, walking and cycling; transitioning to electric or zero-emission vehicles; decarbonizing the electricity grid; and minimizing the burning of solid fuels and waste.[169] In the Asia-Pacific region, the UN Environment Programme recommends two additional interventions for tackling air pollution: investing in renewable energy and ending the open burning of cultivated fields.[170] Moreover, creating green belts (areas of urban forests) also helps to reduce urban air pollution, while delivering wider environmental benefits. Many of these interventions have been successfully implemented at the national and city levels in the region.

Several countries have implemented policy actions to reduce air pollution (see Box 12 and 13). Interventions include the adoption of the polluter pays and corrects principle, the installation of monitoring systems to track industrial pollutants, the development of renewable energy resources, the greening of cities and the creation of green belts around industrial areas. Other examples include switching energy sources to reduce dependence on fossil fuel consumption, introducing gas-powered buses, and making legislative changes to encourage the use of electric vehicles.

Box 12: Tackling air pollution in Kyrgyzstan

Improving public transport with public health benefits
Aligned with SDG 3,7,9,11, and 13

Air pollution is a major public health risk in Kyrgyzstan. The annual average exposure to PM2.5 in the country is approximately 3.6 times higher than safe levels. In the capital city, Bishkek, UNICEF[171] estimated that between 2021 and 2022, this exposure resulted in 112 deaths and caused an estimated economic loss of 1.6 billion Kyrgyz Soms ($20 million).

To address this issue, the government is taking steps to modernize the energy sector by transitioning to cleaner fuels, such as natural gas and renewable energy sources. With support from the World Bank, efforts are underway to increase the gasification of residential buildings that were previously reliant on coal. Gazprom Kyrgyzstan, a subsidiary of the Russian energy utility, reported that in the first half of 2024, 40 per cent of settlements in the country had been connected to gas networks, leading to a significant reduction in coal consumption of 58,000 tons from January to June 2024. Additionally, a subsidized loan programme totaling 1 billion Soms (around $11.5 million) per year has been allocated to facilitate connections to gas distribution networks. In Bishkek, the government's initiatives include the purchase of over 1,000 gas-powered buses in 2024. Each bus replaced four diesel minibuses, resulting in a daily reduction of diesel fuel consumption by 200 tons. Furthermore, in April 2024, a law was passed to incentivize the use of electric vehicles in the country, through tax breaks, special green registration plates, and the development of charging infrastructure for electric cars.

Sources: Aisultan (2025);[172] 24.kg News Agency (2024).[173]

Box 13: Battery-backed renewables in Tonga

Switching to renewables with employment benefits
Aligned with SDG 7,8,9,11, and 13

Tonga, one of the world's most climate-vulnerable countries, is seeking to transform its fossil fuel- dependent energy system with the goal of reaching 70 per cent renewables by 2030. A key initiative is the installation of a 10.1 MW/19.9 MWh Battery Energy Storage System (BESS) to store solar energy and ensure grid stability, directly addressing the intermittency of renewable power.

Funded by ADB, the Green Climate Fund, and the Australian government, the project is expected to reduce annual CO_2 emissions by more than 13,600 tonnes and save around 4.2 million litres of diesel. Importantly, it has also generated significant co-benefits by creating skilled jobs for women in roles such as carpenters, electricians, and assembly line workers. With more reliable power, communities have been able to launch small businesses using electric equipment, increase their incomes, and improve their quality of life by becoming more food secure, and achieving a better balance between work, family, and education.

Sources: ADB (2023),[174] Entura (2025);[175] Green Climate Fund (2025).[176]

(b) Growing public demand for improved air quality and citizen's legal action

In some countries in the Asia-Pacific region, there is a growing public demand for improvements in urban air quality, which has led to legal action. These cases of public interest litigation have resulted in court judgments that promote action to improve urban air quality in several cities in the region (see Box 14).

Box 14: Growing public demand for action on air quality improvements

In India, several policy interventions, such as the phasing out diesel-powered end-of-life vehicles (ELVs) in the Delhi National Capital Region,[177] have resulted from court orders driven by citizen petitions.

In Indonesia, a court ordered the establishment of stricter national and regional air quality standards in response to a citizen lawsuit in Jakarta in 2019.[178] The court also mandated increased supervision of emissions and required the prevention and reduction of health impacts from air pollution, while ensuring public participation and transparency in these efforts.

In Pakistan, interventions from the Lahore High Court and the Supreme Court of Pakistan led to the creation of the Policy on Controlling Smog[179] in 2017 and the Smog Commission,[180] which issued a public report in 2018.[181]

In Thailand, a group of 10 legal experts, medical practitioners, and civil advocates in the northern city of Chiang Mai took the PM2.5 issue to court. This resulted in a court ruling mandating local authorities to issue an air pollution action plan within 90 days.[182]

In Uzbekistan, public pressure in the capital city of Tashkent[183] led to the establishment of new rules and regulations on air pollution. These rules address key sources of pollution, including coal-burning power plants and polluting fuels.

Source: Health Effects Institute (2025).[184]

2.3.2. Improving solid waste management and addressing problems faced by waste-pickers

Tackling urban inequality and improving solid waste management are interconnected challenges. Effective solutions require a multi-faceted approach that includes strengthening waste management services, providing support to informal waste-pickers, and building stakeholder capacity (see Box 15). Furthermore, the integration of new technologies—such as apps that connect residents with recycling services—introduces digital solutions that can make urban resource management more efficient and inclusive (see Box 16).

Box 15: Waste banks in Battambang province, Cambodia

Waste management, circular industry, and digitalization
Aligned with SDG 3, 5, 6, 8, 11, and 12

Battambang, Cambodia's third-largest city, is currently facing significant financial and infrastructure challenges in solid waste management. The city's eight-hectare landfill is nearing capacity, with 20 per cent of the city's waste being illegally dumped. The remaining waste is disposed of in landfills lacking proper bottom liners or leachate treatment systems.

In an effort to move away from the traditional take-make-dispose model, Battambang is working towards a more sustainable urban resource management approach. From 2020 to 2021, the city initiated pilot projects with the Waste Bank initiative and played a key role in promoting recycling.

The Waste Bank initiative encourages residents and organizations to participate in waste sorting. Recyclable items are taken to the waste bank, where they are weighed and recorded in an account, essentially creating a form of resource currency. Residents are then provided with cash or points based on the type and weight of materials, creating an incentive for resource circulation. The collected items are then sent to specialized organizations, such as the Cambodian Education and Waste Management Organization (COMPED) or plastic product factories for cleaning, sorting, shredding, and composting.

The project also supported informal work and women's employment by helping 25 waste pickers secure contracts with plastic recycling companies, establishing a supply chain for reusable plastic bags. The project offered entrepreneurship training for women, teaching them how to operate waste banks for recycling resources and providing seed capital to assist them in starting small businesses within the community, thereby increasing their sources of income.

Sources: ESCAP (2020);[185] Urban SDG Knowledge Platform (2021).[186]

Box 16: Plasticpay digital platform for waste recycling in Jakarta, Indonesia

Waste management, circular industry, digitalization, and the private sector
Aligned with SDG 6, 11, and 12

Plasticpay, a for-profit social enterprise, operates a digital platform that encourages people to trade environmentally harmful plastic waste for points that can be redeemed on digital payment platforms. The Plasticpay platform utilizes vending machines to process plastic bottle waste deposited by the public. People who deposit plastic bottles can earn points that are redeemable for electronic currency on popular digital wallet platforms. This innovative system incentivizes community participation in recycling by offering tangible rewards. Once the plastic bottles are collected, Plasticpay recycles them into eco-friendly materials such as fabric and polyester. The platform partners with small and medium-sized enterprises (SMEs) to create upgraded products using these recycled materials. This collaboration not only encourages recycling but also supports local businesses and sustainable development within the community.

Plasticpay has expanded its services by facilitating the exchange of high-density polyethylene (HDPE) bottles, such as shampoo, soap, skincare, and lotion bottles, through its dropbox units. Currently, it operates 183 mini collection points in Jakarta, making it convenient for residents to participate in the recycling programme and contribute to environmental protection.

Source: Ajie et al (2024).[187]

2.3.3. Strengthening urban resilience, including through nature-based solutions and green spaces

As highlighted in Chapter 1, many countries in the Asia-Pacific region are highly vulnerable to disaster risks and the adverse impacts of climate change. It is crucial for policy action at different levels of governance to be taken in order to develop and strengthen urban resilience. This is particularly important for slums and informal settlements, where disaster risks are concentrated, along with a general lack of adequate housing and access to basic services. Research has shown that efforts to build and enhance urban resilience are more successful when local communities are actively involved from the beginning stage of planning to implementation, monitoring, reporting and evaluation (see Box 17).

Box 17: Flood Resilience for Ulaanbaatar Ger Areas (FRUGA) in Mongolia

Combining modern planning with grassroots action
Aligned with SDG 11,13, and 16

The FRUGA project addressed flooding risks in the vulnerable informal Ger districts of Ulaanbaatar. Its main objective was to protect communities by combining modern planning with grassroots action, employing UN-Habitat's People's Process approach to strengthen community engagement and ownership.

The project established a foundation for resilient urban management in Ulaanbaatar through proactive, city-wide planning. This involved creating the city's first Flood Simulation Model and a Territorial Land Use Plan to identify flood zones, guiding future development away from risk areas. This strategic approach was complemented by the construction of five drainage facilities and a 197-meter-long flood retention dike, which now directly protects 3,688 households from seasonal floods.

A significant achievement was the project's community-led model, which mobilized 1,827 households into groups to guide planning and construction, avoiding complex land resettlement. Local ownership was strengthened by investing in local capacity, with 82 training sessions for over 1,400 officials and community leaders, most of whom were women. The initiative also constructed 1,133 flood-resilient toilets designed for vulnerable community members.

Source: Adaptation Fund (2024).[188]

Investing in nature-based solutions or ecosystem-based approaches can strengthen urban resilience and address urban inequality in the Asia-Pacific region.[xvii] Nature-based solutions can deliver up to 40 per cent of the needed climate actions by protecting, restoring and sustainably managing ecosystems, thereby reducing disaster risks.[189] There are also financial tools that can assist in building climate resilience, protecting ecosystems, and improving people's lives.[190] Nature-based solutions have significant potential to reduce the costs of disasters. Well-managed wetlands, flood plains and forests reduce floods and droughts, while mangroves and coral reefs provide protection against coastal flooding (see Box 18). When integrated into urban planning, these measures can contribute to long-term urban resilience.[191]

Box 18: Wetland-based urban resilience in Colombo, Sri Lanka

Urban resilience, wetland, biodiversity and eco-system service
Aligned with SDG 6, 9, 11, 13, and 15

The coastal city of Colombo faces significant flood vulnerability exacerbated by wetland degradation and poor drainage. A complete loss of its wetlands could raise water levels by 1.8 meters during a 1-in-100-year flood, potentially causing significant economic losses to the Colombo Metropolitan Region's economic output.

xvii The UN defines Nature-based Solutions (NbS), as "actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems". Source: UNEP (2022) *Nature-Based Solutions for Supporting Sustainable Development (English Version)- Resolution Adopted by the United Nations Environment Assembly on 2 March 2022 [UNEP/EA.5/Res.5].* Available at: https://wedocs.unep.org/handle/20.500.11822/39864

In response, the government launched the Metro Colombo Urban Development Project (MCUDP). The project is primarily designed for flood control in the Colombo Metropolitan area, and wetland management was a key component of the project. The Metro Colombo Wetland Management Strategy introduces a shift from seeing wetlands as wastelands to recognizing them as valuable infrastructure that provides essential services to the city, including flood control, waste water treatment, and public health improvements. The strategy includes protection or restoration of a range of urban wetlands, including artificial lakes, marshlands, and abandoned paddy fields so that these areas can act as natural flood sponges, storing stormwater during rains and releasing it gradually.

