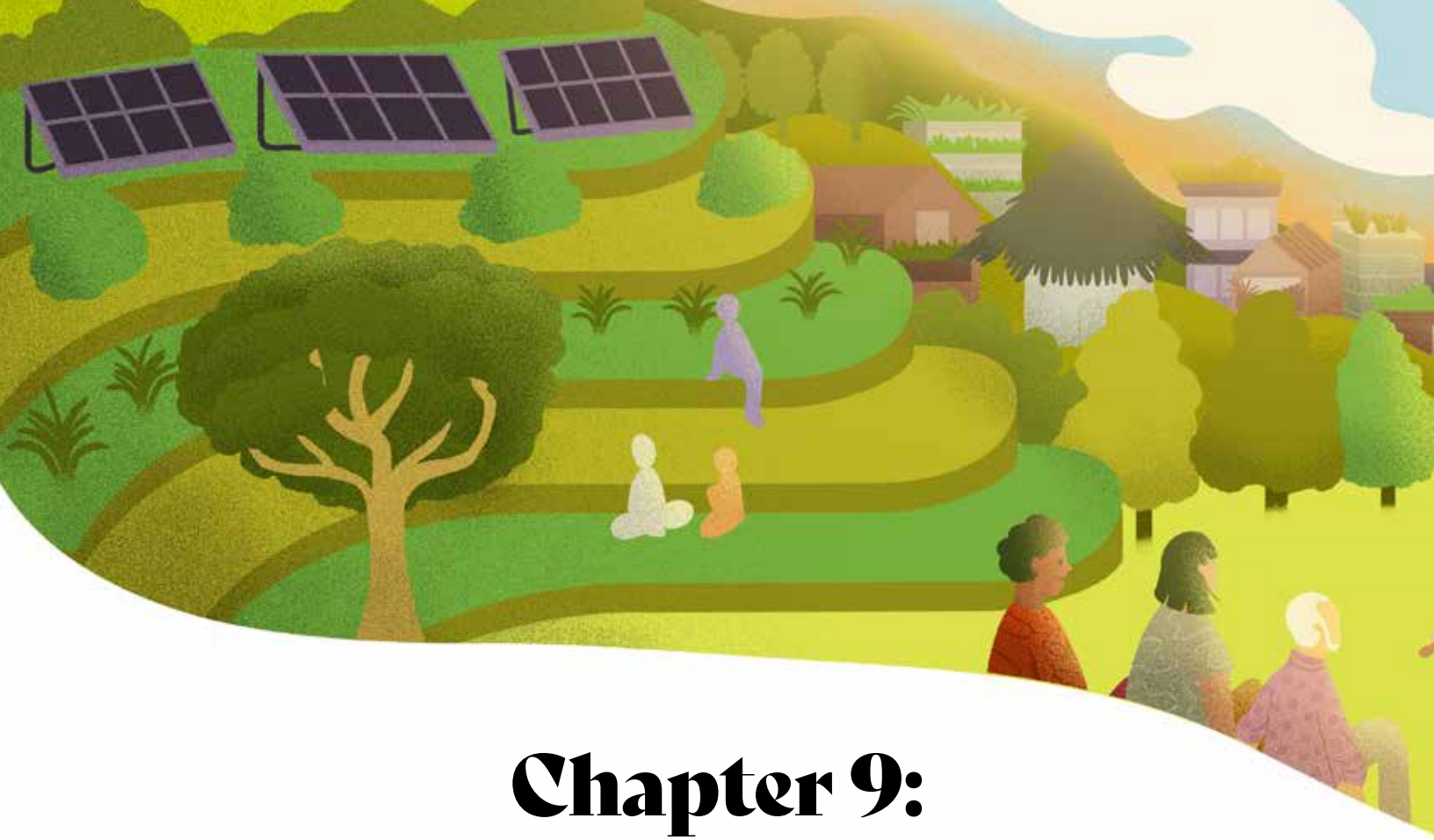


Chapter 9:

Financing Interventions for Climate Change in Cities

Quick facts

1. Cities are receiving less than 20 per cent of the finance required for effective climate action and are struggling to attract financing, particularly for small-scale local projects.

2. Cities' needs for adaptation, mitigation, and sustainable development are deeply intertwined, requiring financing to address these three areas simultaneously for effective response to climate change.

3. Borrowing from private sources is a necessary consideration as public finances, while vital, are insufficient to deliver the required scale and speed of urban climate finance.

4. There is significant potential for local governments to scale up land-based revenue sources to finance urban climate action.

5. National governments play a crucial role in urban climate finance through direct and indirect financing, and through enacting regulations that enable local governments to enhance own revenue, borrow and reduce investment risk.

Policy points

1. To be effective, urban climate finance must be people-centred, addressing not only the climate actions with the highest impact and economic value, but delivering actions that secure a just urban transition.

2. Cities need to collaborate with other levels of government and across sectors to aggregate and synchronize bankable projects to make urban climate actions more attractive for financing.

3. Cities need to leverage a blend of financial sources from both public and private sources to accelerate the scale and speed of urban climate finance.

4. Cities need to enhance their creditworthiness and risk profiles to attract financing at favorable terms, especially from private sources.

As the climate crisis intensifies, cities and urban areas are emerging as critical battlegrounds, driving urgent calls for adequate financial resources to be directed towards them.

Cities face both a challenge and opportunity in financing interventions for climate change in a context where trillions of dollars are needed every year to support the transition to net-zero. On the one hand, cities need to mobilize US$4.5—5.4 trillion[1] annually up until 2030 to invest in climate-resilient urban infrastructure, while at the same time responding to escalating displacement, livelihood disruptions and damages to critical urban infrastructure at unprecedented scale and speed. Inaction is not an option: the economic costs of climate change-related damages have increased sevenfold since the 1970s[2] and are projected to continue rising for the foreseeable future. By 2030, the annual disaster-related losses on the built environment could reach $415 billion, potentially pushing tens of millions more urban residents into poverty.[3]

Cities face both a challenge and opportunity in financing interventions for climate change in a context where trillions of dollars are needed every year to support the transition to net-zero

By 2030, the annual disaster-related losses on the built environment could reach $415 billion, potentially pushing tens of millions more urban residents into poverty

On the other hand, a substantial opportunity exists—according to one 2018 estimate, as much as US$29.4 trillion cumulatively by 2030[4]—for cities to attract investments in climate—resilient urban infrastructure. The bulk of the new investment is projected for the construction or retrofitting of green buildings as well as enhancing energy efficiency, transitioning to renewable energy, and investing in public transport infrastructure to support anticipated economic and population growth in rapidly urbanizing regions.[5] If successfully implemented, given their long life cycles, these investments could shape the development of cities for decades to come. Cities would also accrue resilience dividends from averted future losses and damages, as well as social and economic co-benefits over the infrastructure's lifetime that enhance sustainable livelihoods and well-being for urban residents.[6] Moreover, when the planning and financing of such investments addresses vulnerabilities and inequalities, the potential benefits can be truly transformative, with the infrastructure contributing to broader and long lasting positive societal changes (see Chapter 6).

Cities' needs for adaptation, mitigation, and sustainable development are therefore deeply intertwined, requiring substantial financial resources of the right mix synchronously directed towards these three needs to effectively respond to the urban impacts of climate change. Despite estimated financial needs in the trillions, cities received only US$831 billion annually on average in climate finance during 2021-22. Of this, less than 3 per cent (US$10 billion) was designated for adaptation.[7] Financing adaptation

Despite estimated financial needs in the trillions, cities received only US$831 billion annually on average in climate finance during 2021-22. Of this, less than 3 per cent (US$10 billion) was designated for adaptation

actions such as early warning systems, disaster response and recovery systems, and adaptive social protection is especially urgent for cities in low-income countries with limited resources and capacities to respond.[8]

The imbalance in how financing is directed for climate action replicates globally, with tracked adaptation finance of US$63 billion accounting for less than 5 per cent of the total tracked annual climate finance of US$1.27 trillion in 2021/22.[9] Striking a balance between financing mitigation and adaptation, in line with Article 7 and 9 of the Paris agreement, is critical for effective climate action as it addresses the different vulnerabilities and capabilities to respond to climate change that exist between developed and developing countries.[10] In some cases, these inequalities stem from historical legacies and systems of exclusion and marginalization that remain deeply embedded in city structures. When these drivers are not addressed, climate action could potentially amplify or even generate new forms of vulnerability and inequality (see Chapter 4).

It follows that the challenge of a fit-for-purpose urban climate finance system goes beyond a narrow tracking of the quantity of finance to consider the quality of finance to cities. To be effective, urban climate finance must be people-centered and advance just urban transitions, addressing the structural drivers of unequal distribution of vulnerabilities across various urban contexts. This approach is essential for realizing inclusive, sustainable and climate-resilient urban futures (see Chapter 4 and 8). With that in mind, this chapter aims to contribute to the discussions on increasing the quantity and quality of finance available to cities. In particular, it identifies key barriers and opportunities for accessing urban climate finance, before going on to explore innovative pathways to financing the desired transition.

A fit-for-purpose urban climate finance system goes beyond a narrow tracking of the quantity of finance to consider the quality of finance to cities

Section 9.1 begins by framing the context of urban climate finance through a review of the current debates on financing climate interventions, from the global to the local, concluding with a clear definition of people-centered urban climate finance. Section 9.2 estimates the financing gap and Section 9.3—9.5 examines the instruments and mechanisms available for financing urban interventions for climate change. Thereafter, Section 9.6 delves into the challenges and barriers of enhancing the quantity and quality of urban climate finance, categorizing them into "traditional" challenges and barriers faced by cities in accessing financing in general and those challenges "unique" to financing urban climate action. Section 9.7 then discusses various strategies and opportunities cities can leverage, including innovative approaches to financing people–centered urban climate actions that enhance inclusion and equity while promoting climate resilience. The final section 9.8 presents recommendations for various actors including local governments, national governments, community level organizations. academics, experts and philanthropists.

9.1 An Overview of the Finance Landscape for Climate Action

Climate finance should enable the efficient allocation of economic resources to respond effectively to the needs arising from climate change. In the context of climate change the predominant needs for cities are twofold:

- *Adaptation: aimed at reducing vulnerabilities* of cities and urban communities to climate change impacts mainly through safeguarding existing infrastructure and systems.

- *Mitigation: aimed at preventing or reducing greenhouse gas emissions* mainly through enabling or accelerating transitions to low-carbon futures such as renewable energy sources (like wind and solar), enhancing green and blue infrastructure to sequester carbon dioxide from the atmosphere (for example, through community gardens, open green spaces, watershed restoration and marshlands), as well as shifting production and consumption models.

Cities, however, existed long before the climate crisis with their development marred by histories of structural exclusion, marginalization and discrimination. These inequalities persist today, creating uneven starting points for enabling climate action at the individual, community and city levels. Urban climate action that ignores these disparities could further entrench existing inequalities and vulnerabilities or even create new ones (see Chapter 4). This is particularly crucial for cities and other urban areas which are home to the majority of the world's population and are on the frontline of the human-induced climate crisis. Context – relevant financing for urban climate action should therefore recognize the reality of unequal vulnerabilities and target specific projects and beneficiaries in developing countries and marginalized areas such as informal settlements to address climate change and social injustice simultaneously.[11] Increasingly, climate finance instruments are seeking to recognize and incorporate these equity, inclusion and justice dimensions in the interventions.

Context – relevant financing for urban climate action should therefore recognize the reality of unequal vulnerabilities and target specific projects and beneficiaries in developing countries and marginalized areas such as informal settlements to address climate change and social injustice simultaneously

9.1.1 The need for systemic global financial reform

Over the past decades, several global agreements have highlighted the interconnected challenges of financing climate action, sustainable development and urban growth, underpinned by a commitment to equity and inclusion. Collectively, the Sustainable Development Goals (SDGs), the Addis Ababa Action Agenda, the Paris Agreement and the New Urban Agenda (NUA) offer a synergistic approach to integrate climate action with urban development, emphasizing the necessity of financial mechanisms to facilitate and accelerate the transition towards more sustainable futures.[12]

However, the international financial framework that should in principle enable this transition has increasingly come under scrutiny for its inefficiencies, misalignment and lack of synergy in addressing the climate crisis and inclusive development at the required scale and speed, prompting calls for reform.[13] It has been argued that the existing framework, originally created over 75 years ago to rebuild the post-war economies of industrialized nations, is obsolete and not fit-or-purpose in responding to today's crises.[14]

In contrast with the past where financial resources were needed to restore established socioeconomic systems at a national level, the present-day polycrisis demands support for local, innovative and often untested solutions. This includes quick response to escalating disasters and intervening holistically across multiple sectors, partnerships and geopolitical scales to be effective. There have been some encouraging examples of initiatives that embrace this perspective, such as the case of the Unlocking Blue Pacific Prosperity programme (see Box 9.1).

In contrast with the past where financial resources were needed to restore established socioeconomic systems at a national level, the present-day polycrisis demands support for local, innovative and often untested solutions

Box 9.1: Unlocking Blue Pacific Prosperity: A holistic approach to financing climate and development

The Unlocking Blue Pacific Prosperity initiative, launched in 2023 at the international climate change conference COP28 in Dubai, brings together 27 members and territories in the Pacific region. The majority are over 60 per cent urbanized, with some countries like Nauru, Guam and Northern Mariana Islands nearly 100 per cent urbanized.

The programme identifies the disproportionate impact of climate change as a fundamental threat to the Pacific region that intertwines and exacerbates challenges in safety, food security, health and productivity, while emphasizing the need for a just transition to climate resilience.

Describing the current climate finance landscape as insufficient, fragmented, slow and unfair for effective ocean-climate action in the region, the initiative adopts a paradigm shift. By leveraging shared resources and collective advocacy, it engages various partnerships and financial mechanisms to simultaneously finance solutions for climate, oceans, food, health and livelihoods. Though at the early stages of implementation, it offers an inspiring pathway for mobilizing resources from diverse sources to promote integrated solutions to climate change across the region, with a target of US$500 million in funding by 2030.

