Urban rethink:
Tackling climate change in cities

Insights from the December 2022
Deloitte-ThoughtLab Global City Survey

A report from the Deloitte Center for Government Insights

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Table of contents

Introduction

Cities, globally, continue to fight a multipronged battle. COVID-19 was one of the biggest public health challenges faced by cities and nations in the past century. However, even as the pandemic recedes, its lingering effects and the associated economic disruption will likely continue to impact cities for a considerable time. Amid all this, cities are now shifting their focus to another major challenge—climate change and environmental sustainability.

In December 2022, Deloitte collaborated with ThoughtLab to survey 200 city leaders and 2,000 citizens globally to better understand the steps cities worldwide are taking to become future-ready. The survey shows that both city leaders and citizens surveyed agree that climate change and pollution are among the biggest challenges faced by cities globally. The article dives deeper into ways cities are targeting emission reduction, building resilience toward climate change, developing governance structures, and working to achieve equitable climate actions.
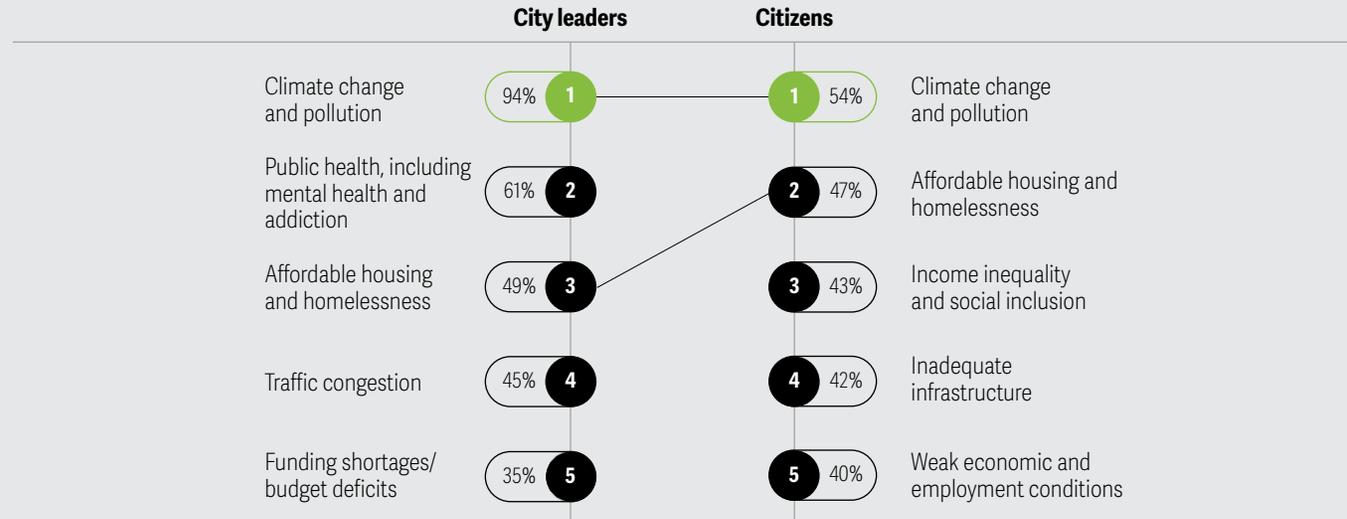
Key takeaways

1. Both city leaders and citizens surveyed call out climate change and pollution among the biggest challenges their cities will face.

2. Achieving carbon neutral, net-zero, and renewable-energy targets has been sluggish in most surveyed regions, except in Europe.

3. City leaders surveyed intend to improve environmental resiliency primarily in areas of pollution, flooding, and water scarcity.

4. A multisectoral approach toward climate change may be key to driving impact, and many city leaders are prioritizing partnerships to drive sustainable mobility, procurement, energy usage, and track emissions.

5. The survey suggests there is a lack of focus globally in most regions toward climate equity.

Climate change and pollution are top challenges identified by both city leaders and citizens globally

Which of the following are the biggest challenges your city will face over the next five years?