Sources: GFDRR (2016);[192] Mukherjee et al. (2022);[193] WMI and Cobra Collective (2021);[194] World Bank (2022).[195]

The importance of ensuring that cities have green spaces cannot be overstated in the context of urban liveability and resilience. Green spaces provide direct environmental benefits to cities by serving as carbon sinks, reducing urban heat, and attenuating storm water surges, while also supporting human health and well-being.[197] Green spaces also offer important social and communal benefits, such as areas for exercise, leisure, and social interaction.[198] The integration of the planning of green spaces into urban development is an emerging priority (see Box 19).

Box 19: Training urban planners for greener cities in Viet Nam

Urban resilience, health and environment
Aligned with SDG 4,9,11,13, and 15

In November 2025, the Hanoi University of Civil Engineering (HUCE) launched a new Training Hub on Nature-based Solutions and Water Sensitive Urban Design (WSUD). The initiative marked a significant step for climate-resilient urban development in Viet Nam. The hub, funded by the Global Environment Facility (GEF) and administered by ADB with support from the International Centre for Environmental Management (ICEM) and Nippon Koei, aims to help urban professionals integrate nature into city planning.

The hub features a “living laboratory” with green walls, rain gardens, and porous pavements. It is an interdisciplinary learning environment with facilities that allow students and professionals to observe sustainable technologies in action, fostering collaboration between planners, engineers, and architects. This practical approach is crucial for scaling up climate adaptation solutions across Viet Nam and the region.

The hub is intended to host regular courses and research projects to nurture innovation, setting the stage for more resilient and sustainable urban design in Viet Nam.

Source: ICEM (2025).[199]

2.4. Enablers for inclusive urban transformation

Building on the innovative solutions discussed above, this section focuses on four critical enablers for inclusive urban transformation in the Asia-Pacific region. These enablers—financing, science and technology, governance, and partnerships—are essential for the institutional, financial, and knowledge ecosystems needed to scale and sustain innovation.

2.4.1. Financing innovation for sustainable urban development

Rapid urbanization and the increasing negative impacts of climate change are driving the demand for investments in inclusive and resilient urban development across Asia and the Pacific. However, countries in the region are facing challenges in mobilizing long-term capital. City governments often lack sufficient public funds due to high fiscal centralization, limited revenues, and restricted access to borrowing.[199] This has led to local government spending as a share of total government spending falling below global averages, as seen in Malaysia (7.2 per cent), the Philippines (11.1 per cent), and Thailand (30.5 per cent), compared to the OECD average of 39.5 per cent.[200] Local private financial institutions also have a limited role,[201] resulting in many development projects relying on financing through partnerships between governments, development partners or international financial institutions (IFIs). This reliance comes with currency risks, as loans are typically issued in major currencies (such as the US Dollar or the Euro) while project revenues accrue in local currency. This mismatch increases vulnerability to exchange rate fluctuations, adding pressure through rising debt obligations and contingent liabilities. These challenges are further exacerbated by the lack of an enabling environment, characterized by complex legal frameworks governing land ownership and use, bureaucratic red tape, and inconsistent policy implementation. These combined factors contribute to higher financing costs and a perception of heightened investment risk.

Recent projects on sustainable urban development in the Asia-Pacific region have revealed a wide variety of financial instruments being used to mobilize capital and reduce investment risks. An analysis by the OECD[202] of 129 urban projects in ASEAN in 2025 showed that nearly half were financed through a combination of government resources and debt, primarily in the form of public loans from bilateral and multilateral donors. Only 15 per cent relied solely on private capital, mainly from foreign sources, while 10 per cent had a mixed financing structure involving both private and public funding. Debt and public capital expenditure were the primary instruments utilized, with much less use of private and public equity and bonds.

Even so, green, social, sustainable, and other bonds, while still uncommon in the region, are

becoming more popular as instruments to raise capital. This trend has positioned Asia and the Pacific as the world's second-largest Green Social, Sustainability and Sustainability-linked (GSSS) bond market after Europe as of 2024.[203] Examples include a real estate developer in the Philippines, which issued two tranches of its ASEAN Green Bond in 2020 and 2022, raising PHP6 billion ($103 million) to finance its sustainable urban development portfolio.[204] Green municipal bonds can also help fill city-level financing gaps: India's Vadodara Municipal Corporation issued the region's first green municipal bond in 2024, raising INR1 billion ($12 million) for building a wastewater treatment plant.[205] However, uptake remains constrained by the absence of widely adopted, consistent taxonomies or definitions for sustainable debt instruments. These frameworks can guide the design of eligible projects and reassure investors about the use of proceeds. To address this, ASEAN countries have launched their Taxonomy for Sustainable Finance to define the design, objectives, criteria, and intended uses of capital for different green and sustainable financial instruments, including bonds.[206]

The region's sustainable urban development requires increased disaster risk management (DRM) financing. Most countries still allocate more resources to post-disaster recovery than to pre-disaster investment. In this sense, instruments such as sovereign and sub-sovereign disaster risk financing strategies, contingent credit lines (e.g. Cat-DDOs), and parametric insurance for cities are becoming essential complements to climate adaptation finance. They provide rapid liquidity and cover residual risk, especially for MSMEs and informal workers. Regional initiatives highlight the importance of pre-arranged financial protection, including the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI), which offers rapid post-disaster liquidity to Pacific Island governments through parametric insurance. The Philippine City Disaster Insurance Pool (PCDIP) also utilizes parametric triggers to provide quick payouts after typhoons.[207]

De-risking instruments such as first-loss credit enhancement and partial credit guarantee facilities are also expanding, helping to attract private investment in sustainable infrastructure. For example, the SDG Indonesia One Platform has mobilized more than $3.1 billion since 2018 by using a first-loss public fund to leverage private and multilateral financing for 62 urban projects. These projects range from flood control to affordable green housing, as well as solar and geothermal energy initiatives. Similarly, GuarantCo Ltd., a specialized development finance institution, has supported the bankability of infrastructure projects across the region through partial credit guarantees. This includes a $34.5 million guarantee in 2024 for a water treatment plant in Hoa Binh, Viet Nam,[208] and a $13.5 million guarantee in 2019 for the first utility-scale, grid-connected solar plant in Teknaf, Bangladesh.[209]

Despite the growing interest in innovative finance, the region still needs significant policy and institutional reforms to establish a more enabling environment that attracts and mobilizes more capital for sustainable urban projects.

2.4.2. Science and technology as catalysts for urban solutions

Rapid urbanization in the Asia-Pacific region is driving, and being driven by fast-paced technological innovation. Advances in artificial intelligence, data analytics, IoT and remote sensing are transforming how urban areas are planned, managed and experienced. These technologies offer solutions to pressing challenges such as climate adaptation, waste management, public service delivery, and citizens' mobility.

Among the various innovations taking hold in cities and towns across the region, data-driven urban planning tools such as digital twins, remote sensing technologies, and geographic information systems (GIS) allow city governments to model future growth scenarios with greater precision, optimize land use, and improve disaster preparedness. A practical example of this is the Virtual Singapore Platform, which provides a 3D digital twin of the entire city of Singapore. The platform allows planners and citizens to visualize data on energy consumption, mobility, and climate

impacts, enabling smarter planning for large-scale infrastructure development processes.[210]

Smart infrastructure and energy management, supported by IoT applications and real-time monitoring systems, can improve resource efficiency. For example, Thailand's National Smart Grid Master Plan aims to upgrade the energy grid to allow real-time monitoring and support bi-directional energy flows.[211] In Indonesia, the city of Surabaya has implemented a smart waste management system that utilizes IoT sensors, smart bins, community-based recycling points, and a dedicated digital app to streamline waste collection and improve recycling.[212] Technological advancements in sustainable mobility are also progressing, including intelligent transport systems, public transport electrification, and low-emission zones. An example of this progress is the electrification of the entire bus and taxi fleet in the city of Shenzhen, China, initiated in 2017, through a public-private partnership between the local government and industry partners.[213]

While a comprehensive review of all technological innovations in urban development is beyond the scope of this report, AI-enabled climate risk management systems deserve attention for their role in helping urban centres anticipate and mitigate the impacts of natural events. For example, the municipal government of Jakarta has been using a real-time data, AI-powered platform since 2020. This platform integrates sensor data on rainfall, drainage flows, and river or sea levels with IoT analytics, and weather forecasts to predict flood-prone neighbourhoods. The system alerts urban residents via a mobile app and informs decisions on closing flood gates or activating pumps ahead of time, thereby shifting flood management from a reactive to a proactive approach.[214]

Despite their potential, these innovations also pose challenges that can undermine urban inclusion and sustainability. A foremost risk is the widening of the digital divide. At the urban level, low digital literacy, unreliable connectivity, and limited access to affordable hardware risk worsening existing socioeconomic disparities, as digital access increasingly shapes opportunities in education, employment, and civic participation. The ubiquitous rise of AI could further exacerbate the urban digital divide by reinforcing biases in algorithms and concentrating benefits in well-connected urban hubs, while already vulnerable groups face increasing wage compression and job insecurity from AI automation.[215] Without targeted investments in inclusive skills development, affordable connectivity, and efforts to address biases, these dynamics threaten to deepen inequalities among urban dwellers and undermine progress towards sustainable, equitable urban development.

Equity and ethical considerations are crucial when deploying advanced technologies in urban areas. Without adequate inclusion strategies, groups that already lack digital access and literacy, such as those in informal settlements or engaged in the informal economy, are at risk of increased exposure to issues such as algorithmic bias, cybersecurity risks and privacy violations. They also face the possibility of being further marginalized by the rapid spread of these technologies. More explicitly linking technological deployment to informality, including attention to how smart solutions can either bypass or deliberately integrate informal actors and areas, would therefore be a valuable approach to addressing exclusion in urban contexts across the region.

A significant obstacle to changing these dynamics is the lack of institutional and governance capacity. Many local governments lack the technical expertise and financial resources needed to acquire, manage, and maintain complex technological systems. Data governance frameworks are often weak or fragmented, with unclear guidelines on data ownership, privacy, and interoperability, limiting the ability to integrate data across sectors and levels of government. In contexts of high urban informality, these governance gaps can further complicate efforts to extend the benefits of technology to informal settlements and workers, where formal data systems and regulatory oversight are often absent or limited. As a result, data are often trapped in siloes across government agencies, hindering integrated planning and coordinated service delivery. Furthermore, the fast pace of technological advancement often surpasses

the ability of municipal and national regulators to adjust policies, creating uncertainties that may discourage private sector involvement. To ensure that the technological transformation truly promotes inclusion and sustainability in cities and towns across the region, it is essential to implement people-centred strategies that prioritize equity, transparency, and citizen participation. This should be supported by strong governance frameworks and holistic approaches involving all sections of society.[216]

2.4.3. Governance for integrated and accountable urban systems

Reducing urban inequality requires governance systems that are coherent, inclusive, and responsive. The main mechanisms that strengthen inclusive and sustainable urban development are discussed below.