Source: Pacific Community, 2024

UBPP was unanimously endorsed by Pacific Leaders at the 52nd Pacific Island Leaders Forum in Rarotonga, Cook Islands. © UBPP

The debate on reforming the international financial architecture is relevant to cities in two fundamental ways. First, community or local-level projects are best suited to deliver equitable, inclusive climate action tailored to specific contexts, yet the current international financial architecture envisions nation states as the primary implementing partners. Cities, therefore, face significant challenges in navigating the bureaucratic requirements to secure financing for urban climate action from international financial institutions.

Second, the climate crisis is coinciding with a debt crisis that is diverting much needed resources away from expenditure on basic developmental needs, including climate action. This is starkly illustrated by the fact that as many as 3.3 billion people live in countries that are now spending more on paying interest on debt obligations than on public health (Figure 9.1).[15] Moreover, the debt crisis disproportionately affects regions that have historically contributed the least to climate change but are more vulnerable to its effects, with limited capacities to respond effectively.

This debt burden hampers nations occupying more than half of the world's surface area from undertaking climate action at the required scale or speed, in some cases causing significant setbacks during a climate catastrophe. The rising debt burden on national governments has a knock-on effect on fiscal transfers to cities, manifest in insufficient or delayed disbursements. Public funding remains vital for urban climate action, as local governments depend on intergovernmental fiscal transfers for a significant portion of their budget financing. In a survey of about 100 cities worldwide, 55 per cent identified lack of public funding as a major barrier to enabling sustainable urban growth.[16]

The rising debt burden on national governments has a knock-on effect on fiscal transfers to cities, manifest in insufficient or delayed disbursements

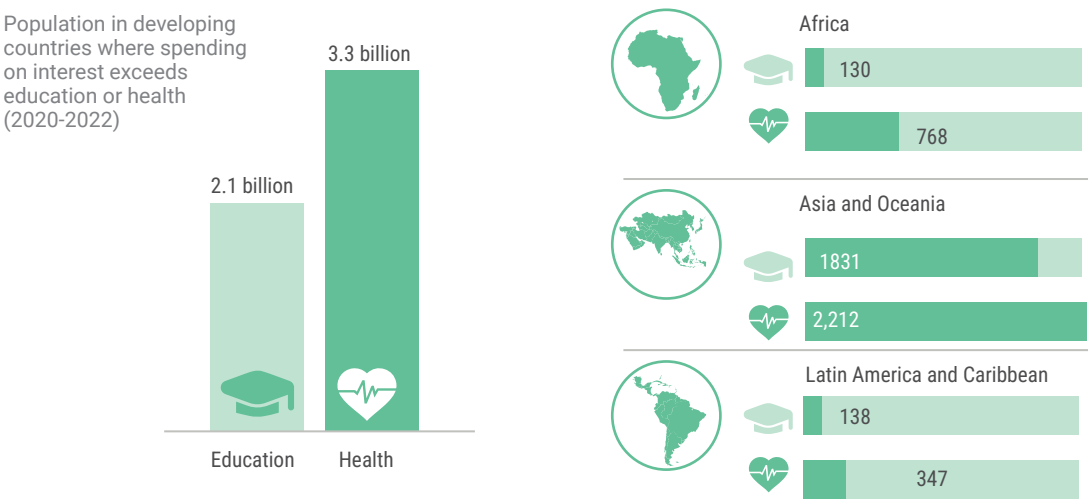
9.1.2 Progressive steps and improvements

Reform efforts aimed at improving access, efficiency, alignment and equity in the international financial architecture are gaining momentum. These shifts could significantly enhance the quantity and quality of finance available for urban climate action. For instance, the Bridgetown Initiative, initiated by Barbados Prime Minister Mia Mottley in 2022, seeks to reframe how debt burdened developing nations progress on the twin goals of SDGs and climate action, arguing they are two sides of the same coin. Among other proposals, the initiative has placed special attention on addressing liquidity and debt sustainability, calling for the inclusion of a natural disaster clause in all lending instruments.[17] This would give a country breathing room to rebuild after a climate disaster without spiraling into debt distress.

The ability to rebuild faster is especially relevant to cities, as delays in repairing damages to critical urban infrastructure such as water and sanitation systems, healthcare facilities and transportation networks could compound to long-term health and economic consequences that make it even harder to recover or achieve resilience. For instance, a study conducted two years after the 2019 Cyclone Idai ravaged the coastal city of Beira, Mozambique, suggested that the city residents were still experiencing "co-occurring" losses in their access to basic resources such as food, cooking fuel, electricity, clean water and medical treatment, potentially contributing to further vulnerabilities and rising inequality in the city.[18]

Another breakthrough that advances the imperatives of equity and justice in climate finance occurred during COP28 with the establishment of a new Loss and Damage Fund for vulnerable countries. In principle, loss and damage seeks to address the disastrous effects of climate change that go beyond the limits of mitigation, adaptation and disaster risk management actions,[19] bringing to focus the lived experience of people whose lives, health and livelihoods are pushed beyond the limits of their

Figure 9.1: Number of people living in countries that spend more on their net interest payments than on education or health



Source: UNCTAD, 2024, p.18, drawing on data from the United Nations Global Crisis Response Group, IMF and World Bank World

capacity to prevent or respond to the climate crisis.[20] This third pillar[21] of financing climate actions, in addition to adaptation and mitigation, further advances climate justice and has strong relevance to cities and other urban areas which are home to a growing majority of the world's population. Fundamental challenges remain around defining what constitutes loss and damages, given the complexities surrounding its manifestation, as well as the limited funds committed so far—the initial pledges of US$661 million[22] are less than 0.2 per cent of the total estimated losses that developing countries face as a result of climate change every year.[23] Nevertheless, the fund's setup and operationalization through the World Bank marks a significant milestone in expanding the climate finance landscape.

In principle, loss and damage seeks to address the disastrous effects of climate change that go beyond the limits of mitigation, adaptation and disaster risk management actions

Looking forward to COP29 in Baku in November 2024, it is anticipated that a higher-value New Collective Quantified Goal (NCQG) in line with the Paris Agreement will be signed off to replace the US$100 billion per year target that was set at COP15 in Copenhagen in 2009. The NCQG is relevant to urban climate action, especially for cities in developing countries, in two key ways. First, the initial target of US$100 billion was primarily determined through political negotiations and only partially considered the financing needs of developing countries. Since then, however, there has been greater recognition of the true extent of financial assistance required. The UNFCCC Standing Committee on Finance currently estimates the needs of developing countries at almost 5.9 trillion between 2021 and 2030.[24] Consequently, the negotiations could yield significant amounts of low-cost capital prioritizing adaptation and climate resilience infrastructure needs of developing countries.

Second, during COP16 in Cancún in 2010, the Green Climate Fund (GCF) was established as the primary entity for channeling multilateral funding for climate action under the collective quantified goal. As a dedicated fund the GCF plays an important role in easing access to financing by streamlining funding processes, thus cutting out the inefficiencies arising from the competing criteria set by different players. Additionally with a stated goal of a 50:50 balance between mitigation and adaptation, the GCF is a vital source of low-cost capital for adaptation action in cities, especially in developing countries. For instance, in 2018 the GCF established the Green Cities Facility which plays a catalytic role in derisking investments by providing concessional grants and first loss capital, as well as supporting project readiness and preparatory support. In 2019, the GCF approved financing for the "Building resilience of urban populations with ecosystem-based solutions in Lao PDR" project, a US$11.5 million project to control urban floods in Laos through ecosystem-based adaptation that is expected to benefit around 900,000 people.[25]

The ongoing global discussions are reshaping the understanding of the nature and function of climate finance, with growing awareness that a just and equitable transition is crucial for achieving inclusive, sustainable and climate-resilient futures. Additionally, there is recognition that in addition to adaptation and mitigation, loss and damage is an integral element for effective climate action. Consequently, urban climate finance must effectively align to this evolving consciousness within the urban context as outlined in Box 9.2.

There is recognition that in addition to adaptation and mitigation, loss and damage is an integral element for effective climate action

Box 9.2: Defining urban climate finance

For this report, urban climate finance is defined as local, national and transnational financial resources drawn from public, private or a blend of sources, directed towards enabling and accelerating urban climate adaptation, mitigation and loss and damage interventions underpinned by the principle of just transitions to achieve inclusive, sustainable, and climate-resilient urban communities.

This definition resonates with UNFCCC's definition of climate finance regarding the source and purpose of the resources (aimed at addressing the drivers and impacts of climate change), with an addition of three key aspects emerging from the evolving discourse and global consensus that are essential to effective urban climate action:

- First, it integrates *loss and damage as the third pillar* of climate action.
- Second, it embraces the idea that *sustainable development and climate actions are inseparable,* with sustainable development complementing and further advancing climate goals.
- Third, it incorporates *just transition as a fundamental guiding principle* in financing ambitious climate targets, a perspective widely acknowledged through inclusive consultations initiated by the COP27 presidency.[26]

9.2. Estimating the Financing Gap for Urban Climate Action

How much do cities and other urban areas need to transition to inclusive, sustainable and climate-resilient futures? This question is a useful starting point for evaluating resource gaps, as well as determining the suitability of various financing sources to enable the desired transition.

9.2.1 Calculating the cost for cities

As mentioned earlier in the chapter, according to one authoritative estimate, cities and other urban areas require US$4.5—5.4 trillion annually to invest in new or retrofitted low-carbon, climate-resilient infrastructure in transport, energy, water, waste and telecommunications projects.[27] Comparing this to the estimated global spending of US$6.5 trillion annually on low-carbon physical assets and enabling infrastructure across various sectors for a net-zero transition from 2021 to 2050,[28] the projections suggest that a significant portion of low-carbon infrastructure investments will be located in cities and urban areas.

It is important to note that these estimates predominantly focus on physical "hard" assets and often exclude the ongoing cost of running high emission assets that may still be in use during the transition period (such as coal plants or fossil fuel cars), estimated at US$2.7 trillion.[29] There is also a real cost of "stranded" assets (infrastructure that is rendered obsolete before its expected useful life) by 2050 as a consequence of the transition, estimated at a total value of US$2.1 trillion.[30] Additionally, the estimates do not include the social "soft" infrastructure necessary to enable people to use climate–resilient physical infrastructure, such as enhancing institutional capacity or reskilling for livelihood transitions (see Chapter 6). Nor do they factor in the cost of financing adaptive social protection to strengthen the resilience of vulnerable urban populations (see Chapter 4). There are also the inevitable costs of resettling communities from some low-lying cities, as already witnessed in the case of the relocation of the Guna Indigenous community from the flood-exposed island of Gardi Sugdub to mainland Panama.[31]

Table 9.1: Estimates of the financial outlay needed for urban climate action

Category	Purpose of investment	Elements of investments (For adaptation, mitigation and loss and damage)	Cost estimates
Physical ("hard") low-carbon, resilient infrastructure	Low-carbon, resilient infrastructure constructed to support the urban population and economies	New construction and retrofitting for green buildings Electric vehicles Renewable energy Solid waste disposal and treatment, wastewater treatment and water supply networks	US$2.5 trillion p.a. (2018-30, IFC)[32] to US$4.5–5.4 trillion p.a. (2015-30, CCFLA).[33]
Social "soft" Infrastructure	Promoting inclusion and just urban transition vital for enhancing well-being, social cohesion and sustainability	Urban planning and zoning Enhancing data and governance systems. Social security systems targeting vulnerable groups such as children, youth, elderly, women, migrants and Indigenous Peoples Disaster risk management and relocations Safeguarding cultural heritage Slum upgrading Healthcare and education systems Reskilling and capacity building.	Not generally accounted for in urban climate actions costings
Green and blue infrastructure	Natural or semi-natural elements in the urban ecosystem that protect and improve regulation of water and air quality, temperature, as well as creating opportunities for community recreation	Open green spaces, parks, rain gardens and urban forests Wetlands, permeable pavements and flood plains Natural water bodies such as rivers, lakes and ponds Canals and stormwater systems	Not generally accounted for in urban climate actions costings
Transition, write-off costs and decommissioning, as well as subsidies	Continued spending on high-emission infrastructure	Coal fired power plants, vehicles still running using fossil fuels, as well as some from industrial productions	Approximately 30 per cent of annual expenditure on energy and land use systems[34]

Source: summarized from CCFLA, 2015, IFC, 2018 and McKinsey Global Institute, 2022.

Table 9.1 summarizes major categories for which financing is needed for urban climate action. These estimates are at best conservative projections of the financial outlay required. It is important to also note that different methodologies and definitions are applied in arriving at such estimates. The values therefore are useful as comparatives as opposed to treating these as absolute set targets. The figures are also illustrative in showing what to date has not been accounted for with any degree of accuracy: in particular, the estimated costs associated with maintaining and improving social and blue-green infrastructure.

Notwithstanding the variability of these estimates, it is abundantly clear that there is a substantial gap between the urban climate finance that is currently available and what is needed for effective urban climate action. Without a significant uptick in financing, this gap could widen in future as required expenditure levels continue to rise over the next few decades (see Figure 9.2).

