

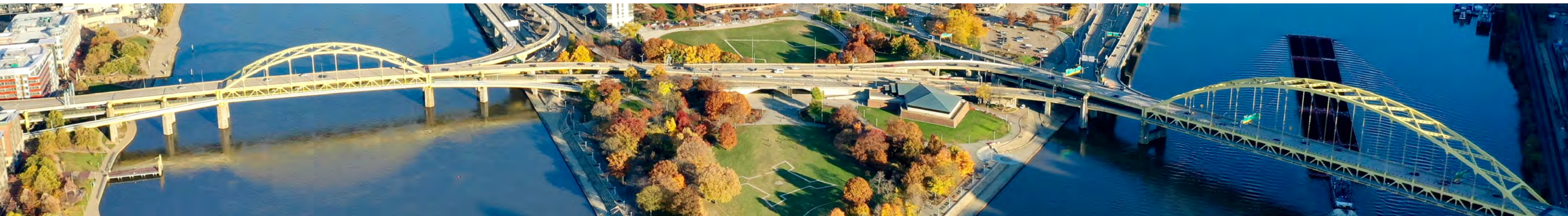
FURTHER AND FASTER TOGETHER

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THE 2021 GLOBAL COVENANT OF MAYORS IMPACT REPORT

The Global Covenant of Mayors for Climate & Energy (GCoM) is the world's largest alliance for city climate leadership, totalling more than 11,000 city and local government commitments representing over 1 billion people. With more than three-quarters of GCoM signatories setting more ambitious targets than their countries' Nationally Determined Contributions (NDCs), more than half aiming to achieve emissions reduction sooner, and a combined 100,000 climate actions in the pipeline, cities and local governments are demonstrating their willingness to act. Significant increases in city climate finance - in particular from national governments and international organizations - can catalyze action implementation, propel the systemic transformations needed to meet the moment, and help cities and countries go further and faster together.



CHAPTER 1

CITIES UNITING ON CLIMATE ACTION

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With more than 11,000 city and local government commitments representing over 1 billion people, the Global Covenant of Mayors for Climate & Energy (GCoM) is the world's largest alliance for city climate leadership. Cities are speaking with one voice - more intensely and frequently - to reinforce the critical need for climate action at all levels of government and across sectors of society that leverages the nimble, intersectional, and galvanizing force of local governments to accelerate progress. Core to this voice is the need to build back better and usher in a green and equitable recovery from the COVID-19 pandemic, whose impacts are still felt in our communities today.

Since 2017, more than 1,700 new cities and local governments - encompassing more than 200 million people - have committed to the GCoM alliance. Today, nearly one-quarter of Earth's entire urban population is represented by a local government committed to climate action under the Global Covenant. These cities and municipalities comprise a diverse socioeconomic fabric: from small and mid-sized towns to the largest metropolises, climate action that reflects local needs remains the common thread.

United through the GCoM alliance, cities and local governments around the world are clearly signalling their commitment to combating climate change - standing ready and able as willing partners to bolster action with national governments, the private sector, and civil society.



11,719 SIGNATORIES 1.012 BILLION

PEOPLE REPRESENTED BY GCOM SIGNATORIES

Malmö, Sweden

239 CITIES
97.1 MILLION

NORTH AMERICA

6 CITIES
1.7 MILLION

THE CARIBBEAN

517 CITIES
184.4 MILLION

LATIN AMERICA

9,728 CITIES
248.5 MILLION

EU & WESTERN EUROPE

154 CITIES
66.2 MILLION

MIDDLE EAST &
NORTH AFRICA

268 CITIES
139.3 MILLION

SUB-SAHARAN AFRICA

597 CITIES
58.9 MILLION

EASTERN EUROPE &
CENTRAL ASIA

36 CITIES
81.6 MILLION

SOUTH ASIA

51 CITIES
69.9 MILLION

EAST ASIA

79 CITIES
57.8 MILLION

SOUTHEAST ASIA

44 CITIES
7.5 MILLION

OCEANIA

Across regions, the GCoM alliance is witnessing significant growth. Cities and local governments in the European Union and Western Europe consistently represent around half of all new commitments per year, mirroring the strength of European Union initiatives like the European Green Deal to catalyze local action. In terms of population, local governments in South Asia, Latin America, Sub Saharan Africa, Southeast Asia, and the Middle East and North Africa are also heeding the Paris Agreement's call for subnational action. Collectively, these regions make up more than three-quarters of the population represented by new GCoM commitments since 2016, highlighting both the importance of climate and the sheer scale and effort needed to catalyze action across mitigation, adaptation, energy access, and energy poverty.