Legislative frameworks provide the basis for rules and regulations aimed at orderly urban growth and reducing inequality. National laws on land use, spatial planning, and environmental protection lay the foundation for urban development, but weak enforcement can perpetuate inequality. Ensuring the fair and transparent application of these laws is crucial for expanding access to secure land and basic services. Ecologically sensitive zones, such as flood plains, wetlands, rivers, lakes, and forests form core urban ecological infrastructure that support climate resilience. Laws should prohibit unsanitary landfilling, illegal encroachment, and unchecked pollution, with enforcement to prevent marginalized groups from being disproportionately exposed to risks.

National Urban Policies (NUPs) provide a strategic framework for guiding urban development and can play a pivotal role in reducing urban inequalities. The Asia-Pacific region is experiencing a surge in next-generation NUPs, which prioritize participation, inclusion, affordability, and people-centred planning.[217] When designed with urban equality at their core, NUPs help to expand access to affordable housing, basic services, transport, and economic opportunities for underserved populations and marginalized groups. By setting national standards, laws and making investments more inclusive, they are a key tool for closing urban gaps and advancing more people-centred development. National housing programmes, such as India's Prime Minister's Urban Housing Mission, Indonesia's 1-Million Housing Programme, and Viet Nam's 1–Million Social Housing Units Programme, illustrate how NUPs can directly target inequalities.

Multi-level governance is crucial for reducing urban inequalities. In the Asia-Pacific region, sub-national governments account for around 29 per cent of public expenditure and 38 per cent of public investment,[218] making strong vertical coordination essential for inclusive urban outcomes. Strengthening coordination across levels of government, improving fiscal transfers, and establishing urban governance mechanisms are key to ensuring that no one is left behind and no place is left behind. Equalization transfers are a key mechanism that can reduce urban inequalities. By allocating resources to fiscally constrained local governments, they help ensure a more balanced provision of basic urban services. For example, Mongolia's General Local Development Fund allocates funds to aimags (provinces) and soums (districts) based on population, poverty incidence, and service needs. This helps narrow gaps between well-resourced urban centres and poorer municipalities.[219]

Urban planning instruments are essential for coordinated urban and territorial development. They utilize master plans and support zonal and site-level plans that establish controls such as floor space index (FSI),[xviii] building coverage, and height limits. These urban planning instruments also guide commercial incentives. For example, in Mumbai and Delhi, additional FSI and Transfer of Development Rights (TDR)[xix] bonuses encourage private investment in public infrastructure and affordable housing.

xviii Floor Space Index (FSI), also known as Floor Area Ratio (FAR), is the ratio of a building's total floor area to the size of the plot it is built on.

xix Transfer of Development Rights (TDR) is a zoning tool that moves "right to development" from environmentally or historically sensitive "sending" locations to more appropriate "receiving" locations, typically with higher growth potential.

In Mumbai, a regulation stipulates that 20 per cent of land plots over 4,000 square meters must be allocated to affordable housing in exchange for a higher FSI.[220] TDR allows bonus FSI to be used or traded across sites. These tools help align private investment with inclusive urban development goals.

Community-led solutions are important for reducing urban inequalities. They involve combining public policy and investment with local knowledge, labour and resources of communities to build affordable housing and improve access to basic services. These solutions require communities to identify priorities, co-design plans with local governments, and implement improvements to housing, basic services, and neighbourhood infrastructure. Thailand's Baan Mankong programme is a prime example of this approach. The programme strengthens land tenure security, upgrades housing, and expands basic services in informal settlements. Similarly, UN-Habitat's People's Process supports access to affordable housing and community-driven upgrading and service delivery in various countries in the region, particularly in post-conflict and post-disaster contexts.

Digital governance is a crucial factor in enabling efficient and equitable urban management. It helps identify service gaps, target underserved communities, and support evidence-based decision-making. Urban centres across the Asia-Pacific region are increasingly adopting various digital systems to strengthen planning and service delivery. These tools promote transparency and enable more focused support. For example, India's e-Shram platform registers informal workers and connects them to welfare schemes, improving access for marginalized groups.

Digital platforms are also being used to improve urban operations and predict risks. In Bangkok, Thailand, Traffy Fondue is a digital platform created to facilitate citizen engagement, by allowing official reporting and resolution of urban challenges. This enables effective problem-solving and improves city operations.[221] China's City Brain utilizes real-time data and AI to optimize traffic flow and emergency response, ultimately reducing spatial disparities in mobility and access.[222] Similarly, Seoul's S-Map, a 4D urban digital twin, integrates geospatial data, BIM models, IoT sensors, population density, transport information, and CCTV analytics to model flood-risk zones, air quality, and traffic flow.[223] This supports more accurate identification of flood risks and better-coordinated emergency responses during heavy rainfall and heatwaves.

Public participation is vital for transparent and accountable urban governance. It ensures that the voices of all people, especially those who are often overlooked, are considered in planning and service delivery. Inclusive engagement mechanisms, such as mandatory disclosure and consultation on draft city master plans, enhance inclusion by providing underserved communities with a meaningful voice. In India, Japan and several other countries in the region, draft master plans must be publicly displayed for at least 30 days to gather citizen feedback. Additionally, maintaining permanent feedback channels improves responsiveness. For example, China's 12345 Mayor's Hotline allows residents to report issues, with cases directed to the appropriate departments for prompt resolution.[224] Public participation in budgeting also enhances engagement. India's MyCityMyBudget, implemented in Bengaluru, Kalaburagi and Mangaluru enables residents to submit spending priorities through digital forms, neighbourhood campaigns, and ward-level consultations.[225] Since its inception, this initiative has gathered over 130,000 inputs and has influenced city budgets for roads, footpaths, and drainage. However, meaningful public participation goes beyond ticking a box. It requires intentional design to address barriers faced by pregnant women, persons with disabilities, older persons, youth, migrants, and informal workers.

2.4.4. Multilateral and multi-stakeholder partnerships

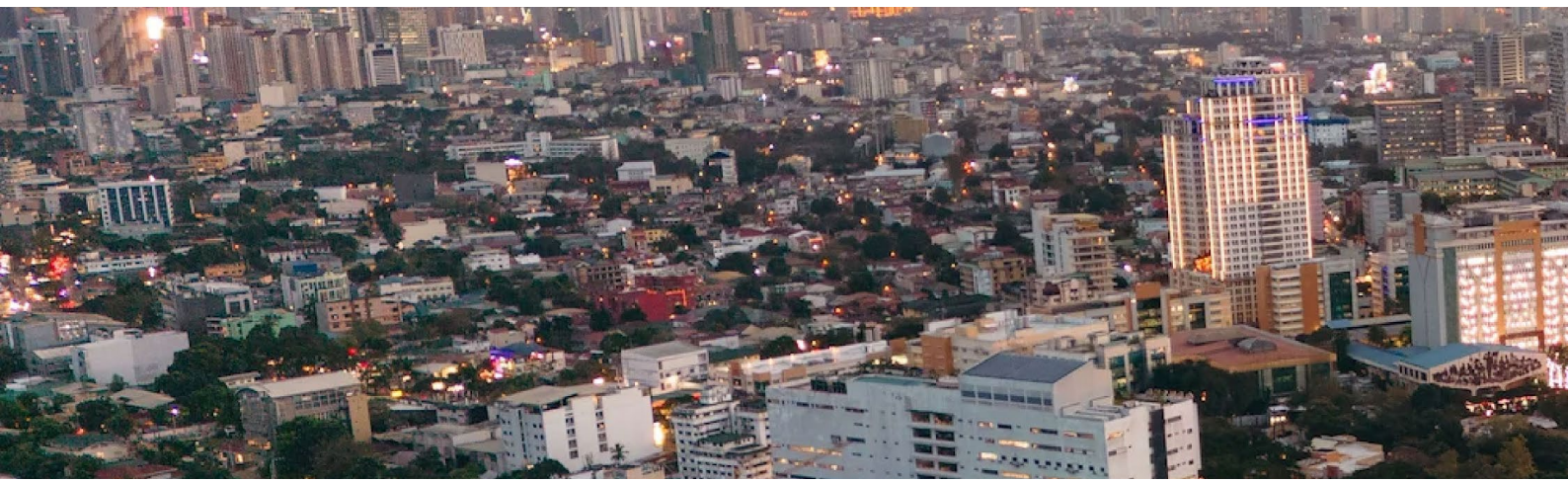
Effective multilateral and multi-stakeholder partnerships are essential for inclusive and sustainable urban development. Whether it is through inter-city cooperation, cross-border collaboration, private sector engagement, or research partnerships, urban centres can benefit from pooling resources and working together to address common challenges.

Partnerships among cities

Partnerships within urban agglomerations enable shared prosperity through industrial diversification, infrastructure integration, and efficient public service delivery. The Hangzhou Metropolitan Area, which includes the major Chinese cities of Shaoxing, Jiaxing and Huzhou, illustrates how digital and cloud-based industrial alliances drive regional transformation. This partnership links the cities by an expressway and a 516-kilometer subway network, facilitating mobility and service integration.[226] Similarly, Indonesia's Bandung Metropolitan (Bandung Raya) Partnership coordinates services and infrastructure in four municipalities through joint planning bodies and shared projects. This includes the Legok Nangka Waste Treatment Facility and the Bandung Raya BRT corridor, enabling local governments to pool resources, harmonize regulations, and deliver infrastructure with shared benefits for the wider metropolitan population.[227] To ensure sustainability, enablers such as regional consultation mechanisms, joint planning platforms, and transparent governance frameworks, should be institutionalized. This should be supported by monitoring systems to track progress and prevent the siphoning effects of larger urban centres.

Cross-border bilateral urban partnerships allow urban centres to advance technological innovation, industrial upgrading, and infrastructure development. Through a joint piloting/experience replication/regional promotion approach, these collaborations make successful models more scalable and transferable. Strategic MOUs, dedicated funds, innovation pilot zones, and talent and data sharing platforms, can provide the basis for sustained collaboration and mutual learning. The Singapore-Shenzhen Smart City Initiative is an example of this approach. The initiative promotes digital connectivity and innovation through 43 projects, 29 MOUs, and a Smart City Demonstration Zone.[228] Similarly, the long standing cooperation between the Republic of Korea's Busan and Japan's Fukuoka has integrated cross-border transport links, and joint cultural and innovation programmes that boost economic dynamism and people-to-people ties.[229] These initiatives, from high-speed ferry connections boosting tourism and trade to joint port development and disaster management, demonstrate the potential of bilateral partnerships to create shared economic corridors. For long-term impact, bilateral partnerships should align with national and regional development frameworks.