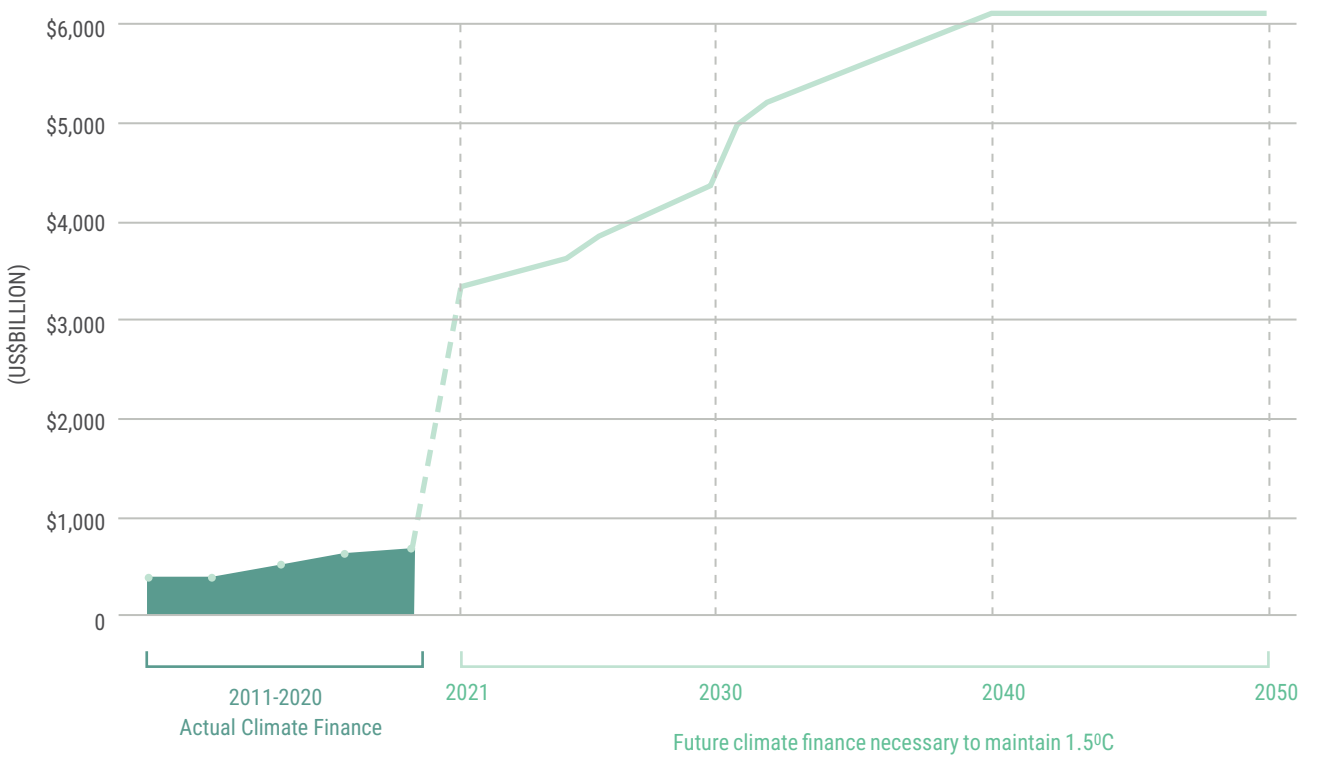
Notwithstanding the variability of these estimates, it is abundantly clear that there is a substantial gap between the urban climate finance that is currently available and what is needed for effective urban climate action

9.2.2 The business case for climate investments in cities

While the required financial outlay for enabling urban climate action is daunting, there is a compelling business case for the multiplied economic and social benefits accruing to cities from such investments, in both the short and longterm. It is estimated that investing in resilient infrastructure in low- and middle-income countries would have a net benefit of US$4.2 trillion, with US$4 in benefit for every US$1 invested in climate resilience.[35] This is in part because the damage prevented can easily exceed the upfront investment costs. These benefits are evident, too, in developed country contexts such as the United States. The state of Florida, when assessing the impact of its disaster mitigation projects in the aftermath of Hurricane Matthew in 2016, reported a total of US$81.1 million in avoided losses: this far outweighed the combined capital outlay of US$19.2 million, working out to a 422 per cent return on investments.[36]

It is estimated that investing in resilient infrastructure in low- and middle-income countries would have a net benefit of US$4.2 trillion, with US$4 in benefit for every US$1 invested in climate resilience

Figure 9.2: Current and future global climate finance gap until 2050



Source: Climate Policy Initiative, 2021, p.5

Furthermore, by strengthening a city's long-term security from potential disasters, resilient infrastructure can greatly enhance the value of housing and other urban assets. A cost-benefit analysis of the sponge city pilot project in the city Wuhan, China, for instance, found that the initial investment of CNY 15.2 billion (approximately US$2.15 billion) has produced almost CNY 30.9 billion (approximately US$4.4 billion) in added real estate value every year. The project also generates approximately CNY 60 million (approximately US$8.5 million) in annual economic and social benefits, ranging from the prevention of direct losses from waterlogging to the indirect benefits of improved water quality, reduced air pollution, lower maintenance costs, climate regulation and stormwater recycling.[37] Box 9.3 further elaborates Wuhan's cost benefit analysis of the sponge city pilot project.

By strengthening a city's long-term security from potential disasters, resilient infrastructure can greatly enhance the value of housing and other urban assets

Box 9.3: Illustrating the business case for climate action: The sponge city project in Wuhan, China

In 2013, China's national government launched the "Sponge City Programme" in response to its urban water management challenges. The programme encouraged cities to adopt green and blue infrastructure rather than grey infrastructure that is based on concrete and steel. Between 2015 and 2017, the national government dedicated CNY 20.7 billion (US$3 billion) for 16 pilot sponge cities, with ambitious targets that 20 per cent of each pilot city's land should be constructed to sponge city standards by 2020 and 80 per cent by 2030.

In Wuhan, one of the pilot cities, this approach was deployed with considerable success. Authorities implemented 389 separate sponge city projects over a space of 38.5 square kilometers, encompassing gardens, parks and green space that provided vital areas for run-off and drainage during periods of heavy rain and flooding. The economic case for this nature-based solution is also compelling: Wuhan's sponge city programme is estimated to cost almost US$600 million less than the "grey" infrastructure that would have otherwise been developed to strengthen the city's resilience to flooding.

Source : Oates et al., 2020.

Sponge city model. © chapmantaylor.com

It is crucial for cities to recognize that delaying climate investments is costly and counterproductive. It is estimated that the global average loss from the cost of repairing damages to critical infrastructure as a result of natural and climate disasters, the lost economic, social and health outcomes from service disruptions, as well as the erosion of new

It is crucial for cities to recognize that delaying climate investments is costly and counterproductive

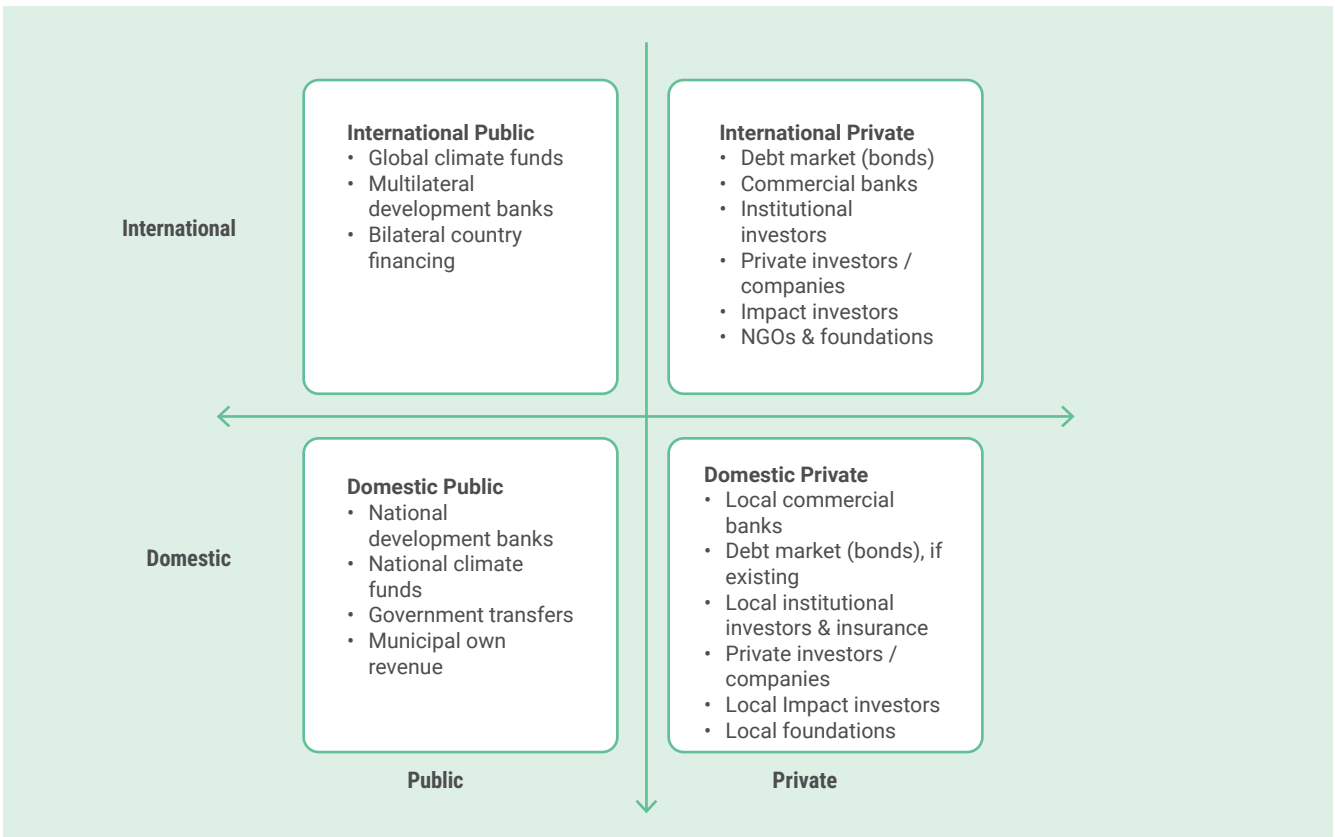
capital investments, is US$700 billion annually: of this, around 70 per cent is specifically associated with climactic hazards such as storms and flooding, with the remainder attributable to earthquakes, tsunamis and other geological risks.[38] This works out to around US$490 billion lost every year as a result of climatic impacts, of which a significant portion is incurred in cities and other urban areas, Compared to the estimated average climate investments of US$831 billion in cities annually, this arguably illustrates the significant erosion of value as a result of delayed, inadequate, or uncoordinated climate actions.

9.2.3 Options for mobilizing financial resources for urban climate action

Cities need to mobilize trillions of dollars to finance the transition to inclusive, sustainable and climate—resilient futures. No single source can deliver the scale and speed of urban climate finance needed. Cities have to strategically engage with multiple players and leverage diverse financing instruments in a way that they complement and enhance each other towards meeting their present and future needs.

The landscape of climate finance is a complex web of diverse actors—local, national, international, bilateral and multilateral—drawing on a range of resources from public, private, for-profit and philanthropic sectors. Each is informed by various rules of engagement, encompassing international agreements, local, national and regional policies, as well as voluntary targets and guidelines. While it is challenging to capture the entire picture, Figure 9.3 summarizes the key sources that local governments can access to finance climate interventions in cities.

Figure 9.3: Overview of different sources of finance available for urban climate interventions



Source: World Bank and United Nations Capital Development Fund, 2024, p.71

To advance the discussion on the strategies for mobilizing urban climate finance, Box 9.4 frames the distinction between funding and financing. This is especially useful in the context of engaging with external parties as it clarifies the expected roles of each party, and the general nature of contractual terms and obligations.

No single source can deliver the scale and speed of urban climate finance needed. Cities have to strategically engage with multiple players and leverage diverse financing instruments

Box 9.4: Distinguishing "financing" and "funding"

Though financing and funding are sometimes used interchangeably, it is important to distinguish between the two terms, especially in a context where local governments are engaging external parties through a variety of financial instruments that set out different terms, conditions and obligations between a borrower and a lender. The distinction is useful in framing the discussion on the different instruments and mechanisms that cities can engage for urban climate action. For the purpose of this report:

Financing refers to mobilizing resources from private or public financial institutions used for up-front investment costs. Most financing has a future obligation of repayment (usually with interest) such as loans, bonds or equity. In this report, financing is classified as "repayable" or "non-repayable", though some financing instruments may not fall neatly into one or other category. With credit enhancement instruments, for instance, future payments are obligated only if certain stated events occur, such as project non-performance or default by the borrower.

Funding refers to the process of paying back the financing, as well as paying for long-term operations and maintenance of the investments made. Funding includes two major types of financial resources that generally do not have any obligation of repayments: local government's own revenue sources raised through taxes, user charges, fees or operational surpluses, as well as intergovernmental fiscal transfers, grants and subsidies directed towards capital investments.

Source: World Bank and United Nations Capital Development Fund, 2024

The following sections explore in greater detail the different sources of urban climate finance, as well as the instruments and strategies that cities can use to mobilize and access the required quantity and quality of finance for effective urban climate action.

9.3. Channeling Local and National Government Revenue

This section outlines some of the opportunities and challenges in raising and disbursing public funds to support urban climate action. These are shaped by a number of factors, including not only the relative wealth or poverty of different countries and cities but also the complex institutional arrangements that determine their respective powers, capacities and autonomy. Though the ratio of national to local revenue varies greatly, most cities are sustained by a mix of income streams, from intergovernmental transfers to land-based revenues, local taxes and service fees (Figure 9.4).

Most cities are sustained by a mix of income streams, from intergovernmental transfers to land-based revenues, local taxes and service fees

Figure 9.4: Local government own revenue sources

Land-based revenues	Non Land-based revenues	User Charges	Intergovernmental transfers
• Property Taxes • Land fees/rates • Land Value Capture: - Infrastructure levy - Developer's obligation - Charges for development rights - Land pooling or readjustment - Strategic land banking - Charges on under- utilized urban land	• Licence fees for business • Pollution and congestion charges • Income taxes • Sale of carbon credits • Sale of data • Advertising rights	• Services: water, sewerage, parking fees • Administrative fees: business permits, registration	• conditional grants • unconditional grants

Source : Adapted from UN-Habitat, 2016a

9.3.1 The relative fiscal power of local governments

The rights and responsibilities of local governments for revenue collection and assignment of expenditures vary widely between countries, according to how national government systems are designed. Consequently, the degree to which various functions such as tax collection are decentralized to the local level is an important determinant of a city's financial autonomy. In a federal system such as India, for example, the role of state governments in policy can overshadow local authorities, in some cases leaving the latter with limited decision-making power over revenues and expenditure, depending on the legislative arrangements in place.[39]

Generally, cities in higher-income countries have a greater level of decentralization,[40] with more autonomy and administrative capacity in decision-making, as well as more financial resources and fiscal powers to source for urban climate finance. In developing countries with weaker governmental systems, cities may have limited capacity for revenue collection, and weaker or fragmented service delivery mandates and procurement processes. In such cases, delivering urban climate finance must begin by strengthening city planning, budgeting and financial management systems, including the broader city finance system beyond climate finance.[41] It should also be noted that decentralization is not in itself a guarantee of a financially resilient local government: in many cases, cities have found themselves charged with ever greater responsibilities in recent years without a concomitant increase in their revenue.