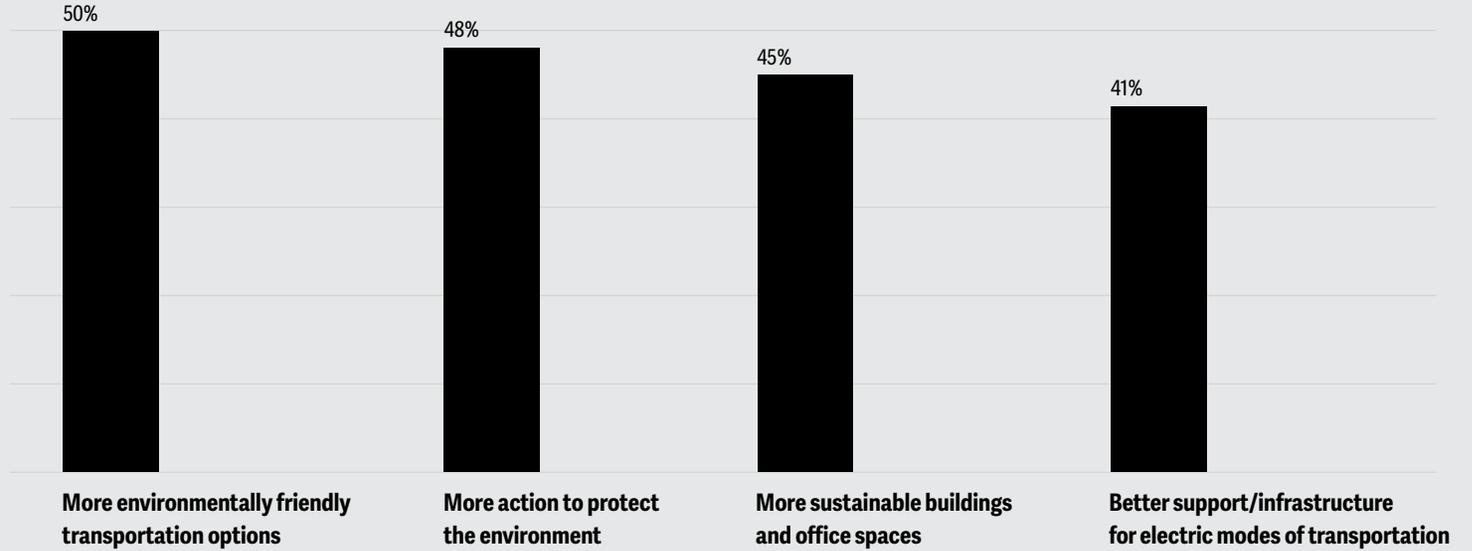|	City leaders	Citizens	
Climate change and pollution	94% ①	① 54%	Climate change and pollution
Public health, including mental health and addiction	61% ②	② 47%	Affordable housing and homelessness
Affordable housing and homelessness	49% ③	③ 43%	Income inequality and social inclusion
Traffic congestion	45% ④	④ 42%	Inadequate infrastructure
Funding shortages/ budget deficits	35% ⑤	⑤ 40%	Weak economic and employment conditions

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

Surveyed citizens want local governments to do more to improve sustainability in city infrastructure and transportation

Changing citizen priorities could result in more pressure on local decision-makers in cities to greatly improve their sustainability efforts.

In which of the following areas has the pandemic and other recent trends raised your expectations?

More environmentally friendly transportation options	More action to protect the environment	More sustainable buildings and office spaces	Better support/infrastructure for electric modes of transportation
50%	48%	45%	41%

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

Addressing these challenges could require cities to adopt a broad approach toward sustainable urban management

The approach should go beyond just emission reduction and carbon neutrality and should also include a clear focus on climate equity, building resilience toward extreme weather events, and an ecosystem approach to accelerate progress toward sustainability. Moreover, leveraging global cooperation networks can help cities achieve these results.

The C40 Cities Climate Leadership Group is a global network of mayors taking urgent action to confront the climate change challenge.

The C40 climate action planning framework was designed to guide climate actions under four distinct pillars.

This article tracks progress made by cities on these four pillars.
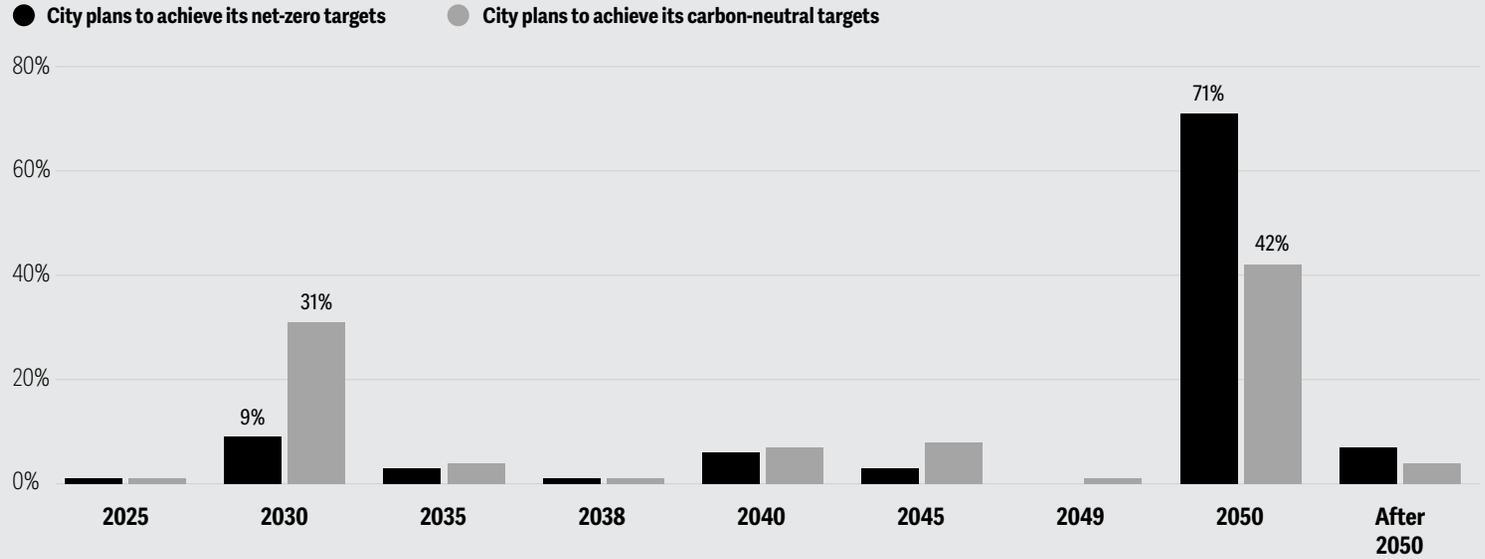
- **Emissions neutrality:** Developing pathways to become carbon and emission neutral by 2050 or before.