Establishing multilateral city alliances to address transboundary urban challenges can help cities to tackle climate change, energy insecurity, pollution, digital security, migration, and epidemics. Unlike national governments constrained by sovereignty, cities have greater flexibility to address these challenges. Established in 2007, the Cities Development Initiative for Asia (CDIA) supports secondary cities in the Asia-Pacific region by providing expertise for the preparation of sustainable and bankable infrastructure projects, linking cities with funding sources, and strengthening local capacities to develop and implement their high-priority investments.[230] The ASEAN Smart Cities Network (ASCN), launched in 2018, exemplifies this approach by connecting 26 pilot cities to promote smart and sustainable urban development. The ASCN has a dual-tier governance model of national



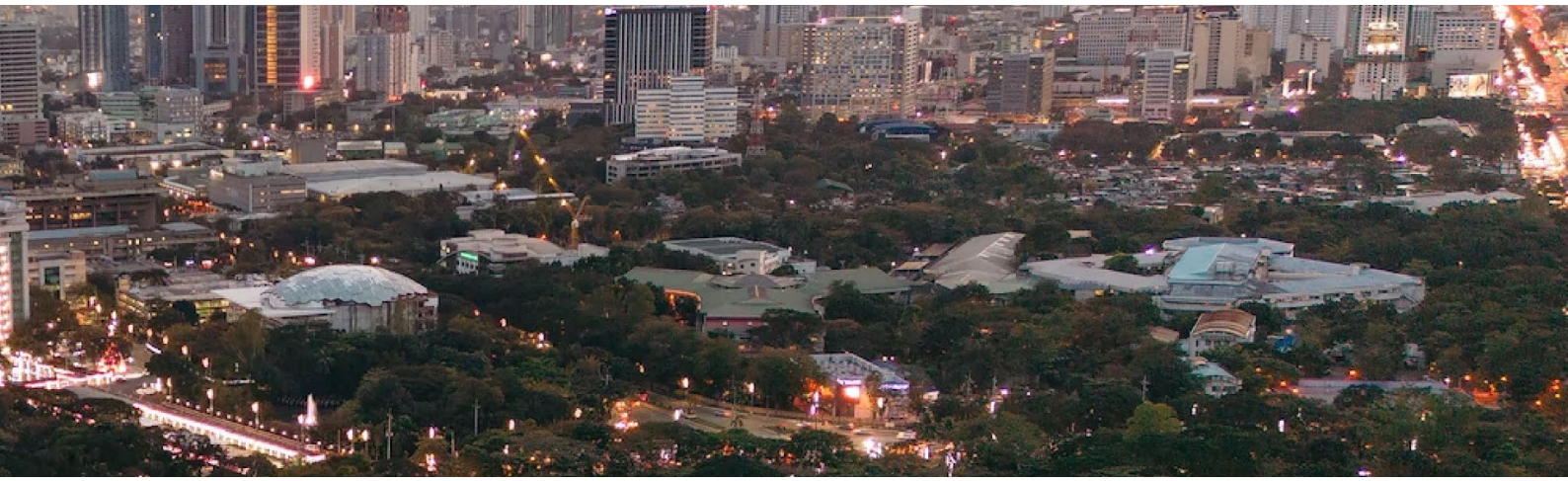
representatives and chief smart city officers who coordinate national policies and oversee local implementation. The network convenes annual meetings, publishes monitoring and evaluation reports, and delivers capacity building programmes.[231] Similarly, United Cities and Local Governments Asia-Pacific (UCLG ASPAC) represents over 7,000 local governments to foster cooperation through projects and technical exchanges, and regional forums to address service gaps, disaster risks, and climate resilience.[232] To maximize impact, such alliances should align with regional and global frameworks, strengthen data-sharing platforms and ensure inclusive participation mechanisms.

Collaboration between cities and the private sector

Collaboration between cities and the private sector has become essential for advancing sustainable, efficient, and innovative urban development in the region. Private businesses can provide technical expertise and financing, contributing to the operational efficiency of public sector operations. A key mechanism in this regard is public-private partnerships (PPPs), which enable large infrastructure investments, while reducing fiscal pressure and improving service quality and efficiency. The private sector can provide expertise in digital infrastructure, data analytics, and system integration to help create smart and people-centred cities. For example, the Busan Eco-Delta Smart City PPP in the Republic of Korea, implemented by the Busan Metropolitan Government and LG CNS, an IT service provider, pilots a smart community of 100,000 residents that provides integrated services in the areas of water, energy, education, healthcare, transport, and public safety.[233] To scale such partnerships and encourage private sector participation and long-term investment, governments need to establish clear digital standards, open-data and cybersecurity frameworks, as well as supportive policy and financial mechanisms, such as tax incentives, innovation funds, and risk-sharing schemes.

Collaboration between cities and research institutions

Joint research by local governments, universities, and research institutes enable cities and towns to use scientific knowledge to tackle complex urban challenges and design practical solutions. In the Republic of Korea, Osan City partnered with SeoulTech University to promote AI-integrated education.[234] Likewise, the Hong Kong University of Science and Technology in 2025 signed an agreement with Guangzhou Municipal Government to advance "industry-university-research" integration, life sciences, and talent development.[235] Similarly, Mumbai, the capital of the Indian state of Maharashtra, has collaborated with IIT Bombay's Centre for Climate Studies (CCS) to develop a hyperlocal flood forecasting system. The system provides real-time rainfall and waterlogging data and improves stormwater management during extreme monsoon events.[236] These collaborations show how knowledge partnerships create a mechanism by which governments set priorities, universities and think tanks conduct applied research, businesses validate applications, and findings inform public policy. To sustain and promote evidence-based policymaking, innovation funds, joint research platforms, data-sharing systems and performance-based grants, are essential.



CHAPTER 3

Conclusions and Recommendations

Countries in the Asia-Pacific region have made progress in creating more inclusive urban futures. Governments have worked to provide affordable housing, improve access to basic services, address informality, and enhance the liveability of cities and towns. Environmental resilience is being enhanced through measures to reduce air pollution, improve solid waste management, develop and protect green spaces, and reduce disaster risks. Meanwhile, tens of millions of people have benefitted from inclusive urban policies, including improved access to essential services. Many of these efforts are guided by regional commitments to the 2030 Agenda for Sustainable Development and the UN New Urban Agenda.

Despite these achievements, challenges related to urban inequality remain widespread, and rapid urbanization and other mega trends will test the region's capacity to deliver inclusive and sustainable urban futures. National urban policies, along with urban and city-regional plans to guide local development, are needed to manage expanding urban areas and growing slum populations. Digitalization is unlocking innovation and urban growth, but also feeding digital divides and facilitating precarious, unprotected forms of work, underscoring the need to strengthen skills development, integrate new forms of work, expand social protection, reform legal and regulatory frameworks, and improve livelihoods for informal workers. Meanwhile, low-income and marginalized groups are most acutely affected by urban environmental hazards, while geo-physical and hydro-meteorological disasters in the region still lead to significant loss of life, assets and livelihoods, highlighting the need for stronger national-level disaster risk reduction policies and urban-level resilience plans.

Ensuring that urbanization is a powerful force for positive change, with benefits that counterbalance deepening divides, requires integrated and coordinated policy actions. Institutional silos will have to be broken down, various dimensions of urban inequality tackled, and marginalized populations must be uplifted. The following section outlines necessary actions to achieve this.

3.1. Overarching recommendations

Targeted policies and strengthened governance are essential for creating more inclusive and environmentally liveable cities in the region.

To achieve this, it is necessary to enhance integrated, coherent and inclusive urban governance systems. This can be accomplished by implementing National Urban Policies, clarifying mandates across all levels of government, promoting cross-sectoral planning, and involving the community in decision-making processes. Strong governance can help break down institutional barriers, identify and address synergies and trade-offs, and prioritize interventions to achieve maximum benefits across SDGs. Governments need to utilize governance tools that can assess distributional impacts, integrate social and environmental safeguards, and ensure fair transitions to more liveable and inclusive cities.

A stronger emphasis on financing and innovative municipal funding mechanisms is essential to achieve sustainable urban outcomes. While pursuing equitable services and last-mile connectivity remains critical, these public policy goals ultimately depend on reliable, long-term funding. To tackle urban challenges more effectively, local governments will require greater local fiscal autonomy to implement locally viable taxes and modernize revenue administration. Cities should therefore prioritize enhancing operational efficiency and greater cost recovery through a balanced and progressive application of tariffs, taxes, and well-targeted intergovernmental fiscal transfers. There should be a shift in focus from building new infrastructure to ensuring sustainable service delivery, including maintenance, operations, and adaptive management.

Achieving critical urban transitions at scale, which includes shifting to clean mobility, green housing, digital service delivery, and more resilient infrastructure, will require investment volumes that far exceed available public budgets alone. This is why national and city governments need to adopt proactive

policies that can help attract private capital, for example by making extensive use of de-risking instruments (e.g. partial credit guarantees, first-loss capital) and implementing reforms to improve clarity in local investment regulation. It is crucial to utilize technology and data for inclusive urban solutions. Governments, businesses and development partners must collaborate to implement and invest in digital technologies as public goods to enhance service delivery and governance. This will help bridge the digital divide by providing affordable connectivity, promoting digital literacy, and ensuring inclusive access. Additionally, investing in urban data systems and strengthening local institutional capacity is essential for guiding decision-making, tracking progress on the SDGs, and addressing urban inequalities.

At the local level, there is a need to further institutionalize partnerships and community-led approaches to urban transformation. Doing so will enhance local ownership and accountability, and support more adaptive planning, which will help accelerate last-mile improvements reaching those furthest behind in the cities.

Going forward, governments need to pursue cross-sectoral approaches that address intersecting and mutually reinforcing inequalities. This requires a focus on social inclusion and rights-based approaches in urban policies. Examples include gender-responsive planning and inclusive design of digital and physical infrastructure, and mechanisms that enable communities to co-design interventions and solutions from the outset, ensuring policies reflect local needs.

3.2. Addressing urban inequality of informal settlements and affordable housing, and access to basic services

Inclusive urban development is still hindered by the growth of slums and informal settlements, as well as persistent gaps in access to basic services. Unequal access to clean energy, safely managed water and sanitation, public transport, and digital and financial services continues to restrict opportunities for low-income and marginalized urban populations. Overcoming these challenges requires extending infrastructure networks to provide affordable housing and bridging service gaps through targeted last-mile expansion, community-led solutions, and enhanced cross-sectoral coordination to ensure that urban transformation benefits everyone.

(a) Bridge "last-mile" access to basic services for marginalized and vulnerable groups

Achieving universal access to basic services requires targeted actions to reach those who are furthest behind, particularly in informal settlements and peripheral areas. Recommended priority actions include:

- *Water and sanitation:* City governments and water utilities should expand secondary and tertiary network connections to underserved areas. They should also address high connection costs through pro-poor tariffs and targeted subsidies, scale community-led solutions and Community Action Planning (CAP), and integrate climate resilience and water resource management into urban water planning to mitigate scarcity and enhance quality. Prioritizing sanitation as a public good by developing phased, cost-recovery investment plans and mobilizing private participation in wastewater systems are also key. Technology can accelerate last-mile service delivery when embedded into these systems. For example, smart metering for water usage monitoring, geospatial targeting of underserved neighbourhoods for prioritized interventions, and digital grievance redress platforms to improve accountability and inclusion.
- *Electricity and clean energy:* National governments should invest in upgrading distribution networks to improve service reliability and affordability, promote clean energy solutions through targeted subsidies, implement awareness campaigns, and establish partnerships with local businesses. In areas where network

expansion is not feasible, governments should deploy off-grid and mini-grid systems.