A GROWING ALLIANCE OF CITIES & LOCAL GOVERNMENTS

CHAPTER 2

CITIES GOING FURTHER AND FASTER

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CITIES GOING FURTHER AND FASTER

Four out of every five GCoM signatories - totalling nearly 9,500 cities and local governments - have set a climate mitigation target in line with the Common Reporting Framework (CRF)¹. Nearly 2,000 signatories have set an adaptation goal. CRF alignment ensures signatory mitigation targets that are *at least as ambitious* as their country's Nationally Determined Contribution (NDC) under the Paris Agreement, and adaptation goals that correspond with the immediate climate risks and hazards they face².

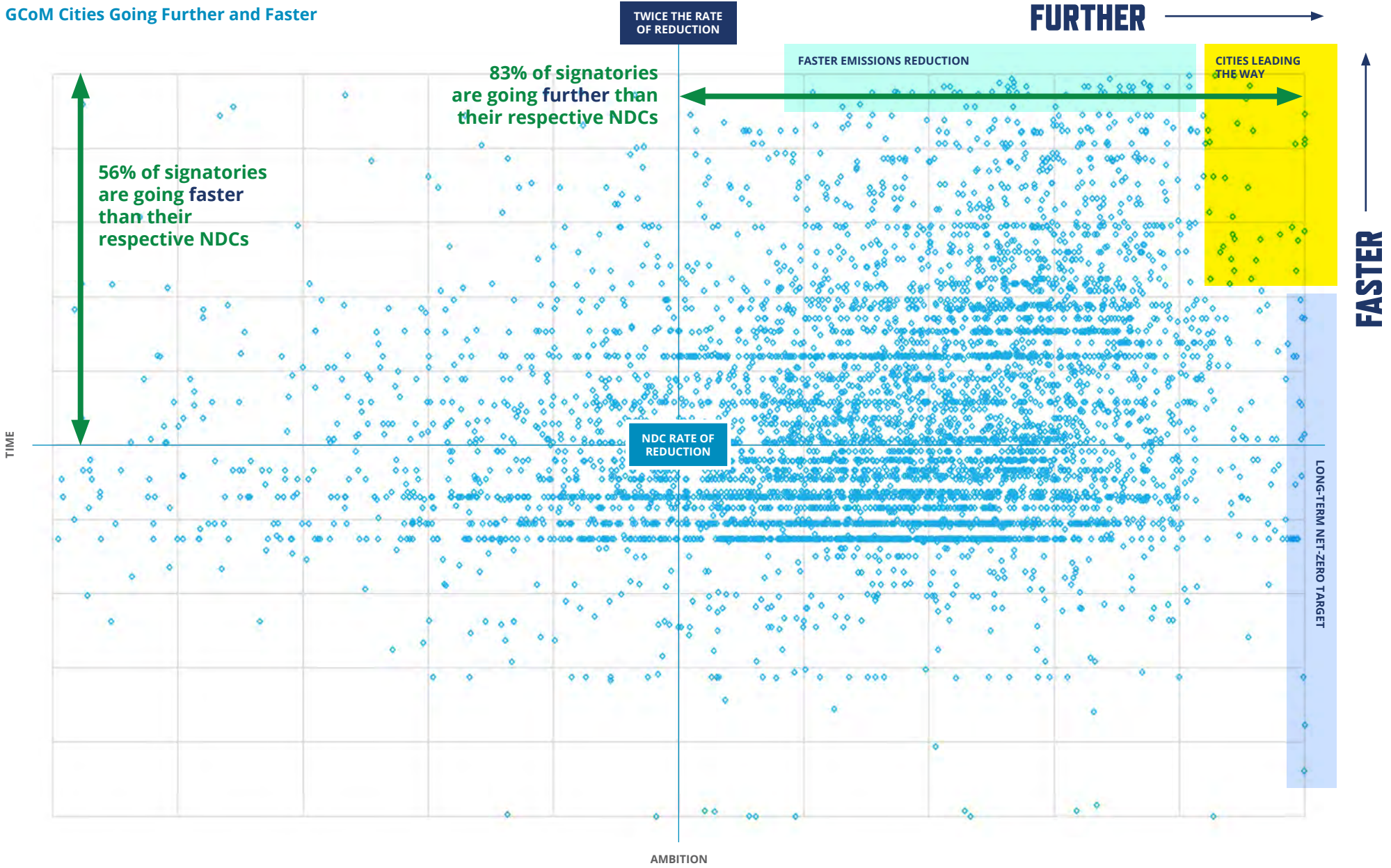
The latest data shows that cities and local governments are not only matching their national governments; more than three-quarters of GCoM signatories are going *further* by setting more ambitious targets, and more than half are acting *faster* by accelerating the rate at which they aim to reduce their greenhouse gas (GHG) emissions³. A further 244 GCoM signatories are leading the way with net-zero targets, as are more than 1,000 cities and local governments who have signed up to the Cities Race to Zero^{[4][5]}.