- **Resilience to climate hazards:** Demonstrating how cities will adapt and improve resilience to climate hazards and extreme weather events.

- **Governance and collaboration:** Detailing the city's governance and partnerships to accelerate the progress on climate actions and resilience goals.

- **Inclusivity and benefits:** Outlining the social, environmental, and economic benefits of climate actions and ensuring equitable benefit distribution.

Source: C40 Cities Climate Leadership Group, *Climate action planning framework*, C40 Knowledge Hub, March 2020.

Achieving net-zero and carbon neutrality is a major goal for surveyed city leaders globally, but very few have set aggressive targets for their cities

Achieving net-zero targets could be an arduous task for most cities with almost 80% of city leaders surveyed planning to meet their goals only around or after 2050.

Cities' net-zero and carbon neutrality goals

● City plans to achieve its net-zero targets   ● City plans to achieve its carbon-neutral targets

Year	Net-zero	Carbon-neutral
2030	9%	31%
2050	71%	42%

Note: Net-zero means cutting greenhouse gas emissions to as close to zero as possible. Carbon neutral refers to achieving net-zero greenhouse gas emissions by balancing those emissions, so they are equal to or less than emissions that get removed through the planet's natural absorption.
Numbers in graphics may not add up to 100% due to rounding off. Percentages denote cities planning to meet their net-zero and carbon-neutral targets in that year.
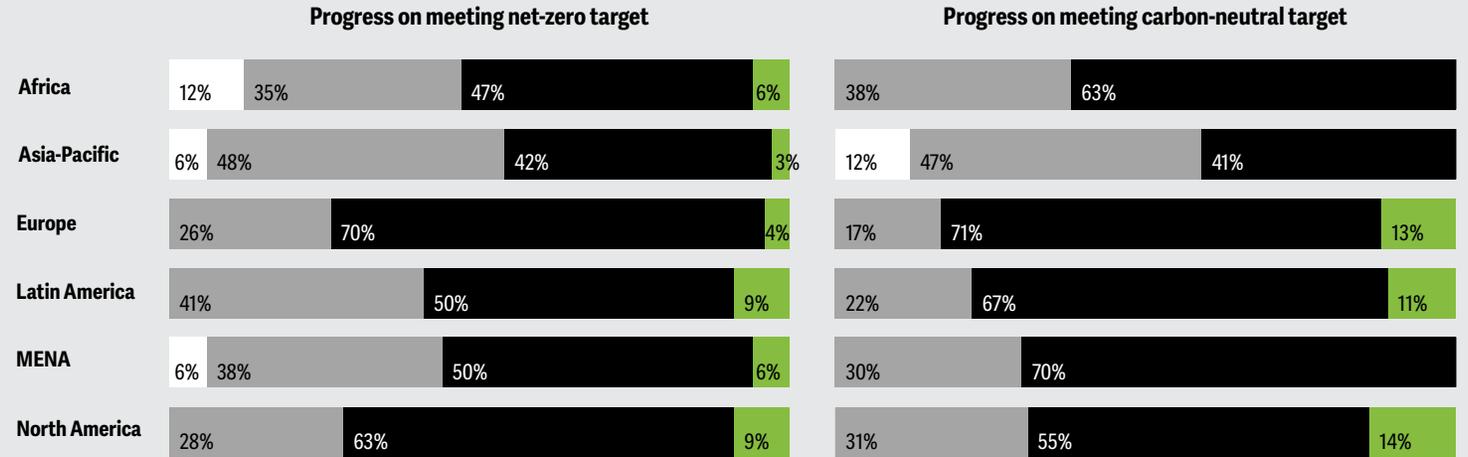
Sources: Deloitte-ThoughtLab Global City Survey, December 2022; United Nations, "For a livable climate: Net-zero commitments must be backed by credible action," accessed July 31, 2023; United Nations Climate Change, "A beginner's guide to climate neutrality," February 26, 2021.