- *Public transport:* City governments should expand affordable and accessible public transportation to underserved areas through discounted fares, community transport schemes, and improved last-mile connectivity. They should also adopt universal accessibility standards to ensure safe mobility for women, older persons, and persons with disabilities. To this end, integrating technology such as real-time tracking apps and geospatial analytics for route optimization can help foster more inclusive and accountable last-mile connections.

- *Digital Access:* City governments should expand affordable connectivity and provide free public Internet access. They should also strengthen digital literacy and skills through both formal and informal education. Collaboration with community-led organizations is essential to facilitating the establishment of community-built and locally managed networks in low-income urban and peri-urban areas. Inclusive digital skills programmes should be created, offering disability support and assistive technology for persons with disabilities, older persons, women and girls.

(b) Support community-led solutions for informal settlement and slum upgrading. Community-led approaches can complement government policies and programmes by ensuring that plans and investments align with local priorities and conditions. Priority actions include:

- Community-led organizations can lead and implement Community Action Planning processes. This empowers communities to identify priorities, conduct upgrading works through community contracting, and jointly monitor outcomes with local governments. Sustained financing mechanisms, such as community development funds, are crucial to ensuring continuity and scalability.

- City governments, in partnership with community-led organizations, can adopt a city-wide approach by preparing strategies that map all slums and informal settlements, assess land ownership (private vs. public), and develop phased upgrading or relocation plans.

(c) Implement holistic planning and cross-sectoral collaboration to provide affordable housing and basic services. Holistic planning breaks down institutional silos and unlocks synergies between housing, infrastructure, and service provision.

- National governments should link housing development with the simultaneous expansion of water, sanitation, energy, transport, and digital infrastructure. They should establish mechanisms for joint planning, implementation, and monitoring among ministries, utilities, and local governments to enhance policy coherence and accountability.

- City governments and urban planning agencies should use land-use planning tools to ensure affordable housing is connected to employment centres, education, and public services, preventing spatial segregation. Transit-oriented development (TOD) can help improve access to jobs and reduce transport costs for low-income households.

- City governments should promote multi-stakeholder partnerships among public, private, and community actors to align resources and strengthen delivery systems. They should also promote participatory mechanisms to ensure the representation of women, informal workers, migrants, and persons with disabilities.

3.3. Advancing decent and inclusive urban employment for all

Nearly two-thirds of the region's urban labour force is engaged in the informal sector, with women, youth, and older persons particularly affected by informality. Countries in the region are implementing promising

approaches to promote better jobs, improve working conditions, and create an enabling environment for a gradual, inclusive and context-specific transition to formality. These actions are necessary at national, sector, and enterprise levels. The ILO's Recommendation No. 204 concerning the transition from the informal to the formal economy serves as a guiding framework for countries, employers', and workers' organizations. While transitioning to formality is a key aspect of achieving decent work, for many informal workers this may not be realistic in the near term. To accelerate and scale up action, the following priorities should be considered.

(a) Promote better and more secure jobs through policy actions by national governments

Measures that enhance productivity, skills and livelihood opportunities are essential for improving the quality of work for informal workers and businesses.

- Sectoral approaches should be applied to enhance productivity, considering the unique challenges and specific drivers of informality within each sector. This should build on existing sectoral policies and organizations.
- Increasing investments in skills development, lifelong learning, enterprise and livelihood support programmes will strengthen the capabilities of the urban workforce. This will enhance their adaptability to evolving labour market demands and the future of work, including upskilling for green economy opportunities and digital transitions.
- Improving access to financial and productive resources and promoting digitalization will increase the productivity of informal enterprises and empower informal workers.
- Developing and implementing measures to address decent work deficits faced by women, migrant workers, youth and other vulnerable groups working in the informal economy is crucial. Programmes should also address unpaid care responsibilities that limit women's ability to pursue better work.

(b) Improve working conditions and social well-being through policy actions by local and national governments

Improving the physical, legal, and social conditions in which informal workers operate is essential for strengthening their safety, well-being and economic security.

- Local governments and urban planning agencies should use planning and spatial instruments to allocate and manage urban space, including developed land with basic services, vending areas, markets and safe work zones, for informal MSMEs, street vendors and other informal economic units.
- National governments should integrate new forms of work such as digital platform employment by implementing legal reforms, ensuring rights and protections, and supporting effective representation.
- National governments should extend social protection coverage to informal workers, reducing their vulnerabilities and increasing resilience. Digital technologies can be used to facilitate access to social security. Subsidizing social security contributions and implementing non-contributory schemes are critical to support informal workers.
- National governments should establish or strengthen national occupational safety and health (OSH) measures tailored to informal work environments, which local governments can implement and enforce.
- Local governments, in collaboration with representative workers' organizations, should implement and enforce OSH measures for informal workers, particularly those vulnerable to climate change and environmental risks.

(c) Create an environment that supports a gradual, inclusive and context-specific transition to formality through policy actions by local and national governments

A supportive regulatory, institutional and business environment is crucial for workers and enterprises to formalize at a pace and in forms suitable to their situations.

- National governments should adopt a whole-of-government approach bringing together authorities from various areas of policy and government levels to design and implement legal and policy reforms that support a gradual, context-specific transition to formality.
- National governments should revise urban planning rules and regulations to allow for mixed land use and informal economic activity in urban areas.
- Local governments should facilitate effective and inclusive social dialogue with the participation of informal workers and economic units. They should also enhance the capacity of representative workers' organizations to include informal workers and strengthen their collective voice.
- National governments need to invest in a business-friendly environment with simplified administrative procedures and improved accessibility to support formalization efforts. They should leverage technology where applicable to streamline these efforts and enhance compliance with legal and regulatory requirements.
- National governments should reduce financial and administrative barriers to registration, such as high fees and complex procedures, to encourage informal workers to participate in formal systems, considering diverse local and community contexts.
- National and local governments, in partnership with representative organizations, should strengthen the evidence base and data systems to capture the diversity of characteristics, circumstances, and needs of workers and economic units in the informal economy.

3.4. Enhancing urban environments and resilience

The ongoing urbanization of the region is exacerbating existing challenges and creating new ones, including air pollution, solid waste management, and environmental vulnerabilities. Climate change may further worsen these issues. Therefore, it is crucial to enhance environmental resilience to maintain urban economic productivity, safeguard critical infrastructure, and ensure the sustainability of livelihoods during and after climate- and disaster-related shocks. These goals can be accomplished through the following policy interventions, which should be implemented by local, sub-national and national governments based on each country's unique circumstances.

(a) Develop and implement interventions to reduce urban air pollution. When combined with the transition to cleaner fuels and the continued development of renewable energy, this multi-pronged approach will benefit both human and environmental health. A significant part of reducing urban environmental health risks will depend on deliberate "greening choices". Depending on the conditions of urban air pollution, countries should consider the following policy actions:

- Governments should undertake regulatory actions to ensure implementation. These actions can include adopting and enforcing WHO air quality standards, monitoring air quality, sharing data with the public, and identifying key air pollution sources and priorities. Tracking industrial pollutants and strengthening emission controls can inform the development of policies and bans on polluting practices by industry and agricultural sectors. At the city-regional level, governments can strengthen urban and regional governance mechanisms for monitoring and managing air quality.

- At the planning level, governments can draft city-level spatial policies and strategies. They can promote non-motorized transport by designating "pedestrian only" and "cyclist only" areas and times, and develop related infrastructure such as bicycle and pedestrian lanes, and bicycle-friendly green light timings. City governments can also enact low emission zones to target diesel and petrol vehicle pollution and support people's mobility by investing in clean energy, efficient and affordable public transportation systems, as well as expanding and protecting urban green belts.

- Supporting policies should be enacted as well. These can include energy sector policies and strategies that accelerate renewable energy deployment and use in urban areas, shifting from coal-fired to gas-fired district heating systems, and decarbonizing urban electricity grids.

(b) Improve solid waste management and address problems faced by waste-pickers. Policy interventions to improve solid waste management offer multiple co-benefits, such as creating jobs, saving resources, and enhancing the environment.

- City governments can work on gradually formalizing informal waste-pickers and enhancing solid waste management. Digital solutions, such as digital platforms and mobile applications, have helped in collecting recyclable material during the solid waste management process, promoting resource recovery, recycling, and advancing the circular economy in various countries in the region. This not only improves solid waste management by encouraging waste segregation but also provides co-benefits such as saving landfill space and improving urban sustainability.

- Designing and implementing policies to improve resource efficiency and reduce waste can not only help low and lower-middle income countries leapfrog towards a low-waste economy but also aid in the transition towards circularity and resilience. Governments should also move to prohibit and penalize the open burning of solid waste in urban areas.

(c) Reduce disaster risks for all and enhance environmental resilience, including through nature-based solutions. The Asia-Pacific region can address urban inequality by enhancing environmental resilience.

- Local governments can establish inclusive, multi-hazard early warning systems and ensure effective last-mile risk communication. They should also assess disaster risks, including short-term, medium-term, and long-term risks. Engaging with local communities to understand the history of disasters and their impacts in specific areas is crucial.

- An understanding of disasters and disaster risks should inform spatial strategies and plans. Governments can develop spatial models of disaster risks to identify projected impact areas and create adaptation options. They should also prepare territorial land use plans that address disaster risks and develop urban land use plans that consider disaster risks.

- Investing in developing and upgrading disaster risk reduction infrastructure and physical assets in urban areas is needed. Monitoring the evolution of geophysical and hydro-meteorological disaster risks, establishing urban disaster risk data systems, and regularly updating disaster risk studies, models, and plans are also essential.

- Based on the unique characteristics of cities and their regional geographies and environments, a combination of nature-based solutions can be implemented in partnership with communities. Examples include collaborating with communities to restore wetlands and reforesting upstream forests and flood plains to reduce surface water runoff and topsoil erosion, which can help mitigate flooding and drought.

- Other interventions to restore and utilize nature-based solutions include re-establishing coastal habitats through

mangrove and coral reef restoration, as well as rehabilitating sand beaches and salt marshes to protect against coastal erosion and flooding.

The time to shape an inclusive urban future across the Asia-Pacific region is now. Placing people at the centre of this process is key to realizing the New Urban Agenda and the 2030 Agenda for Sustainable Development. By tackling urban inequality across spatial, economic, social and environmental dimensions, the region can unlock co-benefits in terms of improved urban infrastructure and services, enhanced access to decent and productive employment, strengthened social protection systems, and reduced GHG emissions. Achieving this requires effective governance, innovative financing, the smart use of technology, robust data and monitoring systems, and regional cooperation. Guided by the commitment to "leave no one behind" and "leave no place behind", coordinated actions can transform the region and its cities into hubs of inclusion, innovation, resilience and prosperity for all.