Based on current targets and actions, GCoM cities and local governments could collectively reduce global emissions by 1.9 GtCO₂e annually in 2030 compared to a business-as-usual (BAU) trajectory. In 2050, that figure is estimated to be 3.8 GtCO₂e annually, comprising one quarter of total urban emissions abatement potential⁶. This is equivalent to more than half of all GHG emissions in the United States in 2019, or four years of CO₂ emissions from global commercial aviation^{[7][8][9]}.

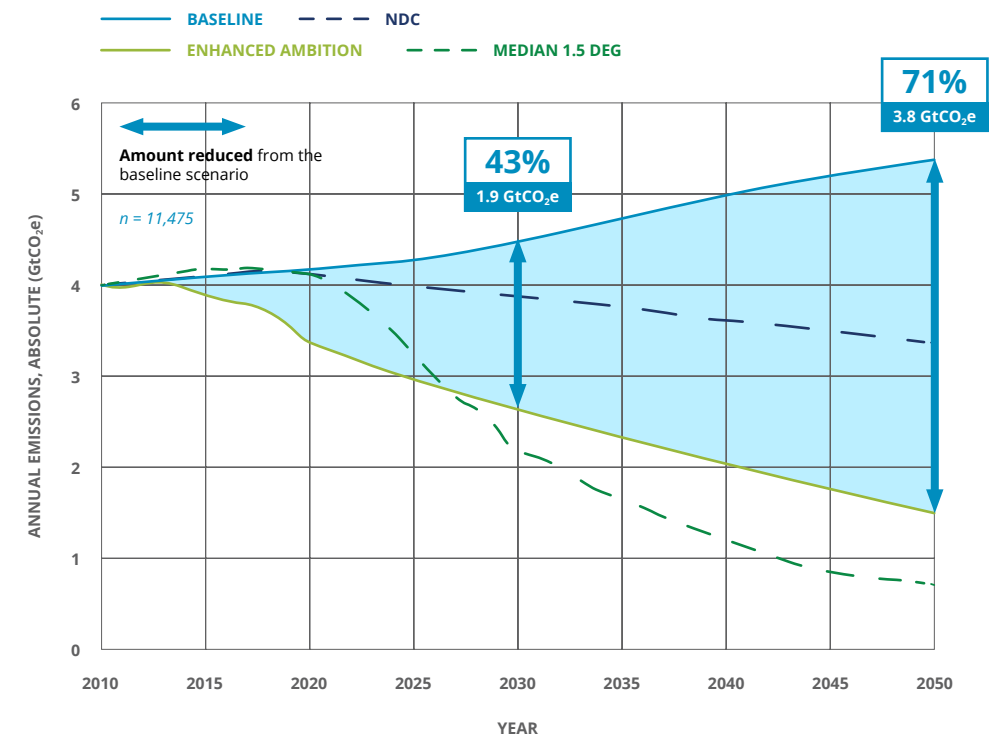
YEAR	Annual GCoM signatory emissions reduction potential		Cumulative GCoM signatory emissions reduction potential	
	GtCO ₂ e	%	GtCO ₂ e	%
2030	1.9	43%	17.11	20%
2050	3.8	71%	76.51	41%

Cumulatively, GCoM signatories are on track to reduce global emissions by 76.5 GtCO₂e in 2050: more than double the global energy-related CO₂ emissions in 2019, or equivalent to removing 16 billion cars off the road for one year¹⁰.