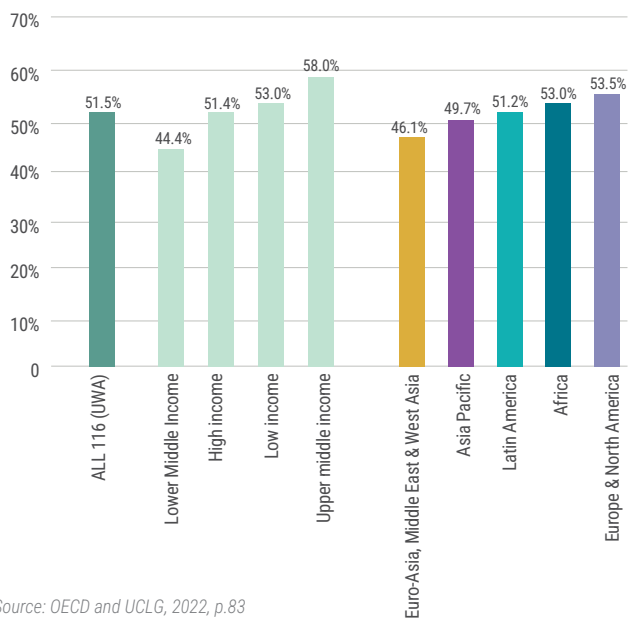
Decentralization is not in itself a guarantee of a financially resilient local government: in many cases, cities have found themselves charged with ever greater responsibilities in recent years without a concomitant increase in their revenue

9.3.2 Intergovernmental fiscal transfers

Own revenue source is a key source of financing for local governments, with a diverse array of instruments that can be tailored for climate action including land value capture instruments, user charges and sale of carbon credits (see figure 9.4). Yet, if we consider the global average of own revenue sources against expenditures, cities often spend more than their capacity to raise revenues. One survey of a selection of EU and OECD countries found that local governments accounted for 19 per cent of total public expenditure, but only raised 13 per cent of public revenues.[42] In countries as diverse as Denmark, Ethiopia and Peru, local governments account for a high share of public expenditure but hold a low share in revenues highlighting significant imbalances between local governments revenue-raising capacities and corresponding spending responsibilities.[43] Depending on the powers vested in them, local governments may have a selection of revenue-generating tools at their disposal that can help raise much needed funds for climate-resilient investments (see figure 9.4). At a global aggregate, tax revenue accounts for approximately one-third of local government income, but with wide disparities between countries.[44] To bridge this revenue gap, local governments heavily depend on intergovernmental fiscal transfers from the national governments, with this accounting for over half of their revenue on average globally, though the proportion varies considerably across regions and income groups (see figure 9.5).[45]

Intergovernmental fiscal transfers refer to transfers of financial resources from one level of government (often central or national) to another (regional, state or local), usually in the form of conditional or unconditional grants and subsidies. The proportion of transfers as a percentage of total local government revenue varies widely across countries: from just 1 per cent in Jordan to as much as 90 per cent in Kenya.[46] In many Asian and African nations, the proportion frequently exceeds 80 per cent of total local government revenues. For instance, in Uganda, Malawi and Rwanda transfers from the central governments represent 94, 91 and 89 per cent respectively of the total revenue of the local authorities.[47]

Figure 9.5: Grants and subsidies from central/national governments as a share of local governments revenue by income groups and world regions (2020)



Source: OECD and UCLG, 2022, p.83

Because the costs and benefits of climate action are often unevenly distributed and extend beyond a city's jurisdictional boundary, the traditional structure of intergovernmental fiscal transfers – whether as conditional "earmarked" or non-conditional grants – may not effectively incentivize resilient investments. One approach of reconciling the cost-benefit imbalances of climate actions is through designing territorial-level transfers that invite consortia, including local governments to collaborate and participate.[48] For instance, under the Climate Pollution Reduction Grants program in the United States, nearly US$5 billion will be made available to states, local governments, tribes, territories and coalitions of these entities to implement ambitious community-led climate action projects which seek to reduce greenhouse gas emissions and air pollution within an environmental justice framework.[49]

Another approach to realigning incentives against fiscal transfers is through performance-based grants, generally from government revenues or external grants channeled through the national to local government. These transfers are conditioned on demonstrated performance against predetermined climate goals, incentivizing recipients to enhance their capacities. For instance, an evaluation of a climate resilience programme in Mozambique found its performance-based grants successfully incentivized the participating municipalities to increase their own revenue source collections by 114 per cent.[50]

9.3.3 Innovative approaches to income generation at the local level

Despite the challenges cities face in generating revenue at a local level, some have successfully reconfigured their current tax system in innovative ways to help finance climate action. In the city of Denver in the United States, for instance, residents passed a ballot measure in 2020, introducing a new 0.25 per cent sales tax for non-essential items specifically earmarked for climate protection efforts. This initiative now generates US$40 million for climate change programs, a tenfold increase from the city's previous climate-related expenditure. The generated revenue is allocated towards activities such as clean energy workforce training, neighbourhood-based environmental programs, energy efficiency and renewable energy upgrades, with more than half of the funds intended for communities most affected by climate change impacts, including Indigenous Peoples, minorities and low-income groups.[51]

Cities have also successfully used pollution and congestion charges to raise financial resources for improving air quality and transitioning to low-carbon public transport. For instance, in 2016 the city of London earned an estimated US$182 million, while Stockholm earned US$155 million.[52] To be effective, however, these charges should be implemented alongside incentives for non-motorized transport such as bike-sharing programmes: that way, they do not merely serve as convenient income sources, but also act as catalysts of a wider transformative shift towards more sustainable practices. Over time, this means that income from fees and penalties would decline as residents increasingly adjust their behaviours in compliance.

Land value capture mechanisms have also been effectively used to raise revenue for climate action, allowing local governments to recover and reinvest private land value increases that result from public investment and government actions. These range from simple one-time payments like betterment fees or charges for development rights, to more complex longer-term instruments such as taxes levied over time for future anticipated improvements of a designated area in the city. Land value capture can be leveraged in combination with land use management and mobility planning (both often within the control of city authorities) to incentivize climate-resilient development, as in the case of Quito, Ecuador (see Box 9.5).

Box 9.5: The use of land value capture mechanisms to incentivize sustainable housing and transportation in Quito, Ecuador

Ecuador's capital city, Quito, home to nearly 2 million residents, faces significant challenges from its transportation sector, a major emission source exacerbated by urban sprawl at the city's edges. As urban development has spread increasingly into peripheral areas, including rural communities, the human and environmental cost has been considerable. The situation has resulted not only in rising pollution levels, but also congestion, degradation of local ecosystems and spiraling service provision costs.

To address this, the city designed an innovative land value capture instrument to incentivize low-carbon compact city development. Anchored on a new city metro system, authorities enacted the Eco-Efficiency Ordinance for the Metropolitan District of Quito in 2016. The ordinance allows the sale of additional building rights to developers in transit-accessible areas, promoting compact, energy-efficient construction. In return for increased building heights and other permissions, developments are required to meet climate-positive design standards such as water and energy efficiencies, with additional incentives provided for including affordable housing units.

Since its introduction, over 35 projects have been approved, generating more than US$10 million for further urban improvements. A striking feature of its success is that it has enabled the city to actively encourage positive social and environmental outcomes while at the same time providing it with a valuable income stream that can then subsidize public services and other forms of climate action.

Source: Welch, et.al., 2022

Though land-based revenue sources currently represent an average of just 3.1 per cent of local government revenue,[53] they have significant potential of scaling up as the tools to operationalize them are largely within the control of local governments, including land use regulations, urban design (including parks and green spaces) and urban mobility planning. Additionally, enhancing these revenue sources can improve local governments' creditworthiness, enabling them to access external financial resources at favorable terms.[54]

Though land-based revenue sources currently represent an average of just 3.1 per cent of local government revenue, they have significant potential of scaling up as the tools to operationalize them are largely within the control of local governments, including land use regulations, urban design (including parks and green spaces) and urban mobility planning

Another channel for raising revenue for improved resilience in cities, though complex, is through the sale of carbon credits. Using this approach, local governments can quantify the reduced emissions from undertaking a particular climate action (for example, the development of a renewable energy system or ecological restoration) and convert these into carbon credits that can then be sold in domestic and international carbon markets. Part of the complexity is undergoing the often-lengthy third-party verification process of the project to ensure it meets the approved carbon standards. Nevertheless, once realized, the benefits of a successful programme can be wide-ranging. In the US, for instance, a consortium of cities generated over US$1 million combined in a bundled sale of carbon credits exclusively generated from urban forests. Besides generating revenue, these projects have protected existing nature spaces from redevelopment and helped restore degraded land through regreening.[55]

9.4 Repayable Financing Instruments: Borrowing, Credit and Loans

While national and local governments can direct more of their expenditure to address urban climate change impacts, the high up-front costs of resilient infrastructure will frequently far exceed the resources at their disposal. Well designed, affordable loans and credit can therefore offer a lifeline for cities to invest in climate solutions that over the longterm will pay for themselves many times over in terms of averted damage, enhanced investor security and a range of other social and environmental benefits.

Borrowing is a necessary consideration for cities to bridge the gap of financing urban climate action, especially to cover upfront capital costs where own revenue sources and intergovernmental fiscal transfers are insufficient. In principle, local governments can borrow directly from the national government, as well as from public development financial

Borrowing is a necessary consideration for cities to bridge the gap of financing urban climate action

institutions (DFIs), private financial institutions or the capital markets, with each of these providers having their own merits and drawbacks. Yet in practice, they face considerable obstacles to borrowing and, in many cases, may not have the political standing or credit rating necessary to be recognized as a worthy loan recipient. Section 9.6 delves deeper into the challenges and barriers cities face in securing finance for climate action.

Nevertheless, there is growing recognition of the merit of expanding the capacity for local governments to borrow, especially given their responsibility to provide climate-resilient infrastructure for essential services. Borrowing at the local level would improve the alignment of the investment costs with the primary place where the benefit is accrued, ensuring the city-level beneficiaries bear the responsibility to pay. Furthermore, the long-term repayment of borrowing spreads the costs to future generations who will also benefit, unlike the local government revenue or fiscal transfers that are drawn from past and present generations. It also fosters the development of financial markets at the local government level.[56]

There is growing recognition of the merit of expanding the capacity for local governments to borrow, especially given their responsibility to provide climate-resilient infrastructure for essential services

It should be noted that, as with any development loans, clear frameworks should be in place to ensure that any borrowing by cities for climate action programmes is responsibly delivered and in line with what the local government can realistically afford. While the fiscal rules are still evolving and necessarily context specific, the "golden rule" is the most commonly applied fiscal rule that limits local level borrowing only for investment purposes and not for recurrent expenditure or to repay debt to avoid over indebtedness of local governments.[57] This is often combined with other fiscal rules that put a quantitative ceiling on borrowings.

9.4.1 Borrowing from public institutions

One important source of urban climate finance is the complex ecosystem of national, bilateral and multilateral development banks, public financial institutions and dedicated international climate funds. From individual country development agencies to regional and global organizations, they provide access to concessional loans with more favorable interest and longer repayment terms. This assistance also plays a critical catalytic role in de-risking transactions and supporting projects that are less likely to attract private financing.

Generally speaking, local governments are unable to access loans and grants from these financial institutions directly without the backing and technical support of national governments, who either negotiate the facilities themselves or offer a sovereign guarantee to enable cities to apply for the loans. They also help local governments navigate the

complex landscape of international climate finance, ensuring urban projects meet the eligibility criteria and are well positioned to secure financing. This involves coordinating with international donors, aligning local projects with global climate goals, and supporting the preparation and submission of funding proposals.

National development banks are particularly well-positioned to support urban infrastructure and can dramatically reduce the transaction costs for cities seeking finance. Engaging with these institutions offers several advantages for cities: they bring a deep understanding of the national context, including challenges and opportunities for investments, and often have a direct role in informing and contributing to the countries' development planning. In most cases, national development banks can borrow from international markets, including international climate finance funds, and have established relationships with private financial institutions and capital markets. They can convert these funds into local currency, providing tailored financing to specific local needs. Moreover, they can bridge the access barriers for municipalities that lack long-term financing options, either by directly lending to them or by pooling different types of funding or small projects together to enhance access to finance.[58]