Annexes

Annex 1: Methodology for identifying gaps in access to opportunities in Asia and the Pacific

Inequality of Opportunity

Inequality of Opportunity (IoO) arises when access to essential goods, services, and life chances is determined not by individual choices or efforts, but by factors beyond one's control. These structural disadvantages, such as socioeconomic background, gender, or place of residence, can entrench individuals and families in cycles of poverty and exclusion, limiting their opportunities and well-being over time and across generations.

IoO differs fundamentally from inequality of outcome. While outcome inequality captures disparities in results such as income, consumption, or asset accumulation, it does not indicate whether these differences arise from individual effort, ability, or structural disadvantage. In contrast, IoO focuses specifically on the share of inequality that stems from circumstances beyond a person's control. It examines whether individuals with similar talents and efforts still face unequal access to opportunities because of the social or economic conditions into which they were born.

For the 2026 SDG Partnership Report, this analysis identifies a set of key opportunities and examines disparities in access across defined population groups. It draws on data from the Demographic and Health Surveys (DHS) and the Multiple Indicator Cluster Surveys (MICS), selecting relevant circumstances to classify individuals into comparable groups. The report covers 31 countries in Asia and the Pacific, with a particular focus on urban inequalities and the structural factors that shape them.

The methodology applies *Classification and Regression Tree* (CART) analysis to identify the most disadvantaged groups within each country.[xx] The composition and size of these groups vary depending on local conditions and the availability of data.

The analysis focuses on opportunities essential for inclusive urban living and for ensuring that no one is left behind: access to basic sanitation, clean water, electricity, clean cooking fuels, internet access, bank account ownership, and the absence of slum conditions. These dimensions are selected because they directly impact well-being, support the accumulation of human capital, and allow individuals to participate meaningfully in economic and social life. They are closely aligned with SDGs 1, 6, 7, 8, 10, 11, and 17.

The selected circumstances reflect key drivers of urban inequality that are consistently available in DHS and MICS surveys. These include household wealth, education of the household head, age of the household head, and gender of the household head. Additional factors such as marital

xx The analysis builds on the methodology developed by the Social Development Division of ESCAP on inequality of opportunity, first introduced in 2018. This approach has been applied in a series of country and regional studies to identify structural barriers to access. For further details, please see https://lnob.unescap.org/

status and other characteristics of the household head, including religion, ethnicity, language, and caste, are not included in this report.

Using CART analysis, the report identifies the combinations of circumstances most strongly associated with limited access to each opportunity. This enables a clear identification of the most disadvantaged groups in urban settings, such as poorer, female-headed households living in slums. The methodology shows how multiple layers of structural disadvantage interact to shape outcomes and reinforce exclusion.

By moving beyond national and urban averages, which often conceal substantial disparities within cities, the approach offers a more granular and context-specific understanding of how access to opportunities is distributed. It highlights where progress has been uneven and where systemic barriers continue to exclude certain groups, providing a practical tool for identifying those who are *furthest behind*.

This evidence allows policymakers to shift from broad strategies to more precise and effective interventions. By pinpointing specific risk profiles and estimating the size of disadvantaged groups, the analysis informs the development of targeted urban policies that aim to reduce gaps in access and ensure that the benefits of urbanization are more fairly and widely shared across Asia and the Pacific.

Countries

Table A1 presents the full list of countries along with the most recent and second most recent survey years, drawn from the DHS and MICS, which serve as the primary data sources for the analysis.

Table A1: List of Countries and Survey Years

Country	Earliest survey used		Latest Survey Used	
	Year	Survey	Year	Survey
Afghanistan	2015	DHS	2022-23	MICS
Armenia	2010	DHS	2015-16	DHS
Azerbaijan			2023	MICS
Bangladesh	2014	DHS	2022	DHS
Cambodia	2014	DHS	2021-22	DHS
Fiji			2021	MICS
Georgia			2018	MICS
India	2015	DHS	2019-21	DHS
Indonesia	2012	DHS	2017	DHS
Kazakhstan	2015	MICS	2024	MICS
Kiribati			2018-19	MICS
Kyrgyzstan	2018	MICS	2023	MICS
Lao PDR	2011-12	MICS	2023	MICS
Maldives			2016-17	DHS

Country	Earliest survey used		Latest Survey Used	
	Year	Survey	Year	Survey
Mongolia			2018	MICS
Myanmar			2015-16	DHS
Nauru			2023	MICS
Nepal	2019	MICS	2022	MICS
Pakistan	2012-13	DHS	2017-18	DHS
Papua New Guinea			2016-18	DHS
Philippines	2017	DHS	2022	DHS
Samoa			2019-20	MICS
Tajikistan	2012	DHS	2017	DHS
Thailand	2015-16	MICS	2022	MICS
Timor-Leste	2009-10	DHS	2016	DHS
Tonga			2019	MICS
Turkmenistan	2015-16	MICS	2019	MICS
Tuvalu			2019-20	MICS
Uzbekistan			2021-22	MICS
Vanuatu			2023	MICS
Viet Nam	2013-14	MICS	2020-21	MICS

Indicators and Circumstances

The indicators used in the analysis are binary variables that capture household-level access to specific opportunities. Each is aligned with a corresponding SDG indicator and constructed from harmonized DHS and MICS data. The unit of analysis is the urban household, and all results are weighted using survey sampling weights.

Access to basic sanitation is measured by whether a household uses an improved sanitation facility, consistent with SDG indicator 6.2.1. Clean water refers to the use of an improved drinking-water source, in line with SDG indicator 6.1.1. Electricity access is defined by whether the household has electricity, following SDG indicator 7.1.1. The use of clean cooking fuels captures whether the household mainly relies on clean fuels or technologies for cooking, consistent with SDG indicator 7.1.2. Internet access is measured by whether any household member uses the internet, aligned with SDG indicator 17.8.1. Bank account ownership refers to whether any household member holds an account at a financial institution or with a mobile-money provider, in line with SDG indicator 8.10.2. Finally, the absence of slum conditions is assessed by identifying whether the household is not classified as a "slum household," based on the operational definition outlined in the next subsection, in accordance with SDG indicator 11.1.1.

The analysis includes a core set of household-level circumstances available across DHS and MICS surveys. Household wealth is measured using the standard wealth index, originally divided into quintiles but grouped here into bottom 40 percent and top 60 percent for comparability.

Education of the household head is categorized into three levels: lower education (no education or primary), secondary, and tertiary. Age of the household head is grouped into three brackets: under 35 years, 35 to 54 years, and 55 years or older. Gender of the household head is recorded as male or female.

Other characteristics, including marital status, ethnicity, religion, language, and caste, were considered for disaggregating the data where available but are not included in this report.

Table A2 provides a detailed overview of all indicators used in the analysis, along with their corresponding SDG targets and survey sources.

Table A2: List of opportunities and circumstances

Indicator	SDG reference	SDG indicator	Survey recode
Access to clean water	SDG 6	6.1.1 – Proportion of population using safely managed drinking water services	Household-level
Access to basic sanitation	SDG 6	6.2.1 – Proportion of population using safely managed sanitation services and a hand-washing facility with soap and water	Household-level
Access to electricity	SDG 7	7.1.1 – Proportion of population with access to electricity	Household-level
Use of clean cooking fuels	SDG 7	7.1.2 – Proportion of population with primary reliance on clean fuels and technology	Household-level
Access to internet	SDG 17	17.8.1 – Proportion of individuals using the Internet	Household-level
Access to bank account	SDG 8	8.10.2 – Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider	Household-level
Absence of slum conditions	SDG 11	11.1.1 – Proportion of urban population living in slums, informal settlements or inadequate housing	Household-level

Slum dwelling

Slum dwelling is treated in the analysis as a constraint on opportunity rather than a desirable outcome. The definition follows the UN-Habitat concept of a "slum household," adapted to the variables available in DHS and MICS, and harmonized across countries. A household is classified as a slum household if it experiences at least one of four deprivations: lack of access to improved water, lack of improved sanitation, overcrowding, or use of non-durable housing materials. Security of tenure, which is part of the global SDG definition, is excluded due to data limitations in DHS and MICS.

Water deprivation is defined as lacking access to an improved drinking-water source. Improved sources include piped water (to the dwelling, yard, or plot), public taps, tube wells, protected dug wells or springs, rainwater, tanker trucks, carts with tanks, bottled water, and community reverse-osmosis plants, in line with DHS and MICS classifications.

Sanitation deprivation refers to the use of unimproved sanitation facilities. Improved facilities include flush or pour-flush toilets connected to piped sewer systems, septic tanks, or pit latrines; ventilated improved pit latrines; pit latrines with slabs; and composting or twin-pit toilets. Shared

facilities are classified following UN-Habitat's SDG 11.1.1 metadata and survey-specific coding rules. These definitions align with SDG 6 service ladders but exclude dimensions such as water supply continuity or safe excreta management, which are not consistently captured.

Overcrowding is measured by the ratio of household members to sleeping rooms. Households with more than three persons per room, or reporting zero sleeping rooms, are considered overcrowded. This threshold, based on SDG 11.1.1 metadata, captures the most severely constrained households.

Housing durability is assessed based on materials used for floors, walls, and roofs. Each survey uses a harmonized classification of materials as durable or non-durable. Durable floors include brick, stone, tiles, cement, polished wood, or carpet; durable roofs include metal, wood, asbestos sheets, shingles, or reinforced concrete; durable walls include concrete, burnt bricks, cement blocks, wood planks, or metal sheets. A household is considered deprived if any one component (floor, wall, or roof) is made of non-durable material. If data are missing for any component, the deprivation status is also set to missing.

The composite slum indicator is defined by the presence of any of the four deprivations. A household is classified as a slum if it is deprived in at least one dimension, non-slum if none, and missing if classification is not possible due to incomplete data.[237]

In the R code, persons per sleeping room is calculated using harmonized household size and number of sleeping rooms. Households with more than three persons per room or with zero rooms are flagged as overcrowded. Materials used for floors, walls, and roofs are flagged individually, and any non-durable component marks the household as deprived. Water and sanitation deprivations follow the clean water and basic sanitation indicators used in the main analysis. The slum indicator is set to 1 if any deprivation is present, 0 if none, and missing if classification is not possible.

Classification and Regression Trees (CART)

To move from broad associations to actionable targeting, the analysis applies CART to identify urban population groups with the lowest and highest levels of access to selected opportunities across countries in Asia and the Pacific.

For each country, a separate classification tree is estimated using the weighted urban sample from the most recent or second most recent DHS or MICS survey. The response variables are binary indicators reflecting access to key dimensions of urban opportunity. The circumstances used to segment the population are defined as factors beyond individual control. This approach supports a consistent and comparable analysis of IoO across diverse urban settings while accounting for locally relevant sources of disadvantage.

To identify the groups with the greatest differences in access to basic sanitation, clean water, electricity, clean cooking fuels, internet access, bank account ownership, and the absence of slum conditions, a regression tree is constructed for each country using R, an open-source statistical software. The root node of the tree represents the entire urban population sample. From this point, the algorithm searches for the first optimal split, or partition by evaluating each circumstance variable and dividing the sample into two subgroups in a way that best satisfies a predefined splitting criterion.