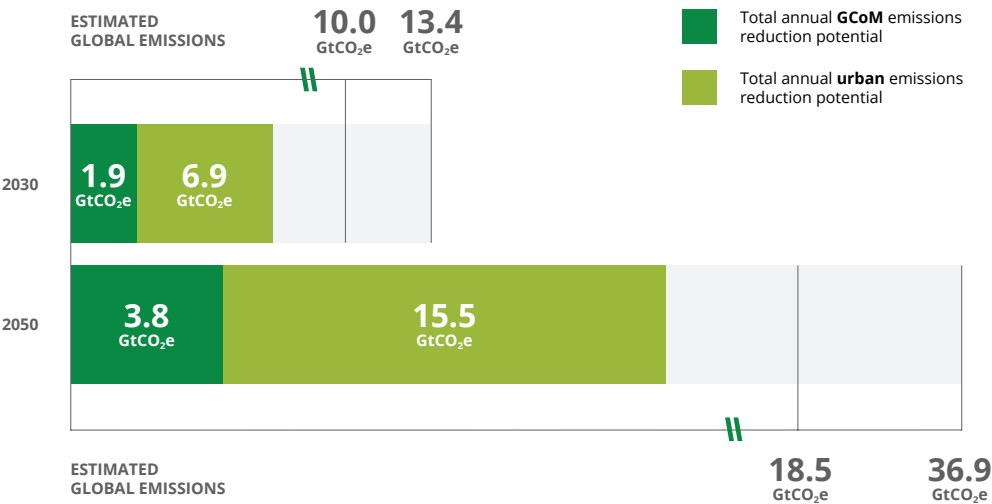
GCoM Cities Going Further and Faster



GCoM Signatory Emissions Scenarios, 2010-2050



GCoM Cities' Potential Contributions to Global Emissions Reduction¹¹



With GCoM cities and local governments ratcheting up their ambition and swiftly moving to limit global temperature rise to 1.5°C, national governments have a critical opportunity to measure, monitor, and integrate regional and local contributions into their climate and NDC implementation strategies. Countries can leverage their cities to accelerate nationwide systems transformation - with greater ambition and at a faster pace.