The survey indicates that European cities are leading the charge on meeting net-zero and carbon-neutrality targets

While city leaders generally show optimism in achieving their sustainability targets, independent reports from organizations such as CDP show their possible optimism bias in assessing progress. Although many cities have set city-wide emission reduction targets, more work is needed to improve interim progress tracking and develop "science-based targets" to make them measurable and actionable.

Worldwide progress on meeting net-zero and carbon-neutral targets

○ Little progress ● Moderate progress ● Good progress ● Excellent progress

Progress on meeting net-zero target

Region	Little	Moderate	Good	Excellent
Africa	12%	35%	47%	6%
Asia-Pacific	6%	48%	42%	3%
Europe		26%	70%	4%
Latin America		41%	50%	9%
MENA	6%	38%	50%	6%
North America		28%	63%	9%

Progress on meeting carbon-neutral target

Region	Little	Moderate	Good	Excellent
Africa		38%	63%	
Asia-Pacific	12%	47%	41%	
Europe		17%	71%	13%
Latin America		22%	67%	11%
MENA		30%	70%	
North America		31%	55%	14%

Note: Numbers in graphics may not add up to 100% due to rounding off.

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

Most of the cities surveyed plan to reach their clean renewable energy target by 2050, indicative of a growing renewable energy focus in cities globally

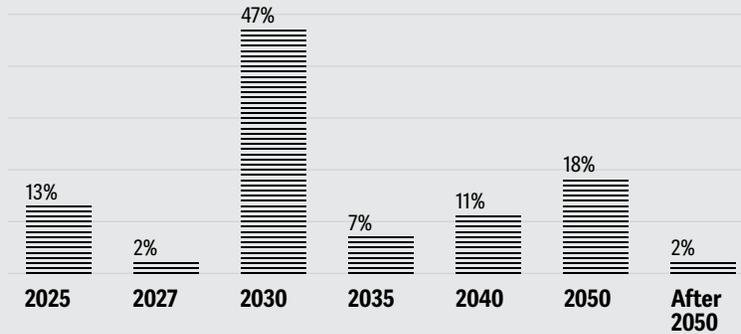Two-thirds of surveyed cities want to reach their clean and renewable energy target by 2035.

However, there is a large variance in the energy mix that city leaders are targeting. About half of the city leaders surveyed want 90% of their city's energy to come from clean renewable sources.

Almost 20% of city leaders surveyed want to target between 60–80% of their city's energy from renewable sources.
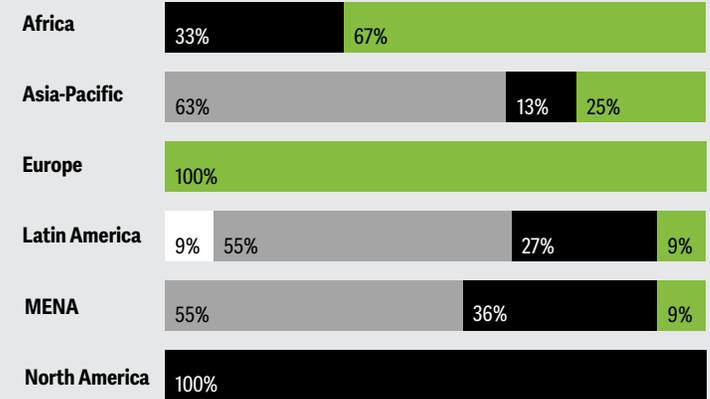
Transition to clean renewable sources by 2050 indicates a growing renewable energy focus in cities globally

○ **Little progress**   ● **Moderate progress**   ● **Good progress**   ● **Excellent progress**

The year that the city plans to achieve its clean renewable energy target

Year	Value
2025	13%
2027	2%
2030	47%
2035	7%
2040	11%
2050	18%
After 2050	2%

City's progress on meeting its clean and renewable energy targets

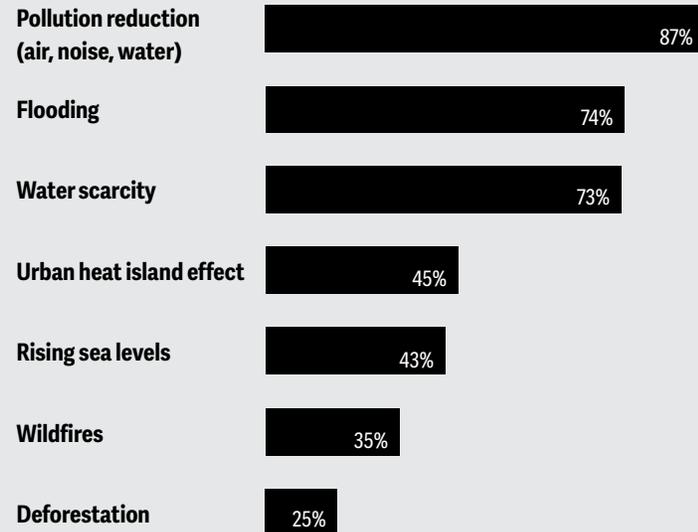| Region	Little	Moderate	Good	Excellent
Africa			33%	67%
Asia-Pacific		63%	13%	25%
Europe				100%
Latin America	9%	55%	27%	9%
MENA		55%	36%	9%
North America			100%	

Note: Numbers in graphics may not add up to 100% due to rounding off.