The splitting criterion used in this analysis is the *Analysis of Variance* (ANOVA), which aims to maximize the difference in average access between the resulting groups. This ensures that each split yields the highest possible explanatory power in distinguishing between different levels of access. The core logic of the algorithm is represented by the following formula:

$$SS_T - (SS_L + SS_R)$$

Where:

$$SS_T = \sum (Y_i - \underline{Y})^2$$

Is the sum of squares for the parent node, and SS_L and SS_R are the sums of squares for the left and right child nodes, respectively.[238] The sum of squares is calculated by first finding the distance between $\underline{Y}$, the sample mean, and the ith data point Y_i. This is also referred to as the deviation.

If deviations for all data points Y_1, Y_2, …, Y_N are squared and then summed, as in $(Y_i - \underline{Y})^2$, this yields the sum of squares for these data. This is equivalent to choosing the split to maximize the between-groups sum of squares in a simple analysis of variance.

The CART algorithm applies the ANOVA test to each possible split, or partition, of the sample population based on the selected circumstances. For every potential division, the algorithm calculates how much the total variance would be reduced if the population were split in that particular way. It then compares all available partitions and selects the one that produces the greatest reduction in the combined sum of squares of the child nodes relative to the parent node. In this way, CART uses ANOVA to determine the most effective split at each step in the tree-building process.

Within the parameters of CART, all partitions are binary, among circumstances with multiple split thresholds. This means the resultant nodes associated with SS_L and SS_R are mutually exclusive and complementary, and every individual belongs to one and only one of the nodes for each partition of the tree generation.

The actual algorithm that generates the nodes for each partition works step-by-step, starting from the entire sample (where "T" given by SS_T is the root node). Each time the sample is partitioned, new nodes are created, and the ANOVA is recalculated and compared to the ANOVA value before the split.

This step-by-step process of building the tree is known as *recursive partitioning*. A new partition is retained if the reduction in variance exceeds a predefined threshold, referred to as the *complexity parameter*. When no remaining split satisfies this threshold, or when other preset conditions are no longer met, such as a minimum node size or maximum tree depth, the algorithm stops generating further partitions. The nodes that are not split any further are referred to as *terminal nodes* and represent the final population subgroups identified in the regression tree.

In addition to identifying groups with significant differences in access, the CART algorithm also requires that each group contains a sufficient number of observations to ensure statistical reliability. To prevent the formation of subgroups that are too small, the analysis stops partitioning if the resulting nodes would contain less than 9 percent of the total sample population or fewer than 49 survey respondents, whichever threshold is reached first.

Furthermore, the depth of the tree is limited to five levels (corresponding to a maximum of four successive partitions). This constraint reflects the diminishing returns of deeper partitions for the purpose of identifying population groups that experience inequality of opportunity.

Gaps and limitations

The scope of this analysis is shaped by the availability and limitations of the underlying survey data. First, several relevant circumstances that could influence access to opportunities are not captured in the DHS and MICS at the household or individual level. Important dimensions such as disability status, homelessness, or migration history may contribute to inequality of opportunity but are not consistently available across countries and surveys.

Second, in line with many studies that focus on group-based disparities, this analysis does not capture inequality within population groups. While CART is effective in identifying groups that differ significantly from one another, it treats each group as internally homogenous. In reality, there may be substantial variation in outcomes among individuals within the same group due to unobserved or unmeasured factors. As a result, the analysis relies on observable group-level averages to assess disparities and does not reflect within-group heterogeneity.

Finally, although recent literature explores the relationship between IoO and inequality of outcome by estimating the share of income inequality that can be explained by individual circumstances, this approach is not used in the present analysis. This is because the DHS and MICS datasets do not include a direct measure of income or consumption. While the wealth index provides a useful basis for identifying relative disadvantage, it is not an appropriate substitute for income in decompositions of inequality.

The Wealth index and the bottom 40 – top 60 wealth split

Wealth, as used in this report, refers to a composite index developed by DHS and MICS to reflect a household's cumulative living standard. It combines information on asset ownership (such as televisions, radios, and bicycles), housing materials, and access to water and sanitation facilities. The index is constructed using Principal Component Analysis, which produces a relative ranking of households within each country. However, because the set of assets varies across countries, the wealth index is not comparable across them. Cross-country comparisons using wealth should be interpreted with caution.

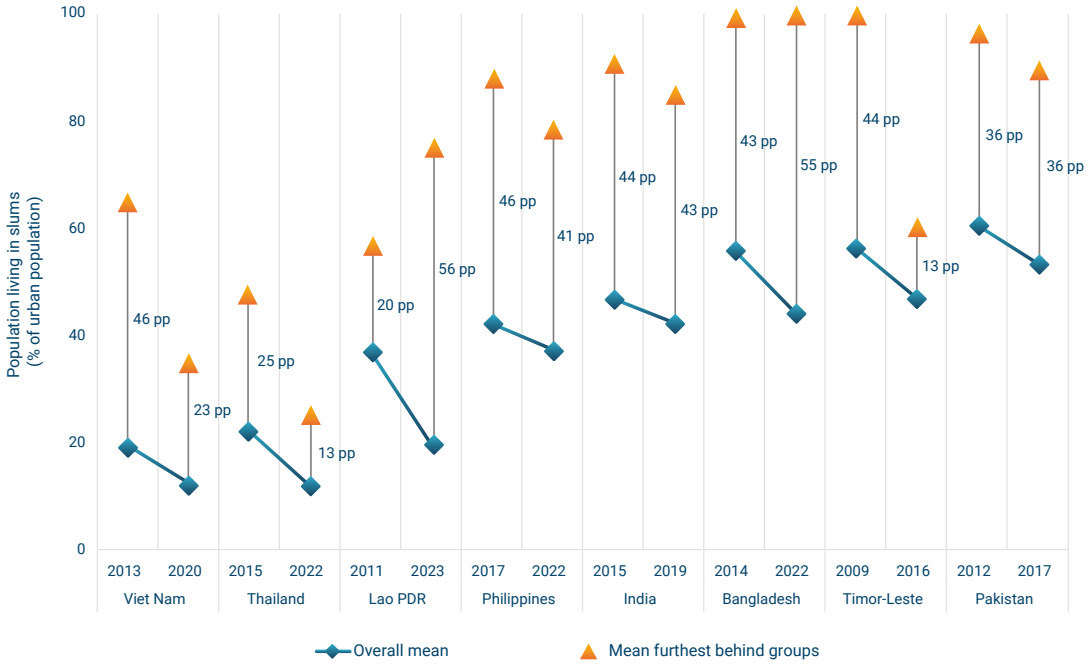
In this report, the wealth index is used to distinguish between household types. Although wealth is not strictly an immutable circumstance, it serves as a proxy for a wide range of underlying conditions that may restrict access to basic opportunities, particularly where more direct measures are unavailable. Households are grouped into two categories: the bottom 40 percent, referred to as poorer, and the top 60 percent, referred to as richer.

Other groupings were considered, including quintiles, top 40 versus bottom 40 percent, and top 10 versus bottom 40 percent. These were not selected, as they tend to produce more homogenous groups, making it harder to identify the effects of other factors such as education or place of residence. In addition, excluding 20 to 50 percent of the sample reduces statistical power and risks overlooking middle-income households that may share common characteristics, such as having completed secondary education. Restricting the analysis to only half the sample also limits the ability to draw statistically meaningful conclusions and reduces the representativeness of the resulting groups.

It is also important to note that the wealth index does not assign any monetary value to households. It reflects relative position within a national distribution, and distinctions such as top 1, top 10, or top 40 percent do not carry the same meaning as they would in measures based on income or expenditure data with continuous monetary values.

Annex 2: Urban slum populations in Asia and the Pacific and their socio-economic circumstances/characteristics

Proportion of Urban Slum Population in select countries in Asia and the Pacific, in percentage, comparison between "furthest behind" and average households over time



Source: Calculations based on the Classification and Regression Tree (CART) using DHS/MICS survey data from 2010 to 2024.

Note: - Blue markers show the national average. Orange markers show the mean for the furthest behind groups, defined as the population with the lowest access. The gap reflects the difference, in percentage points, between the national average and the furthest behind group in each country. Survey years are indicated below each country. The complete list of countries and years is available in the methodological annex.
- The slum estimates in this report slightly differ from UN-Habitat's published figures primarily because they rely only on DHS and MICS microdata and apply a strictly survey-based operationalization of the slum household concept. While the underlying definition is aligned with UN-Habitat and SDG Indicator 11.1.1, some components cannot be measured consistently in DHS and MICS. Most importantly, security of tenure is excluded due to the lack of reliable and comparable data, and housing durability is proxied using reported materials without accounting for location, hazard exposure or building codes. In addition, the estimates presented here rely solely on harmonized DHS and MICS for cross-country comparability, while the estimates from UN-Habitat could combine multiple data sources (censuses, administrative records, and spatial data).

Socio-economic circumstances/characteristics of those 'furthest ahead' and 'furthest behind' within slum residence

Who are those furthest ahead and furthest behind within slum residence?

Country	Survey used	Circumstances or characteristics of the groups				Circumstances or characteristics of the groups			
		Wealth: Bottom 40-Top60	Education of household head	Sex of household head	Age of household head	Wealth: Bottom 40-Top60	Education of household head	Sex of household head	Age of household head
Afghanistan	MICS 2022				<=34				35–54,55+
Armenia	DHS 2015	T60	tertiary			B40			
Azerbaijan	MICS 2023	T60	lower		<=34, 35–54	B40			
Bangladesh	DHS 2022	T60	tertiary			B40			
Cambodia	DHS 2021	T60	secondary, tertiary		<=34	B40			

Country	Survey used	Circumstances or characteristics of the groups				Circumstances or characteristics of the groups			
		Wealth: Bottom 40-Top60	Education of household head	Sex of household head	Age of household head	Wealth: Bottom 40-Top60	Education of household head	Sex of household head	Age of household head
Fiji	MICS 2021	T60	tertiary			B40			
Georgia	MICS 2018	T60	tertiary	Male	<=34,55+	B40			
Indonesia	DHS 2017	T60	tertiary			B40			35–54
India	DHS 2019	T60	tertiary			B40			
Kazakhstan	MICS 2024		secondary	Female	<=34, 35–54		lower, tertiary	Male	
Kyrgyzstan	MICS 2023	T60	secondary	Female		B40			
Kiribati	MICS 2018		tertiary	Male	35–54,55+		lower, secondary		<=34, 35–54
Lao PDR	MICS 2023	T60	secondary, tertiary		55+	B40			
Maldives	DHS 2016				55+		lower		<=34, 35–54
Myanmar	DHS 2015		tertiary			B40	lower, secondary		
Mongolia	MICS 2018	T60	secondary		<=34	B40			
Nepal	DHS 2022	T60		Female		B40			
Samoa	MICS 2019		tertiary		55+	B40	lower, secondary		
Pakistan	DHS 2017	T60	tertiary		<=34,55+	B40			
Philippines	DHS 2022	T60	tertiary		<=34,55+	B40			<=34, 35–54
Papua New Guinea	DHS 2016		tertiary				lower, secondary		
Thailand	MICS 2022	T60	secondary, tertiary	Female	<=34, 35–54	B40	lower		
Tajikistan	DHS 2017		tertiary	Female			lower, secondary	Male	55+
Turkmenistan	MICS 2019		secondary, tertiary	Female			lower		35–54
Timor-Leste	DHS 2016		tertiary				lower, secondary		<=34, 35–54
Tonga	MICS 2019	T60		Male		B40			
Tuvalu	MICS 2019	T60	tertiary		<=34,55+	B40			
Uzbekistan	MICS 2021	T60		Female	<=34, 35–54	B40			
Vanuatu	MICS 2023		tertiary				lower, secondary		<=34, 35–54
Viet Nam	MICS 2020	T60			55+	B40			35–54