3.8 GtCO₂e BY 2030

ANNUAL GCOM CITY AND LOCAL GOVERNMENT EMISSIONS ABATEMENT POTENTIAL

76.5 GtCO₂e BY 2050

CUMULATIVE GCOM CITY AND LOCAL GOVERNMENT EMISSIONS ABATEMENT POTENTIAL

Chefchaouen, Morocco

CHAPTER 3

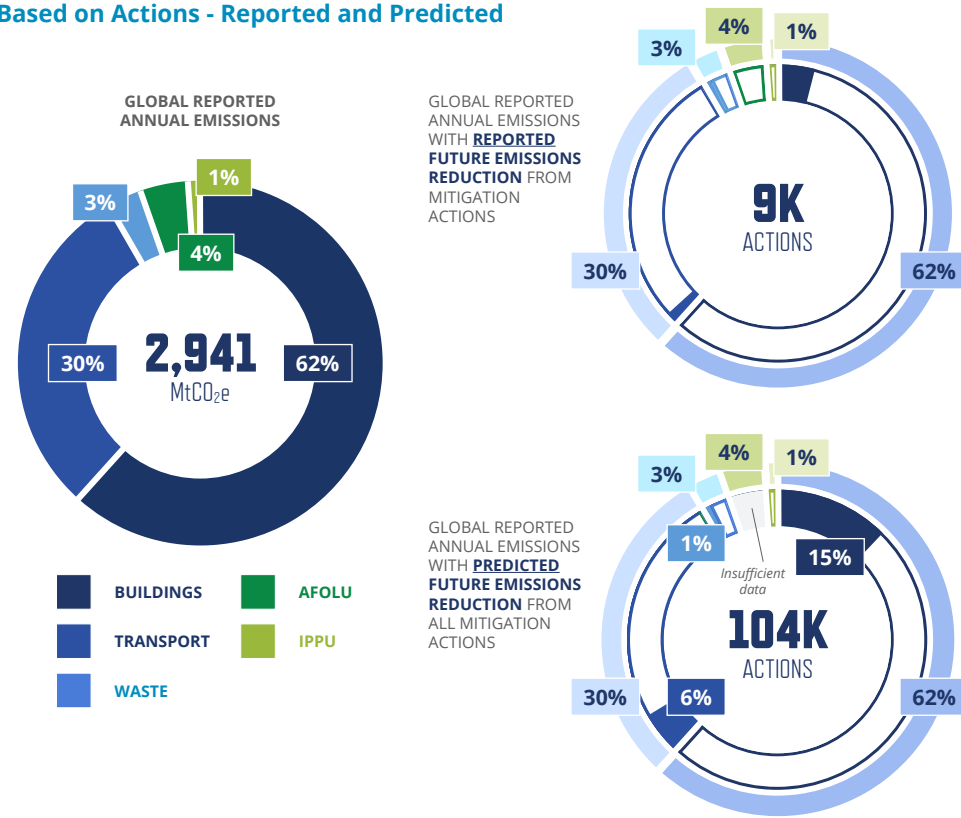
CITIES ACCELERATING CLIMATE ACTION

CHAPTER 3

CITIES ACCELERATING CLIMATE ACTION

Over the last decade, cities and local governments have worked tirelessly to transform comprehensive targets, goals, and plans into concrete actions. Since 2008, GCoM signatories have completed more than 8,500 climate mitigation and adaptation actions. Another 27,000 discrete climate actions are currently underway, with 4,000 focused explicitly on building adaptive capacity. With more than 100,000 actions planned across mitigation, adaptation, and energy in the near term - and as more GCoM signatories begin to report on their actions in the coming years - it's clear that cities are accelerating climate action.

GCoM Signatory Emissions Abatement Potential
Based on Actions - Reported and Predicted