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

There is an emphasis on building environmental resilience to help tackle the growing challenges of pollution, flooding, and water scarcity

Which of the following areas is your city prioritizing in its environmental resilience plans?

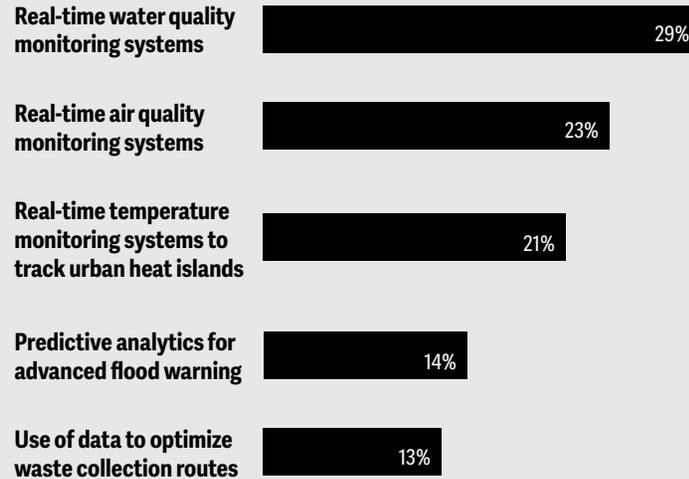| Area	Percentage
Pollution reduction (air, noise, water)	87%
Flooding	74%
Water scarcity	73%
Urban heat island effect	45%
Rising sea levels	43%
Wildfires	35%
Deforestation	25%

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

- Most cities surveyed report reduction of pollution as a key area of their environmental resilient plan.

- Water pollution, flooding, and scarcity are top-of-mind issues for nearly three-fourths of the city leaders surveyed. Flooding and water scarcity are massive challenges in African, Asian, Latin American, and MENA cities.

- The exposure to physical risks due to climate change and extreme weather events to a city's critical infrastructure is a growing administrative challenge globally, and it will likely guide environmental policymaking in cities in the coming years.

Many surveyed cities are spending on technologies that can help with real-time monitoring of water quality, air quality, and temperature

Priority spending areas for cities globally on technological solutions to improve environmental sustainability

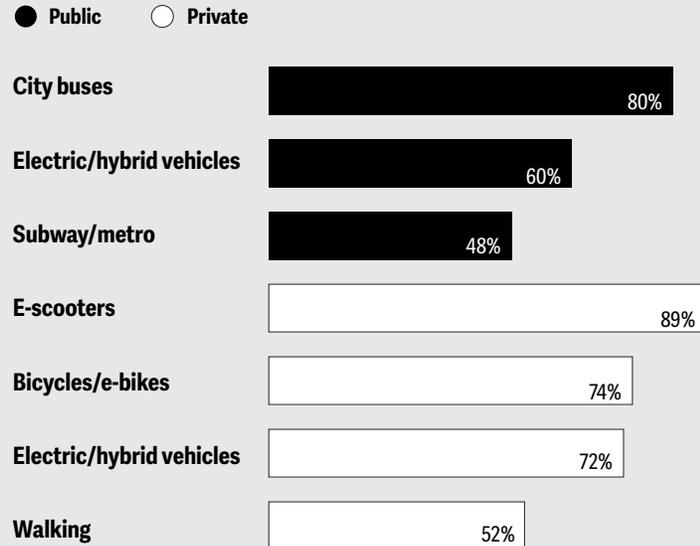|	
Real-time water quality monitoring systems	29%
Real-time air quality monitoring systems	23%
Real-time temperature monitoring systems to track urban heat islands	21%
Predictive analytics for advanced flood warning	14%
Use of data to optimize waste collection routes	13%

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

- However, the urgency and criticality of building environmental resilience have not transformed into investments in technologies that can help track and monitor climate and environmental events. Less than a third of cities surveyed are investing in such technology systems.

Many cities are focusing on public transit and other sustainable modes of transport to help address air pollution challenges

Percentage of cities globally planning to increase the usage of transport modes in the next five years