Source: Authors based on DHS/MICS surveys

Annex 3: Trend in access to drinking water and sanitation in select countries in Asia and the Pacific (2015-2024) (%)

Country	Year	Access to drinking water						Access to sanitation						
		At least basic	Limited (more than 30 minutes)	Unimproved	Surface water	Safely managed	Piped	At least basic	Limited (shared)	Un-improved	Open defecation	Safely managed	Wastewater treated	Sewer connections
East and North-East Asia														
China	2015	98	<1	2	<1	93	95	91	3	5	<1	70	65	**81**
	2024	97	<1	2	<1	96	98	98	2	<1	<1	85	77	**80**
Mongolia	2015	93	5	2	<1	46	49	73	25	2	<1	68	27	38
	2024	96	4	<1	<1	55	54	84	15	<1	<1	78	32	41
South-East Asia														
Cambodia	2015	90	3	3	4	53	64	80	8	2	11	44	18	**40**
	2024	94	5	<1	<1	57	76	93	7	<1	<1	53	18	**38**
Indonesia	2015	94	2	4	<1	34	**30**	81	10	4	6	-	-	1
	2024	95	4	<1	<1	35	**28**	90	6	3	1	-	-	1
Lao PDR	2015	92	<1	6	1	20	58	89	3	2	6	60	2	3
	2024	>99	<1	<1	<1	51	67	99	4	<1	<1	59	2	4
Thailand	2015	>99	<1	<1	<1	-	86	96	4	<1	<1	27	9	19
	2024	>99	<1	<1	<1	-	93	>99	<1	<1	<1	31	14	29
Vietnam	2015	97	<1	2	<1	75	74	92	3	4	1	40	2	4
	2024	>99	<1	<1	<1	76	88	98	2	<1	<1	41	3	6
Timor-Leste	2015	89	2	8	1	-	68	69	15	11	6	-	-	24
	2024	98	2	<1	<1	-	83	80	19	1	<1	-	-	36
South and South-West Asia														
Afghanistan	2015	83	4	11	3	31	35	56	21	22	1	19	3	8
	2024	97	3	<1	<1	36	47	73	23	4	<1	25	3	8
Bangladesh	2015	98	<1	<1	<1	47	32	56	26	17	<1	26	<1	14
	2024	99	<1	<1	<1	54	32	68	24	8	<1	31	<1	16
Bhutan	2015	98	1	<1	<1	45	>99	77	15	7	<1	**46**	9	22
	2024	>99	<1	<1	<1	62	>99	84	13	3	<1	**44**	19	43
India	2015	95	2	3	<1	77	75	71	17	3	9	44	9	32
	2024	97	1	1	<1	83	78	87	13	<1	<1	56	15	38

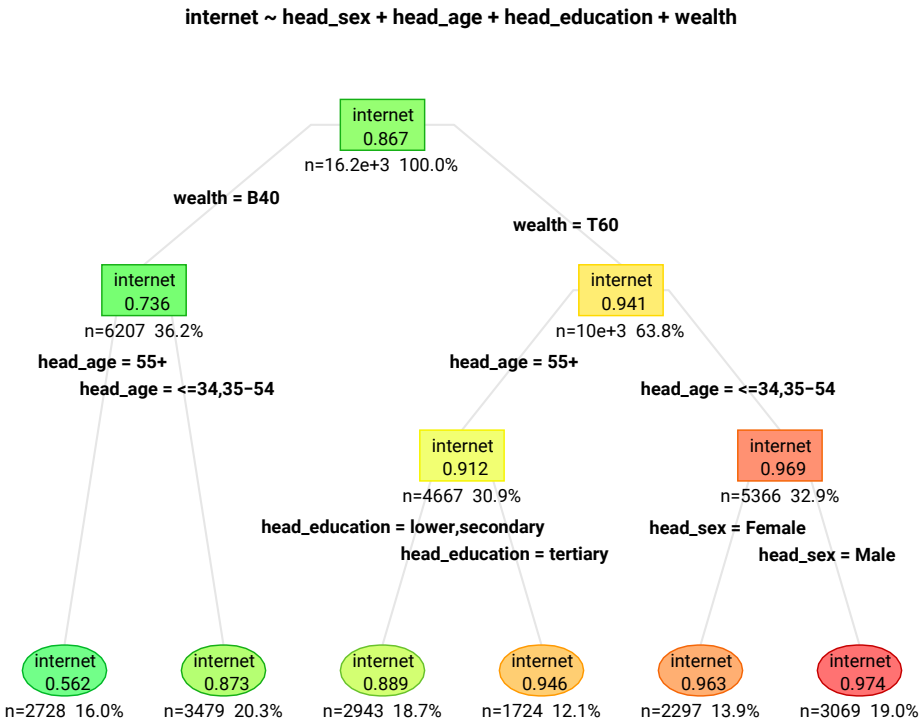
Country	Year	Access to drinking water						Access to sanitation						
		At least basic	Limited (more than 30 minutes)	Unimproved	Surface water	Safely managed	Piped	At least basic	Limited (shared)	Un-improved	Open defecation	Safely managed	Wastewater treated	Sewer connections
Nepal	2015	92	2	5	<1	**33**	**57**	62	27	2	9	31	<1	**18**
	2024	92	3	4	<1	**24**	**53**	83	15	<1	2	46	<1	**11**
Pakistan	2015	**94**	3	2	<1	45	**51**	77	7	15	2	-	-	60
	2024	**93**	5	2	<1	45	**40**	83	6	10	<1	-	-	63
Sri Lanka	2015	97	<1	2	<1	91	77	89	8	3	<1	-	-	**12**
	2024	98	<1	2	<1	80	81	97	2	1	<1	-	-	**6**
North and Central Asia														
Kyrgyzstan	2015	98	<1	<1	<1	**92**	94	94	5	<1	<1	83	41	46
	2024	>99	<1	<1	<1	**81**	>99	97	3	<1	<1	90	45	47
Tajikistan	2015	94	1	1	3	-	**82**	**94**	5	1	<1	-	-	55
	2024	95	<1	2	3	-	**77**	**93**	5	<1	<1	-	-	59
Turkmenistan	2015	99	<1	<1	<1	96	**83**	96	4	<1	<1	-	-	52
	2024	>99	<1	<1	<1	97	**79**	>99	<1	<1	<1	-	-	56
Uzbekistan	2015	97	1	<1	<1	88	**88**	**96**	3	2	<1	64	19	39
	2024	98	2	<1	<1	89	**84**	**95**	3	2	<1	63	21	42
The Pacific														
Fiji	2015	99	<1	<1	<1	52	98	**94**	5	<1	<1	43	**17**	35
	2024	99	<1	<1	<1	53	98	**93**	7	<1	<1	43	**16**	35
Papua New Guinea	2015	**85**	3	8	4	-	**62**	**52**	9	**35**	**4**	30	13	27
	2024	**84**	5	7	4	-	**53**	**49**	9	**37**	**5**	31	16	33

Source: Table prepared by Authors based on data sourced from WHO and UNICEF (2025)[239]

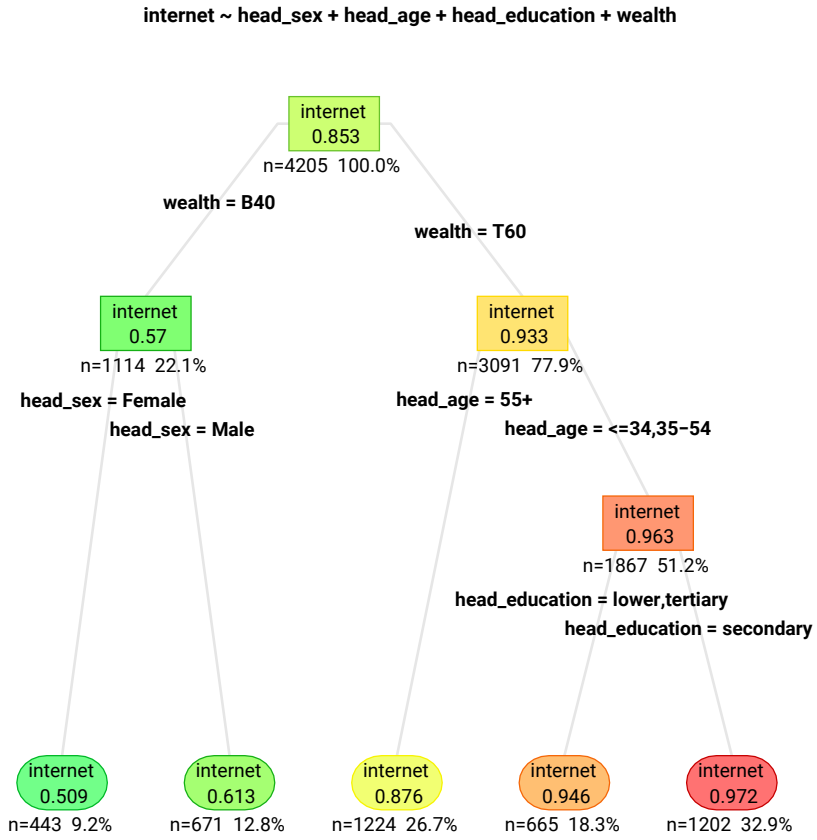
Note: On access to drinking water, *'at least basic'*: Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing. *'Limited'*: Drinking water from an improved source, for which collection time exceeds 30 minutes for a round trip, including queuing. *'Unimproved'*: Drinking water from an unprotected dug well or unprotected spring. *'Surface water'*: Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal. *'Safely managed'*: Drinking water from an improved source that is accessible on premises, available when needed and free from faecal and priority chemical contamination. *'Piped'*: Piped on premises. On sanitation: *'Basic' service*: Use of improved facilities that are not shared with other households. *'Limited'*: Use of improved facilities that are shared with other households. *'Unimproved'*: Use of pit latrines without a slab or platform, hanging latrines or bucket latrines. *'Open defecation'*: Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open places, or with solid waste. *'Safely managed'*: Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated off-site. Source: WHO and UNICEF (2025) *Progress on household drinking water, sanitation and hygiene 2000–2024: special focus on inequalities*. Geneva. Licence: CC BY-NC-SA 3.0 IGO, p.37.

Annex 4: CART analysis results on access to Internet, at household level

(a) Thailand (2022)



(b) Viet Nam (2020)



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