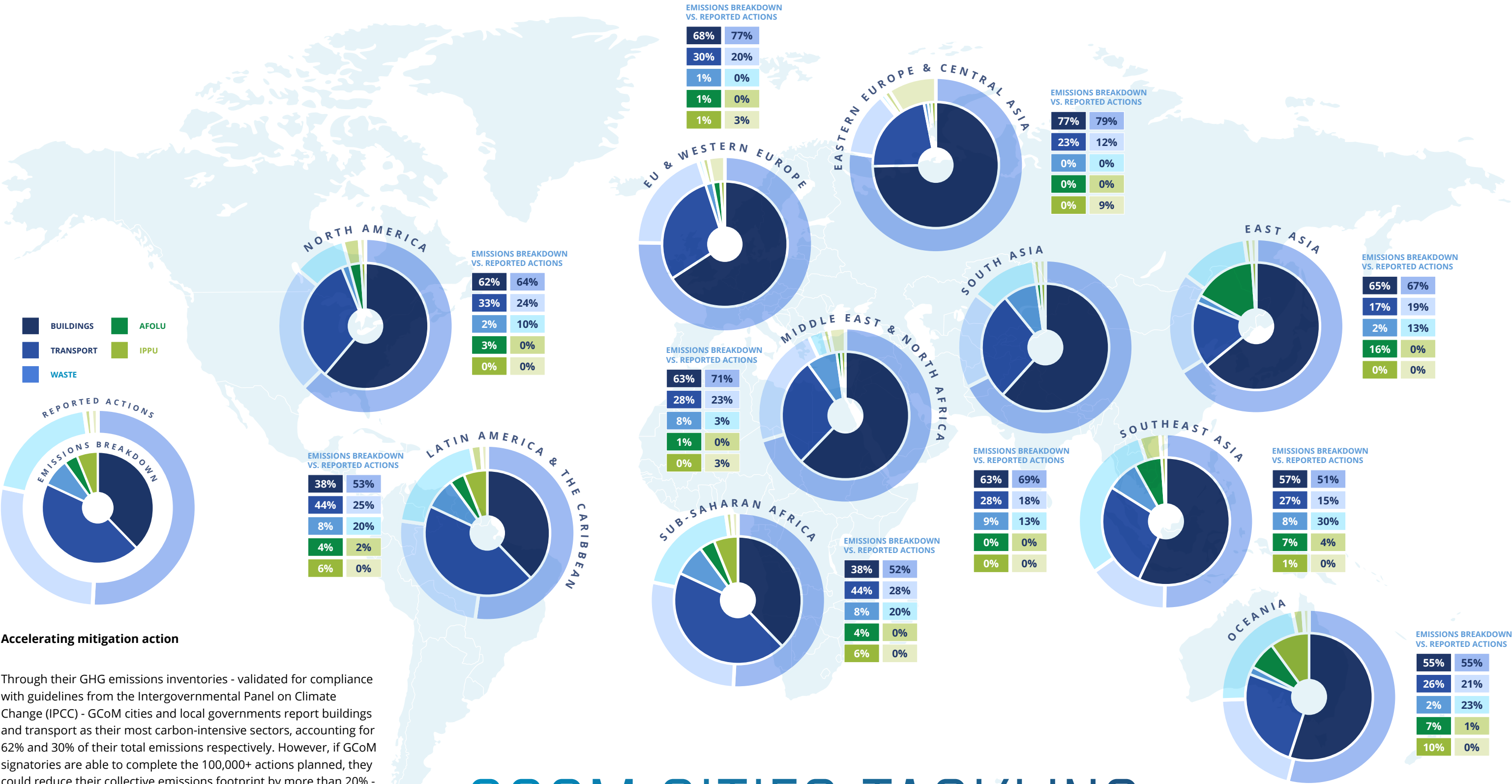
222,034 ACTIONS

NUMBER OF CLIMATE ACTIONS REPORTED BY GCOM SIGNATORIES

315 MILLION

PEOPLE FACING HIGH-RISK CLIMATE HAZARDS

Lviv, Ukraine



Accelerating mitigation action

Through their GHG emissions inventories - validated for compliance with guidelines from the Intergovernmental Panel on Climate Change (IPCC) - GCoM cities and local governments report buildings and transport as their most carbon-intensive sectors, accounting for 62% and 30% of their total emissions respectively. However, if GCoM signatories are able to complete the 100,000+ actions planned, they could reduce their collective emissions footprint by more than 20% - of which 15% are in buildings and 6% are in transport¹².