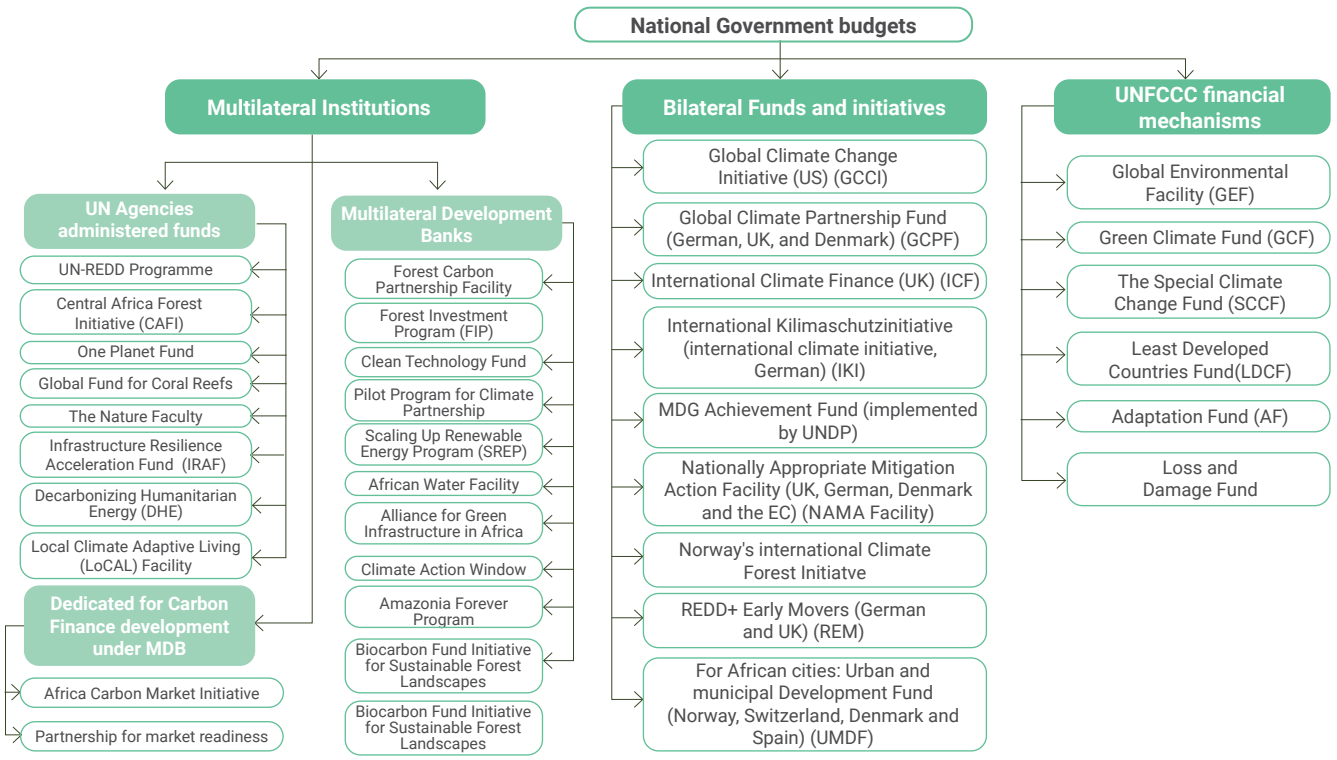
National development banks are particularly well-positioned to support urban infrastructure and can dramatically reduce the transaction costs for cities seeking finance

The urban dimension of bilateral climate finance often fits into a wider agreement or engagement between the involved countries. For example, China has been building climate partnerships for South-South cooperation as part of its Belt and Road initiative. By 2023, China had signed 45 bilateral agreements with 38 countries on climate mitigation and adaptation, mainly in investment in infrastructure projects such as solar farms, donations for e-buses or energy-efficient programs, as well as training programs for low-carbon cities.[59]

As mentioned above, cities often face challenges accessing multilateral development finance due to sovereign guarantee requirements, and therefore national governments act as the main channel for this financing. Multilateral development banks, however, still play a key role by enhancing the capacity of cities to prepare bankable projects and providing early-stage grants for technical studies. By initiating their support during the earlier stages of project preparation, multilateral development banks enable cities to meet the required technical, social and environmental standards for accessing financing. They can further encourage investment flows by providing various credit enhancement mechanisms including guarantees and insurance mechanisms.[60] For example, the European Bank for Reconstruction and Development (EBRD) Green Cities Program effectively integrates financing alongside project preparation support. It has mobilized £5 billion and invested in more than 85 projects to date, supporting cities not only with the financing of sustainable urban infrastructure but also through the development of green action plans and local capacity building to ensure effective implementation and monitoring.[61] Similarly, the African Development Bank's Urban and Municipal Development Fund (UMDF), launched in 2019 to promote "more climate-resilient, liveable and productive urban development in Africa", focuses on assisting cities with the identification, preparation and financial structuring of adaptation projects to bring them to bankability.[62]

Aerial view of the busy city centre of Gondar, Ethiopia © Eric Isselee/Shutterstock

Figure 9.6: The global architecture of public sources of climate finance



Source: adapted from United Nations MPFT Office, 2023, AfDB, 2023b and Watson and Schalatek, 2021

The global architecture of financial institutions providing financing for climate action is evolving, with funds flowing through multiple channels. Though not exhaustive, Figure 9.6 provides an overview of public related mechanisms. Nevertheless, while essential for enabling urban climate action, public financial sources are constrained and cannot alone meet the massive capital outlay required to finance the transition to climate-resilient cities. As of 2023, there were nearly 530 public finance institutions controlling approximately US$23 trillion of assets, financing about 10 per cent of global investments (including non-climate-related investments).[63] Comparing this to the US$90 trillion conservative estimate by the Global Commission on the Economy and Climate Change[64] of the level of global investment needed for low-carbon and climate-resilient infrastructures, public financial resources significantly fall short. This highlights the necessity of private sources of financing and capital markets to achieve the climate goals.

9.4.2 Borrowing from private institutions

Private financial institutions (such as domestic commercial banks) and capital markets can offer market-rate debt instruments to finance resilience projects. Although these instruments often attract higher interest rates than public financing, they provide additional benefits beyond bridging the financing gap in the public sources. Engaging with private sources promotes the development of financial markets and helps to strengthen the financial management systems within local governments, as private financiers often conduct rigorous evaluation of the financial health of the borrower. Additionally, borrowing from commercial entities builds the credit profile of the local governments, reducing perceived risk and making it easier to access future financing.[65]

Globally, private actors contributed 49 per cent (US$404 billion) of the total urban climate finance tracked in 2021-2022.[66] However, private finance flows are heavily skewed across regions. In 2019/2020, private finance accounted for 14 per cent of total climate finance flowing to Africa, compared to 96 per cent in North America, 59 per cent in western Europe and 49 per cent in Latin America and the Caribbean. In Africa, the leverage ratio between private and public finance is 0.16, the lowest in the world: this means that US$1 dollar of public finance attracts just US$0.16 in private finance, compared to US$18.5 in North America.[67]

However, even when private finance is available for climate investments, it is generally skewed more to mitigation than adaptation action due to its greater potential of profitability. This is because mitigation-related investments are easier to measure (for example, based on reduction in emissions by a given percentage), easily scalable and offer a higher return on investment. Adaptation actions, on the other hand, are predominantly localized, usually of smaller scale (lacking economies of scale) and present high uncertainty of their impacts and outcomes.[68]

One approach to encourage private sector resources, particularly in projects that may be less attractive from the perspective of potential investors, is through de-risking projects with instruments such as concessional loans, guarantees and first-loss protection. This is well illustrated by the GCF's Private Sector Facility (PSF). The portfolio of

61 private sector projects supports a range of adaptation and mitigation activities with communities in Africa, Asia, Latin America and the Caribbean, including the development of resilient infrastructure and early warning systems for coastal settlements. Through an array of incentives, the PSF has mobilized US$5.5 billion of GCF funds against a total portfolio value of US$27.1 billion, a more than fourfold leveraging of public finance.[69]

As with public financial sources, accessing private debt financing through commercial finance institutions can be challenging for cities, especially small and intermediary cities with lower fiscal capacity. Cities can face obstacles related to limited revenue streams and creditworthiness, further impeding their ability to take on debt. One approach to resolving these limitations is through the aggregation of urban projects through pooled mechanisms to improve borrowing capacity and credit profiles. Box 9.6 below illustrates the approach undertaken by the Mayor of London to attract private capital by aggregating projects across different boroughs and agencies within the Greater London Authority.

Accessing private debt financing through commercial finance institutions can be challenging for cities, especially small and intermediary cities with lower fiscal capacity

Box 9.6: Mobilizing pooled finance: the London Climate Finance Facility

In response to the growing evidence of the urgency of climate action, London brought forward its net-zero target from 2050 to 2030, a decision that requires an estimated £75 billion (approximately US$96 billion) in investments in renewable energy, retrofitting, energy-efficient construction and sustainable transportation infrastructure by 2030.

Recognizing the constraints of public finance, the city sought to attract private capital to complement public resources and scale up the financing. However, a key barrier identified was the fragmentation of capacities, funding mechanisms, infrastructure and ownership across the Greater London Authority area.

To resolve this, the City Authority established the London Climate Finance Facility as a platform to bring together projects and create coherent business cases across boroughs and agencies, forming a robust pooled project pipeline. Leveraging its credit rating, London then attracts private finance at favorable rates for onward lending to smaller implementing agencies, offering credit and tenor terms tailored to the specific needs of the infrastructure being financed.

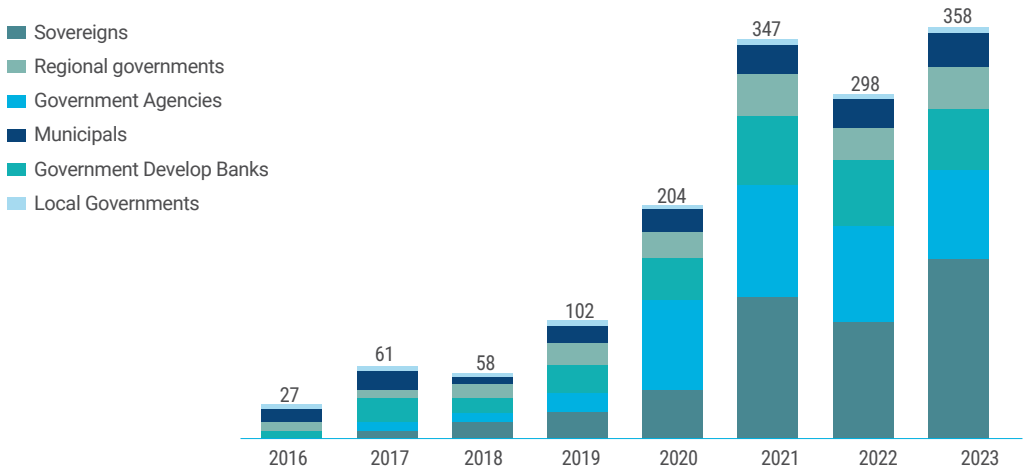
Source: Greater London Authority, 2024

A view across the fields and trees to the City of London. © Laura Stubbs/Shutterstock

9.4.3 Borrowing from capital markets

Another way for cities to mobilize finance for climate action is by issuing bonds in the capital market. This can take multiple forms, including *green bonds* (for projects targeting environmental benefits such as energy efficiency or emissions reduction), *social bonds* (for projects addressing social outcomes such as affordable housing and healthcare), *sustainability bonds* (for projects that combine environmental and social benefits) and *sustainability linked* bonds (not tied to a specific project but linked to the city's overall sustainability performance targets). As of 2023, the cumulative issuance of green, social, sustainability and sustainability-linked (GSSS) bonds since 2016 reached US$4.9 trillion. Public sector issuance, including national governments, regional governments, municipalities, local governments, government agencies and development banks, accounted for 31 per cent (US$1.5 trillion) of this amount, with green bonds making up the majority. However, regional governments, municipalities and local governments issuances cumulatively account for only a quarter of public sector GSSS, amounting to approximately US$375 billion.[70]

Figure 9.7: Cumulative public sector issuance of GSSS bonds as of 2023 in US$billion



Source: World Bank, 2024

To issue bonds cities must demonstrate strong creditworthiness. This is discussed further in section 9.7.3. However, with growing support from national governments and development finance partners, even smaller cities are making progress in accessing bond markets as illustrated by the successful issuance of East Africa's first water green bond by Tanga City, an intermediary city in Tanzania (Box 9.7).

Box 9.7: Tanga Water Green Bond, City of Tanga, Tanzania

Tanga, an intermediary port city in northeastern Tanzania, is home to a population of just over 450,000 residents. In February 2024, Tanga Urban Water Supply and Sanitation Authority (Tanga UWASA), an autonomous water utility, issued the first ever local government water green bond in East Africa. This landmark financing mechanism was valued at TZS53.1 billion (approximately US$23 million), with a 10-year term and an estimated coupon rate of 13.5 per cent and semi-annual coupon repayments. The financing will be directed towards expanding the distribution of safe and affordable water from a capacity of 45,000 cubic meters to 60,000 cubic meters per day, in the process extending the network coverage to around 6,000 households currently without access to piped water. It will also encompass the installation of infrastructure such as kiosks and smart meters, as well as support conservation activities along the Zigi river and surrounding villages.

Importantly, Tanga's local government was able to secure this funding with the support of other stakeholders who provided the necessary financial and technical assistance for the bond to be approved. The national government played a significant role by providing an enabling framework for the development of the domestic municipal bond market as part of the Alternative Project Financing (APF) strategy initiated in 2021, along with offering political support. The UN Capital Development Fund (UNCDF) was also instrumental in providing technical support, building capacity and assisting in the developing and structuring of the project.

Source: UNCDF, 2024.

9.5. Other Sources of Urban Climate Finance

While it is important that national and local governments can access public and private finance to support urban climate action, there are also significant opportunities in mobilizing financial institutions, companies and individuals to actively invest in climate action. By encouraging and facilitating various mechanisms for stakeholders to engage in these efforts, whether in the form of public-private partnerships, equity, household investments or philanthropic activities, cities can mobilize significant untapped potential to drive positive resilience outcomes.

9.5.1 Public private partnerships

Public-private partnerships (PPPs) are long-term contracts between public and private entities to jointly finance and share risk in developing and operating a public infrastructure asset or service. There is no single model for PPPs, as these adjust to the needs of each situation and the capabilities of the private partners. However, in one of the most common types of PPPs for urban climate finance, the private sector provides access to capital, leveraging resources to invest in projects. The public sector's role is to reduce risks for the private partners, by providing guarantees, reducing regulatory uncertainties and contributing to project viability.

This combination of access to capital and de-risking can be observed in a PPP set out in Jakarta, Indonesia, where the public transport authority TransJakarta set an e-bus pilot PPP with bus operators with the aim of achieving its target of 100 per cent bus electrification by 2030. Private operators, having purchased the e-buses themselves, are then paid a set fee per kilometre by the city on a designated route. TransJakarta, in turn, receives payment of the fares from bus users. Given the high upfront investment needed to purchase electric buses, the government increased the concession period for companies from seven to ten years, allowing for better returns on investments. Not wishing to focus exclusively on larger operators, it also worked with small-scale operators in cooperatives who together were able to cover the initial outlay.[71]

9.5.2 Equity investment

Two equity instruments can be leveraged for urban climate action: *private equity* and *project-level equity*. Private equity involves investments in private companies or buyouts of public companies, providing access to liquidity beyond conventional financial mechanisms. Project-level equity, on the other hand, refers to equity provided for project finance, often through the establishment of special purpose vehicles.