● Public   ○ Private

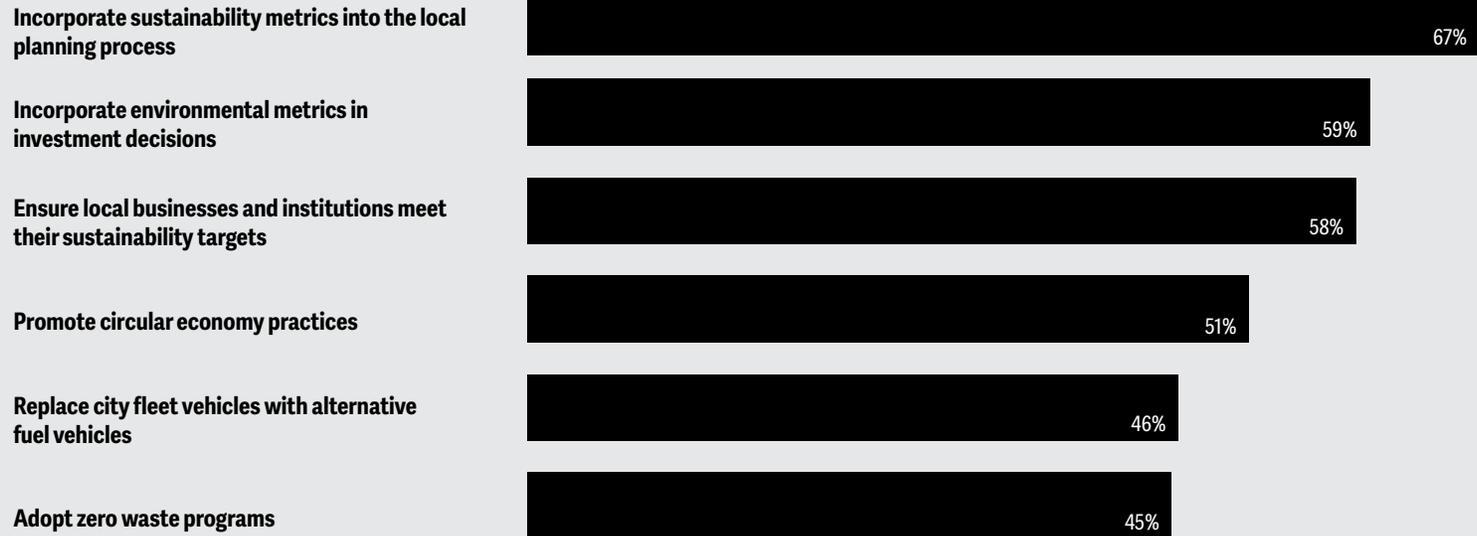| Mode	
City buses	80%
Electric/hybrid vehicles	60%
Subway/metro	48%
E-scooters	89%
Bicycles/e-bikes	74%
Electric/hybrid vehicles	72%
Walking	52%

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

- Cities may need to change the way they view urban infrastructure development, shifting away from car dependency, to encourage walking and biking as safe alternatives.

- Getting riders come back to public transit will be an important priority for many cities. This could require cities to refocus transportation networks to address the changing needs due to hybrid work while ensuring they remain accessible, affordable, and flexible.

- A shift toward private transport modes, such as e-scooters, should be carefully planned and regulated, drawing on lessons learned from cities that have experienced hypergrowth of e-scooters in recent years.

Some cities are reimagining management practices by incorporating the use of sustainability metrics in city planning process and investment decisions
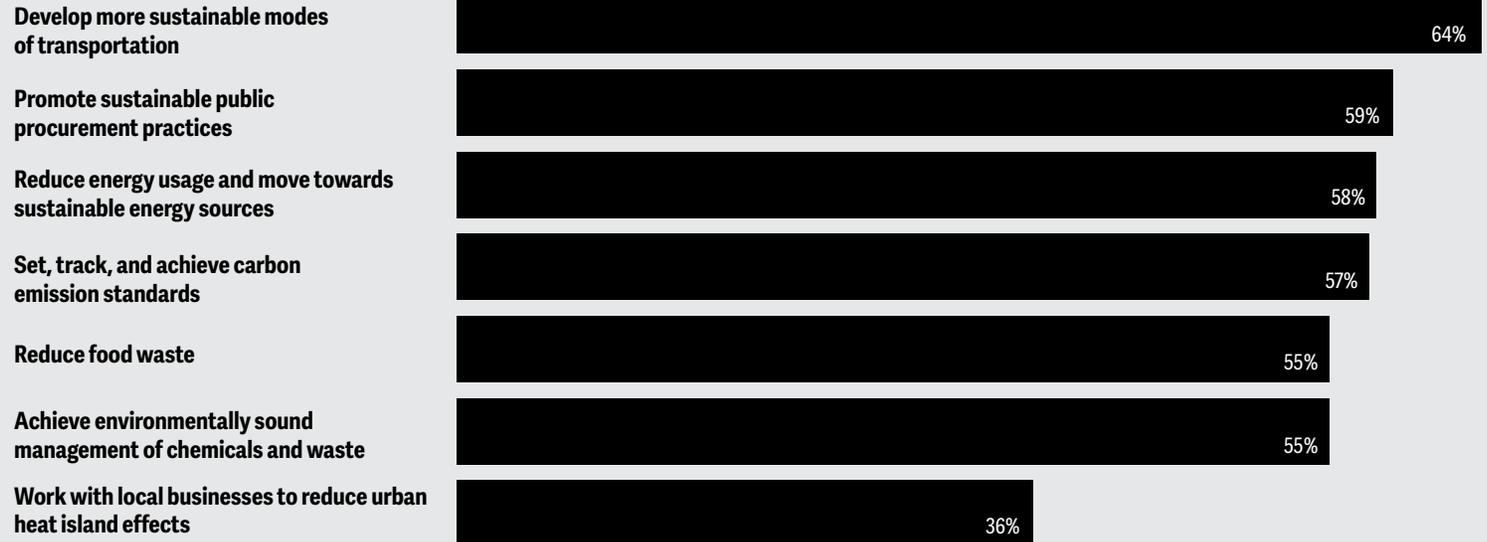
Which of the following governance actions will you prioritize over the next five years to improve environmental sustainability?