Both equity instruments can provide alternative avenues for financing climate-resilient infrastructure projects at the local level and supporting sustainability ventures, especially within public entities closely linked to cities, such as water management or wastewater treatment companies. Accessing equity finance requires a robust bankable project, and investors are likely to focus on the partner's creditworthiness. By having a stronger financial system through collection of taxes and fees cities can improve their creditworthiness and gain access to capital markets. Project preparation facilities can once again be critical partners to support cities in seeking private financing, by incorporating assessments and metrics that specific investors may be looking at to measure bankability.

Accessing private debt financing through commercial finance institutions can be challenging for cities, especially small and intermediary cities with lower fiscal capacity

Private equity funds facilitate investment partnerships, acquiring and managing local companies or urban infrastructure projects. These funds often target larger-scale projects focused on climate resilience and low-carbon solutions, aligning financial returns with environmental objectives. A substantial portion of climate-resilient investment has been facilitated through equity instruments, a trend driven by the significant involvement of the buildings and transport sectors, as well as the interest of private investors in climate transitions.[72]

A case in point is the Smart City Infrastructure Fund (SCIF). Established in 2018 by Whitehelm Capital and Dutch pension fund manager, APG the pool fund focuses on the development of smart city infrastructure in major urban areas in the world. The fund attracted €250 million (approximately US$270 million) in its first closing and targets investments in transportation, energy, resource efficiency and data analytics through common equity in assets, preferred equity and acquisition of assets. Among other projects, SCIF is partnering with a privately owned telecommunications company in the United States to deploy more than US$500 million to support the rollout of high-speed wireless networks and other digital infrastructure in secondary cities across the country.[73]

9.5.3 Household investments

Domestic private finance amounted to US$389 billion in 2021-2022 for urban climate finance.[74] Households and individuals combines the largest number of investors in urban climate finance, reflecting investments directed towards climate-resilient housing and energy efficiency measures, such as house retrofitting and private electric vehicle investments.

Households and individuals combines the largest number of investors in urban climate finance

While the size of each individual investment may appear modest relative to the overall financing needs, they collectively demonstrate the potential for transformative impacts when aggregated. National and local governments can take steps to encourage household-level investment in low-carbon options through targeted incentives, subsidies and tax breaks.

9.5.4 Philanthropic and charitable contributions

Financing from organizations operating at the community level, including philanthropic and charitable entities, has increased significantly over the past few years. Globally, it is estimated that financing from philanthropic foundations towards mitigation actions more than tripled between 2015 and 2021.[75] Such funding is mainly through small grants with no future repayment obligations. This is especially important for the highly vulnerable low-income informal urban communities who face challenges in gaining legal recognition and navigating mainstream financial systems. By making affordable financing accessible to hard-to-reach urban groups

Globally, it is estimated that financing from philanthropic foundations towards mitigation actions more than tripled between 2015 and 2021

who are often invisible to formal financial institutions, such mechanisms further advance the just urban transitions critical for effective urban climate action (Box 9.8).

Box 9.8: The value of decentralized funding for locally-led climate action

Voices for Just Climate Action (VCA), an initiative of six civil society organizations—Akina Mama wa Afrika (AMwA), Fundación Avina, Slum Dwellers International (SDI), SouthSouthNorth (SSN), Hivos and WWF-Netherlands—manages a small grants mechanism totaling €3.5 million (US$3.8 million). This fund provides grants of up to US$10,000 to local climate actors with limited access to formal financing, including marginalized informal groups and small grassroots organizations, particularly targeting women and Indigenous communities.

Biupe Innovators, a youth group in Mukuru slums in Kenya, is one of 106 recipients that received financing support through a local implementing partner, Muungano wa Wanavijiji, to undertake tree planting, community cleanups, waste management, and urban farming. By decentralizing grant management to local partners like Muungano wa Wanavijiji, VCA ensures that access to finance criteria are relevant and accessible to local groups. This approach facilitates prompt responses to climate challenges, enhances local ownership, and builds community capacity in grant management.

Source: Voices for Just Climate Action, 2024

9.6 Challenges and Barriers to Scaling Urban Climate Finance

It is worth noting that in many ways—how urban climate finance is sourced, structured and implemented—is fundamentally no different from any other type of finance.[76] Consequently, the barriers local governments face in accessing finance in general also apply when seeking financing for urban climate action. These include policy and regulatory barriers, project preparation challenges, financing challenges such as low creditworthiness and political constraints, as well as institutional and governance challenges.

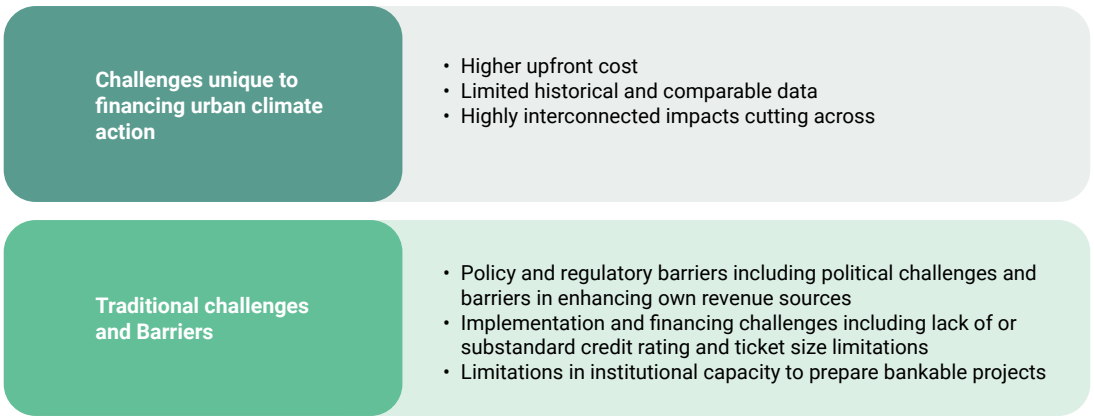
It is worth noting that in many ways—how urban climate finance is sourced, structured and implemented—is fundamentally no different from any other type of finance. Consequently, the barriers local governments face in accessing finance in general also apply when seeking financing for urban climate action

Different from typical project financing, climate interventions present three distinct characteristics that create challenges and barriers unique to urban climate finance. First, climate interventions are often long-term, requiring consistency in action across different political regimes. Second, effective implementation spans multiple jurisdictional boundaries, calling for stronger coordination and synergies across geopolitical lines. Third, limitations in historical data make it difficult to accurately evaluate and value the financing requirements.

This section discusses traditional challenges and barriers summarized in Figure 9.8 and further highlights additional emerging challenges to financing urban climate action, including the problems of long-term planning, the complexities surrounding collaboration and synergy-building, as well as the limitations of the data available.

Community Clean up excercice. © Media Lens King/Shutterstock

Figure 9.8: Challenges and barriers to financing urban climate action



9.6.1 Traditional barriers and challenges

Though interconnected, the traditional barriers and challenges can be grouped into three main categories. Policy and regulatory barriers are closely linked to the enabling environment in which the city is inserted—often determined by national governments—and have a direct impact on a city's ability to leverage and access financing. Project preparation challenges reflect a city's challenges in translating climate action plans and ideas into bankable projects. These are closely linked to the lack of technical expertise and local political priorities both at the national and local government levels. Implementation and financial barriers include the limited local understanding of financing options that cities have access to, and the challenges they face to access existing sources due to constraints that are often beyond their direct decision-making realm. Other broader challenges exist but are not directly connected to financing projects, and for this reason are not discussed here.

Policy and regulatory barriers

National level legal and regulatory frameworks determine the context within which cities can operate and access financing. Due to regulatory constraints, cities are often unable to directly borrow from public and private international lenders. One analysis of 160 countries found that more than half (89) restrict any kind of borrowing from local governments—including the issuance of municipal bonds—while only 22 allowed local governments to borrow without restrictions.[77]

Cities may also have limited ability to generate revenues from local taxes and fees. Regulations over whether a city may or may not have tax authority are also often outside the control of municipalities, with only an estimated 16 per cent of countries allowing significant taxation powers to cities.[78] Instead, they often rely on intergovernmental transfers from national governments, which are often unpredictable and delayed, hindering local governments' ability to plan and allocate funds effectively. In some cases, the basis for allocation and the legislative guidelines on transfers are unclear, creating room for bias or manipulation.[79]

Political and electoral cycles can also affect the stability and continuity of policies on financing and implementation of climate projects. Climate-resilient infrastructure projects often extend beyond the duration of a political mandate, and the dynamics of political leadership at the city level as well as national level can lead to shifts in budgetary priorities, disruption of financing, or delayed and even revoked approvals. This ultimately undermines the effectiveness of urban climate action. Box 9.9 illustrates a case of the influence of the political landscape on financing city level climate action.

Box 9.9: The influence of the political landscape in the failed municipal bond issuance by the City of Dakar in 2015

Dakar, Senegal's capital and a key seaport on the West African coast, illustrates the critical role of political buy-in for innovative financial reforms. Home to over 3 million people in its metropolitan area, Dakar sought to improve its infrastructure through a US$40 million municipal bond for the development of a 10-hectare marketplace for street vendors. This effort aligned with Senegal's progressive decentralization, particularly the 2013 Acte III de la Décentralisation, which empowered and allocated more responsibilities to local municipalities.

Despite careful planning and meeting all regulatory requirements, including securing a 50 per cent guarantee from USAID, as well as receiving pre-approval from the central government on three separate occasions, the bond was halted by a national government decree just before its launch. The central government's withdrawal of support, influenced by among other factors political concerns, ultimately prevented the bond's issuance.

The city, however, still benefited from the process, substantially increasing its municipal revenue as a result of improved financial management. It also achieved creditworthiness through comprehensive reforms, including enhancing financial operating systems, developing a strategic city plan, and engaging international credit rating agencies.

Source: Delbridge, et.al., 2021

Project preparation challenges

Developing bankable projects is at the crux of unlocking access to financing for climate interventions. The process is often lengthy and complex, involving strategic planning, technical designs, risk and returns assessments, political support, potential pilot testing and investor negotiations. Often, cities lack the internal capacities and resources to execute these complex early phases. Additionally, cities also face challenges in availing the required financial resources to enable such activities, typically ranging between 3 to 5 per cent of the total project costs in developed countries with a stable policy environment, and about 5 – 10 per cent in developing countries.[80] The inability to create projects that meet or can clearly communicate the criteria to receive investment, such as clear feasibility assessments and projected returns on investment, is a key hinderance in a city's ability to attract financing, especially from private sources.[81]

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Project preparation facilities (PPFs) have emerged as important players in addressing the lack of existing expertise in cities and help create bankable projects.[82] This early-stage project preparation support is critical to bridging capacity gaps. Programs such as the World Bank's City Gap Fund focus on addressing this bottleneck, having to date provided early-stage project preparation grants for over 180 cities in 67 countries to plan and prepare studies to bring projects to a bankability stage.[83] Another notable platform is the UN-Habitat City Investment Advisory Platform within the City Investment Facility, which provides early-stage technical and financial de-risking activities and assesses, verifies and certifies the SDG impact of a project and aligns this with the city plans.[84]

Implementation and financing barriers

Cities encounter a dual challenge when it comes to financing projects. Projects may be too large for cities to finance through their own budgets, but at the same time, considered too small by external donors to finance. The majority of financial institutions set a minimum ticket price—generally between US$10 and 30 million,[85] depending on the investor—which is often higher than what is needed for local government individual projects, especially for cities in low- and middle-income countries.[86] Around 40 per cent of projects reported in the CDP-ICLEI tracker of urban climate projects are small-scale projects, costing less than US$500,000.[87]

Smaller projects can struggle to attract finance due to their limited scale and impact, as well as their disproportionally higher transaction costs for preparation, implementation and monitoring results. Furthermore, while community or local-level projects can be best tailored to address local needs and inclusion directly, their overall impact on climate mitigation or adaptation may seem negligible at the macro level. This fragmentation can make it difficult to demonstrate the intended impact sought by funders, and governments often will prioritize bigger projects that attract more visibility.

Another common barrier is cities' limited creditworthiness. Creditworthiness is a third-party assessment of whether an entity is worthy of receiving credit, based on the confidence in the long-term financial strength and stability of the borrower and its ability to pay back borrowings in a timely manner. It is often a prerequisite for the application of conventional debt financing, including green and municipal bonds and PPPs that involve municipal borrowing. As a result, cities with low credit ratings face more difficulties in securing commercial and private financing or getting access to credit markets.[88] At the municipal level, of the 500 largest cities in the developing world, less than 20 per cent are considered creditworthy.[89] However, cities that take steps to enhance their credit rating can receive substantial benefits as a result. As shown by the World Bank's City Creditworthiness Initiative, just US$1 invested in improving the creditworthiness of a city in a developing country can potentially leverage more than US$100 in financing for low-carbon and climate-resilient infrastructure at the city level.[90]

Small and intermediary cities, which as of 2020 hosted 58 per cent of the urban population in developing countries,[91] face additional challenges in accessing private capital. These cities have often been neglected by national and regional urban development and planning, receiving less investment and fiscal transfers. As a result, there is a growing disparity between metropolitan centres and small and medium-sized cities.[92] Small and intermediary cities are less likely to have sufficient own source revenue and technical capacity to prepare climate projects, and the smaller size of projects in these cities make these less attractive to private finance or finance from large multilateral banks. In most cases, these cities are also in a weaker political and fiscal position to demand a greater share of the resource transfers from national governments dedicated to fund local infrastructure.[93]

Cities globally vary in size, fiscal structure, creditworthiness capacity and financial autonomy. Each city is likely to have its own combination of these barriers and will require its own approach to access finance. Table 9.2 summarizes common barriers and challenges. While not exhaustive, the summary focuses on obstacles directly affecting cities' ability to access finance for urban projects.

Table 9.2: Traditional barriers and challenges faced by cities to access climate finance

Type of barrier	Challenges	Details
Regulatory and policy barriers	Restrictions on borrowing	National regulations that limit the ability of local governments to borrow and contract debt
	Unclear multi-level governance	Lack of a clear governance structure, or one that limits cities' authority over revenue collection and expenditures, reducing a city's ability to autonomously raise revenue to finance urban climate projects
	Irregular intergovernmental transfers	Lack of clarity on the sums or schedule of transfers, making it challenging to plan, structure and finance projects
	Political misalignments	Lack of political alignment between national and city political leaders especially when city leaders belong to opposition political parties. Additionally, electoral cycles from national to city level can create policy breaks and uncertainty in city climate needs and priorities
	Lack of prioritization of urban climate projects	Lack of a clear commitment from national governments on climate action, for example through bold NDCs or local governments engagement in developing climate action plans
	Limited domestic capital market	The absence of regulation that allows the development of a domestic capital market can limit the financial options available to cities, increase the cost of borrowings, create dependency on external finance and hinder the involvement of the private sector
	Limited fiscal decentralization	The lack of fiscal decentralization on the national level constrains cities' financial autonomy, affecting their ability to plan, finance and implement urban climate projects tailored to their needs
Project preparation barriers	Reduced local planning autonomy	National governments may hold the responsibility for planning in specific sectors, limiting a city's ability to plan and finance local low-carbon projects
	Lack of local climate action plans	Without a clear strategy for plans and projects to implement, cities risk continuing implementing business-as-usual, carbon intensive projects
	Limited project development technical expertise	The deficiency of technical expertise to develop climate projects that meet the criteria of bankability of public and private investors
	Lack of knowledge about existing support	Lack of awareness of the support provided by project preparation facilities that can help them structure projects and explore avenues to access climate finance
	Limited project preparation support	There is often limited capacity from project preparation facilities to respond to the demand from cities on project support
Implementation and financing barriers	Need for sovereign guarantees and lack of creditworthiness	Due to a lack of or poor credit ratings, cities have a limited ability to access capital markets and often depend on national governments to provide sovereign guarantees to access finance from public and private financial institutions
	Limited revenues	Climate projects compete with other urban priorities that are also funded by cities own revenue sources
	Lack of resources for operating expenses	A lack of operating expenses may lead to reduced maintenance and long-term efficiency of a project
	Project size dilemma	Cities can have projects that are too large to be financed through their own budgets, and too small to be attractive to other investment sources
	Lack of access to affordable finance	High financing costs, especially in the early stages of project implementation, can render projects economically unviable, especially affecting innovative or untested technologies that involve higher implementation risks
	Limited understanding of available financing options	Cities rely on using their own resources to pay for projects, instead of exploring alternative or innovative financing mechanisms. Given the limitation imposed by cities' own budgets, projects may be deprioritized or cancelled
	Weakness in financial management integrity	Lack of transparency, accountability, and the presence of corruption in institutional processes can deter potential investors

9.6.2 Additional challenges unique to financing climate action

Different from other investment undertakings, climate-related projects have distinct features that present unique financing challenges. Climate impacts cut across multiple sectors and geopolitical boundaries and can persist over a long period. Additionally, climate solutions are often untested and non-standardized, with benefits that are only fully realized long after the initial investments, as is the case with increasing urban tree cover. These differentiating characteristics pose additional barriers and challenges.

High up-front costs

One important challenge to financing climate interventions is that costs are often heavily front-loaded, especially in the initial stages. These include expenses related to the decommissioning of high-carbon infrastructure, handling job redundancies, and reskilling efforts.[94] With pressing budgetary needs especially in developing countries, such high up-front costs can lead to inertia in adopting low-carbon alternatives, even when the long – term economic viability of the climate-resilient solutions – such as in the case of energy transitions – are clear.[95] Further, with the implementation of such projects often extending beyond political election cycles, the high upfront costs can weaken current elected leaders willingness to commit to these costs due to limited quick wins within their elected term.

Many climate-related solutions are relatively new and untested, with significant data gaps on expected impact, introducing higher degrees of uncertainty. This results in higher due diligence and transaction costs, which in turn can reduce overall returns, making them less attractive to private investors

Limited historical and comparable data

Many climate-related solutions are relatively new and untested, with significant data gaps on expected impact, introducing higher degrees of uncertainty. This results in higher due diligence and transaction costs, which in turn can reduce overall returns, making them less attractive to private investors.[96] One approach to resolving this challenge is availing long-term patient capital[97] such as grants and philanthropic financing and creating an enabling environment for research and development of urban innovation (see chapter 8).

Highly interconnected impacts cutting across sectors and jurisdictional boundaries

Climate change is a necessarily whole-of-economy complex challenge, cutting across sectors and jurisdictional boundaries. Given this scope and scale, a whole-of-society and whole-of-government approach is required for climate action to be effective. Institutions that foster coordination, policy integration and mainstreaming are especially crucial. Effective coordination horizontally (across sectors) and vertically (across different levels of government) can reduce siloed actions, avoid duplication, align incentives and build a shared vision for climate action. Chapter 7 delves deeper into the different governance frameworks, from the global to the national to the local, that promote co-actioning.

Integrating and synchronizing climate actions beyond the city level presents both challenges and opportunities for cities. The challenge lies in securing the financial resources needed for effective coordination, which many local and national governments highlight as lacking.[98] The opportunity lies in scaling impact through a holistic approach that unlocks synergies and co-benefits from the strategic alignment of resources. The resulting financial aggregation enhances the borrowing power of recipients, attracting more capital and favorable financing terms.[99]

9.7 Opportunities for Scaling Urban Climate Finance

Resolving project-level financing barriers for local governments is necessary but not sufficient for the scale and speed needed for effective urban climate action, especially given the unique complexities of climate-related challenges. This section focuses on strategic opportunities to scale up public and private financial resources directed towards investing in inclusive, sustainable, and climate-resilient cities

Resolving project-level financing barriers for local governments is necessary but not sufficient for the scale and speed needed for effective urban climate action, especially given the unique complexities of climate-related challenges

9.7.1 Leveraging integrated long – term urban planning

An integrated approach to planning and implementing climate projects, effectively coordinated both horizontally and vertically, provides a strong foundation for identifying, prioritizing and aggregating city interventions aligned to regional and national plans.[100] This enables robust decision-making and optimizes synergies while minimizing the trade-offs and redundancies between mitigation and adaptation.[101] Chapter 5 explores deeper on how to leverage urban planning for climate action. Relevant to scaling financing, a long-term plan accompanied by a detailed financing strategy signals opportunities and a pipeline of "bankable" projects to finance providers, offering greater certainty on their coherence across government levels, particularly when aligned with Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs). Additionally, it can facilitate strategic collaboration with other local governments to aggregate project development, leverage economies of scale and reduce the transaction costs associated with smaller projects, thus making the aggregated projects more attractive for financing.[102]

9.7.2 Leveraging blended finance

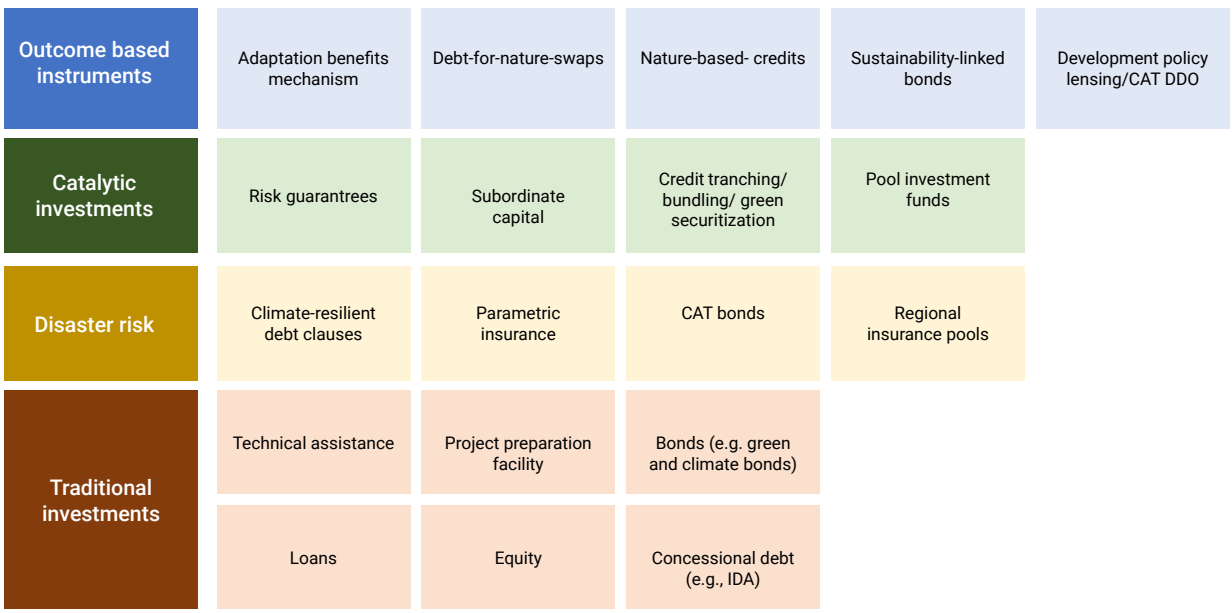
When it comes to financing at the local level, context really matters: no "one-size-fits-all" approach exists. It is not only necessary to secure the required levels of financing, but equally important to consider how the different instruments are integrated to support the intended local climate action outcomes.

Blended finance is a structured approach of layering different financing instruments such as repayable debt, concessional grants and equity,

often blending capital from public sources with that from private investors, impact investors as well as philanthropists for climate action. Blending is particularly useful for project profiles with relatively low financial returns but high social and environmental benefits, shifting the risk-return profile of a particular climate project (for example, through the provision of some concessional finance) so as to attract private capital sources.[103] It is important to note, however, that blending cannot make up for underdeveloped institutional, regulatory and policy environments or a lack of "bankable" projects.[104]

It is not only necessary to secure the required levels of financing, but equally important to consider how the different instruments are integrated to support the intended local climate action outcomes

Figure 9.9: Example of blending for enhancing adaptation and resilience



Source: Sivaprasad, et.al., 2024

Blended finance designs vary by project and investor type, but generally fall into three categories: disaster risk instruments like catastrophe bonds and climate resilience debt clauses, providing quick liquidity and debt relief after a climate disaster; catalytic instruments such as risk guarantees that reduce risk or enhance returns for private investors; and outcome-based instruments like debt-for-nature swaps that incentivize specific climate outcomes.[105] Figure 9.9 illustrates an example of how several financial instruments can be blended for adaptation and resilience climate action. The City of London climate facility discussed in Box 9.6 is a good example of a blended finance approach.

9.7.3 Improving creditworthiness and credit enhancement mechanisms

The primary obstacle to private sector investment in local governments, especially in developing countries where financing is needed the most, is the lack of an adequate investment grade credit rating. Cities need to invest in key factors to successfully access the private sector for climate investments, including clear and supportive policy and regulatory frameworks, transparent working practices at the local government as well as take concrete steps to improving their creditworthiness. By having a stronger financial system in their collection of taxes and

The primary obstacle to private sector investment in local governments, especially in developing countries where financing is needed the most, is the lack of an adequate investment grade credit rating

fees, procurement and financial reporting, cities can improve their creditworthiness and gain access to external financial resources at favorable rates.[106] Additionally, cities can improve their capacities for collecting and analyzing climate risk data to enable them to improve their project risk assessments, providing them with a better evidence base to inform the right mix of instruments to be used for financing.

Almost three-quarters (73 per cent) of low- and middle-income countries have a sovereign credit rating of grade "B" or below, which is often beyond the risk thresholds for most investors.[107] In the context of Africa, a region highly vulnerable to climate change and facing significant financing constraints, 30 of the 32 countries with sovereign credit ratings were rated with non-investment grade as of 2022, with only Botswana and Mauritius being exceptions.[108] Sovereign credit ratings, which consider among other metrics the country's economic stability,

political risks and fiscal policies, weigh in turn on local governments' credit ratings. Consequently, potential investors lack confidence in the ability of local or national governments to meet their debt repayment obligations, resulting either in credit access being declined or only being extended at unfavorable rates to factor in the additional risk to the investor.

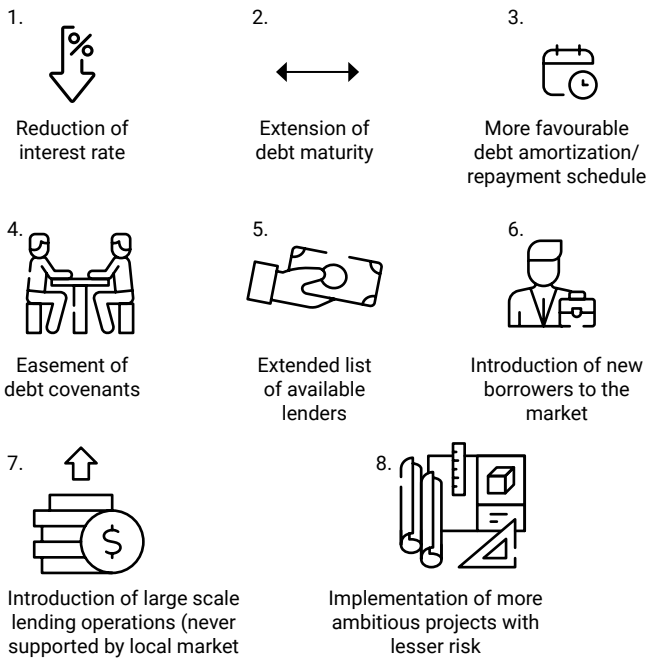
Initiatives and mechanisms for enhancing the creditworthiness and risk profiles of cities are therefore pivotal to increasing the flow of financing, especially from private sources. Among other benefits, as part of the process of achieving investment-grade credit rating process, the city strengthens its financial management to reduce the risk of defaults. This improves its capacity to attract more capital and at more favorable terms in the future.

At a project level, credit enhancement mechanisms can act as a substitute for a local government's creditworthiness. These can take various forms including credit guarantees, revenue guarantees, first-loss provisions, collateral, loan syndication and insurance. The main aim of insurance is to deliver financial and fiscal resilience by addressing the risks associated with shocks, including climate-related ones, while also reducing risk by increasing awareness and supporting economic development. Traditional insurance products often cover disaster response and so, whilst not directly tagged as "climate-change" related, can double up as insurance against climatic hazards.