Incorporate sustainability metrics into the local planning process
67%

Incorporate environmental metrics in investment decisions
59%

Ensure local businesses and institutions meet their sustainability targets
58%

Promote circular economy practices
51%

Replace city fleet vehicles with alternative fuel vehicles
46%

Adopt zero waste programs
45%

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

Climate sustainability will need a multisectoral approach and city leaders plan to use partnerships to tackle multiple climate change and other environmental challenges
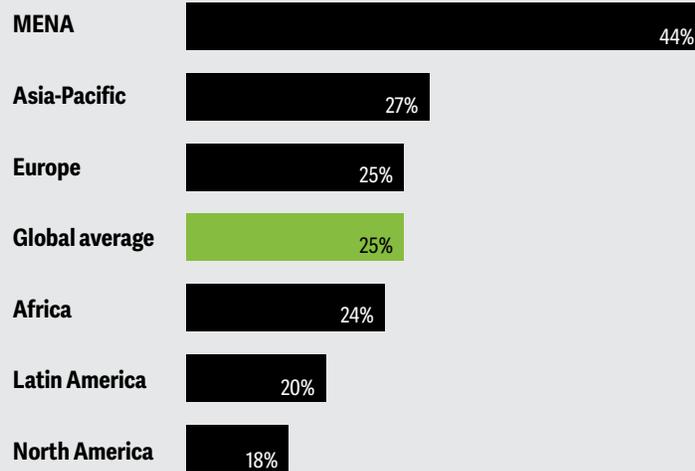
Which of the following partnership actions will you prioritize over the next five years to improve environmental sustainability?

Develop more sustainable modes of transportation
64%

Promote sustainable public procurement practices
59%

Reduce energy usage and move towards sustainable energy sources
58%

Set, track, and achieve carbon emission standards
57%

Reduce food waste
55%

Achieve environmentally sound management of chemicals and waste
55%

Work with local businesses to reduce urban heat island effects
36%

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

However, there seems to be a lack of focus when it comes to ensuring climate actions are fair and equitable

Do you agree with the following statement: Our city will target investments in disadvantaged communities to ensure climate equity

Region	Percentage
MENA	44%
Asia-Pacific	27%
Europe	25%
Global average	25%
Africa	24%
Latin America	20%
North America	18%

Source: Deloitte-ThoughtLab Global City Survey, December 2022.

- Improving the quality of life of residents and communities is one of the core focus for the city administration, yet only a quarter of cities surveyed are planning to make targeted investments in disadvantaged communities to ensure climate equity.

- Cities can improve climate equity by adopting governance processes and sustainability strategies that identify the impact of climate actions on communities and enable community engagement.

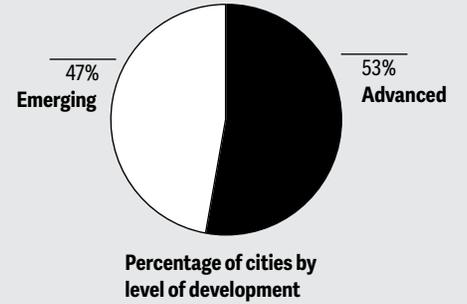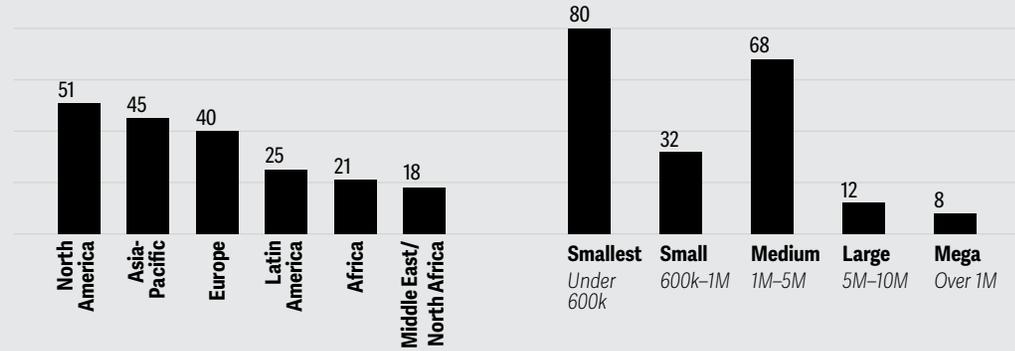# Recommendations and next steps

Although cities have made progress on their climate goals, more should be done to hack jurisdictional silos, improve sustainable consumption and green planning, and help ensure climate equity.