To complement insurance instruments, more cities are buying catastrophe bonds. These high-yield bonds, financed by municipal governments and issued by reinsurance companies, are paid out in the case of climate catastrophes. As cities are first responders in the aftermath of disasters, these bonds can fill the temporal gap usually left by insurance companies when these are assessing risks for other, more traditional insurance instruments.[109] Figure 9.10 illustrates some of the main benefits of credit enhancement and insurance mechanisms that could potentially accrue to cities.

The damage caused by Hurricane Otis in Acapulco, Mexico. © Jessica Rodriguez Leon/ Shutterstock

Figure 9.10: Main benefits of credit enhancement mechanisms



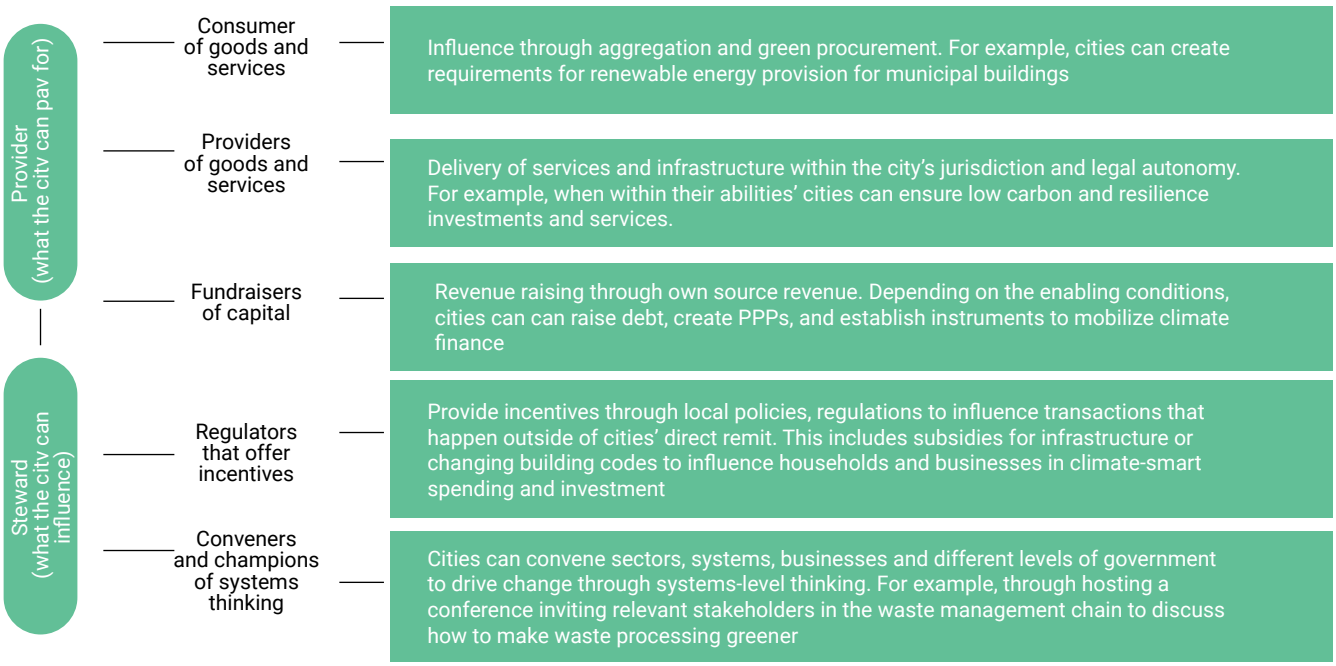
Source: World Bank, 2018c.

9.7.4 Enabling, proactive governance frameworks

A common theme throughout the analysis of this chapter is the roles that national and local governments can both play in supporting climate action beyond providing finance. Though the limitations and constraints that city authorities in particular face have been repeatedly emphasized, there are nevertheless important actions that can be taken to catalyze investment in climate finance. For instance, local governments can have an important bearing on planning and financing decisions through their dual roles as providers and stewards of urban climate finance. As providers, they contribute through consumption, payments and fundraising for climate initiatives. As stewards, they help shape planning regulations and advocate for greener policies, plans and technologies.[110] Figure 9.11 summarizes the various ways cities can influence planning and financing. Cities' role as enablers, regulators and conveners of finance may often be equally or at times more effective in influencing urban climate finance than the impact they may have through their own budgetary actions.[111]

Cities' role as enablers, regulators and conveners of finance may often be equally or at times more effective in influencing urban climate finance than the impact they may have through their own budgetary actions

Figure 9.11: The different roles of cities in influencing planning and financing around urban climate action



Source: adapted from World Bank, 2021b, pp.9-10

As discussed earlier, national governments play a critical role in facilitating access to urban climate finance, directly financing or indirectly channeling resources to local government entities. It is the national government that puts most of regulatory frameworks and policies in place that can encourage investment in climate-resilient infrastructure and sustainable urban development projects. This is directly connected to the enabling conditions in place in a country. By setting clear targets for emissions reductions, renewable energy adoption and energy efficiency, national governments can provide a stable and predictable environment that attracts finance, including private investment. Developing frameworks for assessing enabling conditions is one approach to further identify and resolve challenges in the policy and regulatory environment. One such solution is illustrated in Box 9.10.

Box 9.10: A standardized toolkit to assess enabling framework conditions (EFCs) to accelerate climate finance in Asia and the Pacific

A robust enabling environment – with sound policy, fiscal, regulatory and institutional conditions at both the national and local levels – is crucial for cities to access climate finance. The Urban-Act and Cities Climate Finance Leadership Alliance (CCFLA), in collaboration with the Economic and Social Commission for Asia and the Pacific (ESCAP), developed a standardized toolkit to assess national and local-level enabling framework conditions (EFCs).

The toolkit consists of the National assessment tool that reviews the national level enabling conditions, while a similar local level assessment tool reviews a specific local government jurisdiction within the country. Together, these tools provide a comprehensive evaluation of the EFCs in a country and can be used to identify areas for improvement to enable more climate finance flow to cities. The tools cover four main categories: climate policy, budget and finance, climate data, and vertical and horizontal coordination. Each category includes sub-categories and dimensions to deep dive into each country's context. Guidance in each of the tools includes examples of best practices, case studies and resources.

The National assessment tool was piloted in India and Indonesia, providing key recommendations for enhancing EFCs at the national and local level. The standardized assessment tools facilitated discussion during stakeholder workshops held to discuss the identified gaps and develop recommendations and plans for improvement. The impacts of this standardized toolkit will thus be directly tied to both strengthening multi-level governance for climate action and enhancing financing interventions, by improving national support for urban climate finance.

Source: Case study submitted by the Economic and Social Commission for Asia and the Pacific (ESCAP)

As supply and demand aggregators, national governments can leverage their unique position to scale up urban climate finance, attracting larger investments and achieving economies of scale by pooling the needs of various urban areas and acting as a single large customer. This aggregation can also facilitate the bundling of smaller, less economically attractive projects into larger, more viable investment opportunities for investors.

As supply and demand aggregators, national governments can leverage their unique position to scale up urban climate finance, attracting larger investments and achieving economies of scale by pooling the needs of various urban areas and acting as a single large customer

Furthermore, national governments can implement measures to reduce the financial risks associated with investing in urban climate projects. This can be achieved through mechanisms such as guarantees, insurance products and first-loss protections that mitigate investor risks and enhance the creditworthiness of urban projects. By reducing the perceived and actual risks, governments can attract more private investment, lower the cost of capital for urban climate projects, and accelerate the transition to sustainable urban development.

Finally, as the primary stakeholders in multilateral negotiations, national governments play a crucial role in ensuring that climate negotiations and the reformation of development finance institutions prioritize the promotion of inclusive and zero-carbon cities. Figure 9.12 illustrates the different ways in which national governments can directly or indirectly promote urban climate finance.

Figure 9.12: Different roles of national government in promoting urban climate investments

Source: Adapted from Coalition for Urban Transitions, 2019, p.19 and other sources.

9.7.5 Promising progress in international financing mechanisms

Promisingly, there have recently been concerted efforts at the global level towards increasing and aligning the flow of affordable climate finance, especially to developing countries where it is needed the most. These efforts also aim to reduce the institutional fragmentation in financing the concurrent priorities of sustainable development, climate action and ensuring just transitions. This progress holds great promise for scaling the right mix of financing for urban climate action where, as earlier discussed, sustainable development and climate actions are inseparable and just, equitable transitions are essential for effective action. Chapter 2 discusses in more detail the momentum in international policy towards scaling up climate action. Three developments relevant to finance are worth mentioning:

Progress towards balancing adaptation and mitigation finance

As discussed in this chapter, adaptation finance is especially important for effective urban climate action. Under the Glasgow Climate Pact Article 18, developed country parties were urged to double their provision of adaptation finance to developing country parties by 2025—as a progress towards achieving a balance in financial resources for adaptation and mitigation, and in line with Article 7 and 9 of the Paris agreement.[112] To this end, commitments towards adaptation finance have been growing. Multilateral development banks, which account for more than 50 per cent of available adaptation finance,[113] have stepped up their efforts in balancing the mix of financial instruments by committing to higher adaptation finance targets as a share of their total lending. For instance, the World Bank pledged to allocate 50 per cent of its climate finance to adaptation action in its 2021 – 2025 strategy,[114] while the Africa Development Bank committed to double climate finance to US$25 billion by 2025 with equal shares to adaptation and mitigation.[115] These shifts portend more financial flows for much needed adaptation action at city level.

Progress on operationalizing the loss and damage funds

A significant breakthrough at COP28 was the agreement to establish the Loss and Damage Fund, with US$661 million pledged as of September 2024.[116] Though, arguably, the pledges fall far short of the estimated hundreds of billion required annually for loss and damage, the establishment of the fund marks a significant milestone in addressing the recovery needs of the most vulnerable communities.[117] The fund will provide financing in the form of grants and highly concessional loans,[118] thus potentially increasing the availability of more affordable financing for urban climate action.

Progress on a New Collective Quantified Goal (NSQG)

Set for agreement at COP29 in 2024, the NCCQ aims to set more ambitious financing targets and frameworks from the current floor of US$100 billion per year, considering the needs of developing countries.[119] The NCQG moment presents an opportunity not only for scaling up the quantity of finance available, but also improving the framework and mechanisms of ensuring equitable access to finance for climate action. This potentially could increase the accessibility and

impact of low-cost finance available for urban climate action, especially for fast urbanizing regions in developing countries.

The NCQG moment presents an opportunity not only for scaling up the quantity of finance available, but also improving the framework and mechanisms of ensuring equitable access to finance for climate action

9.8 Concluding Remarks and Lessons for Policy

The urgency of the climate crisis will require not one, but several strategies deployed in parallel to drastically improve the availability and affordability of financial resources for urban climate action. Rather than being conflicting, exploring these different sources, instruments and mechanisms of urban climate finance and how they can be effectively integrated will allow policymakers to understand the complex spectrum in which decisions need to be made, with a focus on the solution most appropriate to each specific context.

The urgency of the climate crisis will require not one, but several strategies deployed in parallel to drastically improve the availability and affordability of financial resources for urban climate action

- *Focus on the quality as well as quality of urban climate finance investments:* While the scale of the climate crisis requires significant investment to address the current gaps in financing, more attention needs to be given to the quality of financing and its transformative potential, especially for those most vulnerable. To be effective, urban climate finance has to be people-centered and focused on addressing not only the targets with the highest impact and economic value, but also delivering climate actions that secure a just urban transition to ensure no one, and no place is left behind. In this regard, the current imbalance in finance, heavily skewed towards mitigation projects, needs to be addressed and more resources allocated towards investments in adaptation that will benefit marginalized and at-risk populations particularly exposed to climate change impacts.

- *Mobilize a wide range of public and private finance sources:* Public finance is and will remain crucial for urban climate finance. Public resources should be aimed not just at directly financing urban climate projects, but rather at unlocking finance from other sources, through de-risking mechanisms, insurance and the provision of guarantees. Cities need to invest in key areas to successfully access the private sector for climate investments, including clear and supportive policy and regulatory frameworks, transparent working practices at the local level, as well as concrete steps to achieve creditworthiness.

- *Strengthen enabling conditions at national and local level:* National governments have a crucial role to play in the access of urban climate finance, both through the provision (direct or indirect) of financial assistance and through regulations to reduce the risks of investment. Countries undergoing public finance management reforms should consider how policies and regulations can be improved to allow cities greater autonomy in allocating resources for urban climate projects. On the other side of the spectrum, cities can use their own fiscal resources to plan and invest in climate projects, as well as strengthen their roles as both stewards and enablers to facilitate finance flows from other sources.

- *Adopt an integrated approach to developing "bankable" projects through fostering stronger vertical and horizontal collaboration:* Enhancing project preparation capacities remains critical for improving the bankability of specific projects and enabling their financing. To scale up the impact of urban climate finance, local governments should integrate climate actions beyond the city level. This can be done by unlocking synergies and co-benefits through the strategic alignment and synchronization of projects and plans at regional and national levels. Collaborating with other local governments and the national governments to aggregate project development, leverage economies of scale and reduce the transaction costs associated with smaller projects can make the aggregated projects more attractive for financing. These arrangements can help optimize shared synergies while minimizing the trade-offs and redundancies between mitigation and adaptation.

- *Embrace blending of existing financial sources and instruments to catalyze* investments for urban climate action: When it comes to financing at the local level, context really matters as no "one-size-fits-all" approach exists. It is not only necessary to secure the required levels of financing, but equally important to consider how the different instruments are integrated to support the intended local climate action outcomes. Blended finance helps make projects "bankable" by combining different instruments to balance risk and attract funding. National governments and financial institutions can further encourage investment flows by providing various credit enhancement mechanisms, including guarantees and insurance mechanisms that can be blended with other financial sources. These reforms to "business-as-usual" finance can open the way for innovative financing mechanisms that catalyze investments tailored to local needs, taking into consideration the impacts on the most vulnerable urban residents.

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