- **Make every decision a sustainability decision.** A systematic approach to climate governance and strengthening internal and external collaboration can enable city leaders to better consider climate risks and opportunities in decisions and embed them in city governance, strategy, risk management, and financial planning. Adopting sustainability management practices from the private sector to the cities' needs, as shown in the TCFD guide for cities, could be a good starting point to do this.

- **Focus on cutting consumption-based emissions.** The C40 climate report suggests that cutting consumption-based emissions, meaning moving toward more sustainable consumption patterns, can deliver wider benefits to individuals, businesses, and city governments. City leaders should focus on moving beyond just emission numbers to driving sustainable consumption within their cities.

- **Enhance green planning of public spaces.** Improving the quality and greening of urban space not only contributes to achieving environmental targets but can also contribute to a shift in urban mobility and overall improvement of quality of life. Having a clear green plan for the city allows city planners to better understand both the existing ecological situation and the end goal.

- **Reinforce climate equity by improving community engagement.** City leaders shouldn't be driving green urban planning and climate actions in a vacuum. Community engagement is crucial for obtaining buy-in from different communities and helps ensure that the administration is not neglecting the needs of disadvantaged communities.

- **Leverage data and analytics for climate tracking.** Although some cities are investing in technologies to track different environmental metrics, city leaders should continually enhance the city administration's ability to analyze extensive and disparate data sets to accurately understand how the environmental landscape is evolving and have the ability to accurately report their sustainability progress to citizens and other stakeholders.
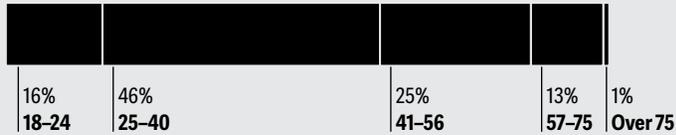
Survey methodology

200 total cities surveyed in 67 countries

51	North America	
45	Asia-Pacific	
40	Europe	
25	Latin America	
21	Africa	
18	Middle East/ North Africa	

80	32	68	12	8
Smallest *Under 600k*	**Small** *600k–1M*	**Medium** *1M–5M*	**Large** *5M–10M*	**Mega** *Over 1M*

47% **Emerging**

53% **Advanced**

Percentage of cities by level of development

2,000 total citizens surveyed across 20 different regions

Citizens by age

16% **18–24**	46% **25–40**	25% **41–56**	13% **57–75**	1% **Over 75**

Citizens by gender

50% **Man**	49% **Woman**	1% **Other**

About the authors

Mahesh Kelkar

mkelkar@deloitte.com

Mahesh Kelkar is the Smart Cities research leader for the Deloitte Center for Government Insights. His research focuses on understanding the impact of technology, innovation, and policy on the future of cities. He closely tracks the federal and state government sectors and focuses on conducting in-depth research on the intersection of technology with government operations, policies, and decision-making.

Anna Kowalewska

akowalewska@deloittece.com

Anna Kowalewska is a partner in Deloitte Central Europe Sustainability and Economics team. She leads sustainability for public sector and international institutions across Central Europe, working with a virtual community of more than 130 sustainability professionals with deep thematic expertise on sustainable cities, green energy transition, circular economy, and sustainable finance agenda. Kowalewska also coordinates a European network of sustainability professionals working for the European Institutions. She has been advising clients on climate mitigation and adaptation, sustainable finance and responsible investments in emerging markets.

Inês dos Santos Costa

inesdcosta@deloitte.pt

Inês dos Santos Costa is responsible for the Climate & Sustainability service line in Risk Advisory. Prior to joining Deloitte, she was Secretary of State for the Environment between 2019 and 2022 and Deputy to the Minister of the Environment and the Minister of Environment and Energy Transition for the area of the circular economy between 2016 and 2018. She has more than a decade of experience in the areas of corporate sustainability and industrial ecology. Within these areas, she has developed work on environmental policies, waste management, ecoparks and industrial symbioses. In addition to holding a PhD in Environmental Engineering from Instituto Superior Técnico, she is also the author and coauthor of scientific articles, books, and technical documents in industrial ecology.

Acknowledgments

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Industry leadership

Anna Kowalewska

Partner | Sustainability | Risk Advisory | Deloitte Advisory
+48 882 641 686 | akowalewska@deloittece.com

Anna Kowalewska is a partner in Deloitte Central Europe Sustainability and Economics team.

The Deloitte Center for Government Insights

William D. Eggers

Executive director | Deloitte Center for Government Insights
+1 571 882 6585 | weggers@deloitte.com

William D. Eggers is the executive director of Deloitte's Center for Government Insights, where he is responsible for the firm's public sector thought leadership.

Contributors

Editorial: Rupesh Bhat, Aditi Gupta, Aparna Prusty, and Emma Downey
Creative: Sonya Vasilieff, Molly Piersol, and Harry Wedel
Deployment: Maria Martin Cirujano
Cover artwork: Sonya Vasilieff

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