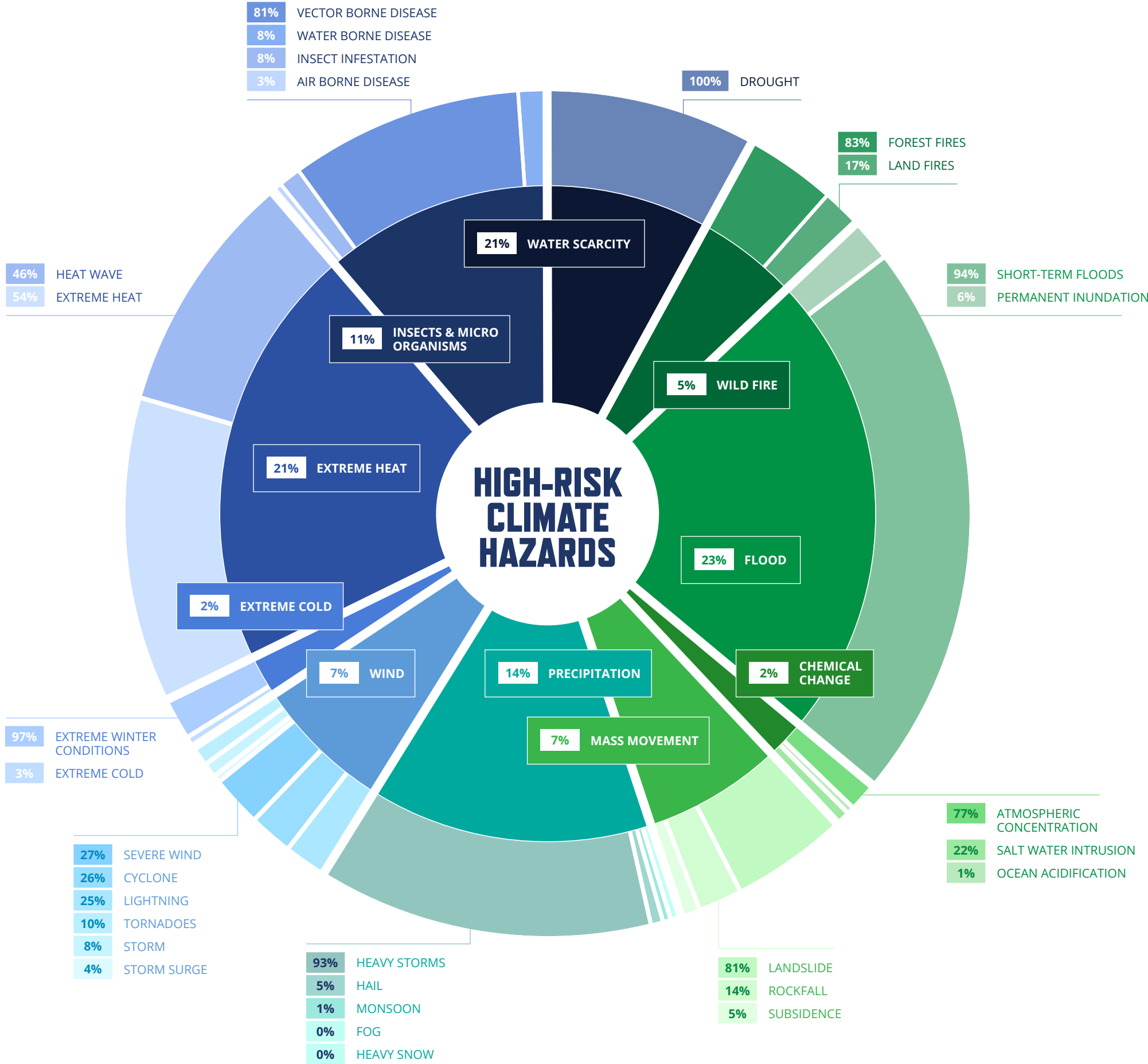
Across regions, cities and local governments are planning, initiating, and completing actions that correspond to high intensity sectors like buildings and transport. In low- and middle-income countries across Sub Saharan Africa, Southeast Asia, Latin America, and Oceania, GCoM signatories are responding to rising emissions from waste - with at least 20% of all reported actions focused on the sector.

GCOM CITIES TACKLING EMISSIONS WITH ACTIONS

Accelerating adaptation action

As global temperature continues to rise, cities and local governments are also feeling the impacts of climate change with greater intensity and frequency. GCoM signatories are therefore accelerating their adaptation actions to safeguard their citizens, infrastructure, and other assets from significant climate risks and hazards. 609 cities and local governments reported more than 1,400 high risk hazards - over 2.5 times the number reported in 2019, suggesting increased efforts to assess climate risk and vulnerability across GCoM regions¹³. Flooding (23%), extreme heat (21%), and extreme precipitation (14%) remain the largest identified risks among GCoM signatories.

Collectively, these high risk hazards affect 315 million people - roughly equivalent to the populations of Bangladesh and Russia combined¹⁴. An estimated 2,900 vulnerable population groups - including youth & elderly, indigenous people, low-income households, and women & girls - are exposed to high risk climate hazards¹⁵. Altogether, GCoM signatories are beginning to paint a more accurate, telling picture of the imminent, intense, and frequent hazards they face. The latest data show that they are also starting to implement climate adaptation plans - with more than half reporting at least one action corresponding to a high risk hazard. The majority of adaptation actions are focused on water (27%), buildings (25%), and health (20%) - with several actions addressing more than one sector.



Accelerating action on energy access and energy poverty

Recognizing the need for clean, affordable, and sustainable energy resources and services, the GCoM alliance is also charting course for action on energy access and energy poverty. With 759 million people lacking access to electricity worldwide, another 2.6 billion people relying on unsustainable cooking fuels and/or technologies, and unequal energy supply across regions, cities and local governments can play a pivotal role in helping facilitate equitable service provision and energy generation¹⁶. In 2022, the Global Covenant of Mayors will launch the Energy Access and Energy Poverty pillar of the Common Reporting Framework, which will allow cities and local governments to report against related progress and milestones for the first time. This helps facilitate signatory progress-tracking, increased energy access and reduced energy poverty, and a community of experience, expertise, and best practice among cities and local governments worldwide.

Through a 2021 pilot exercise with 147 cities and local governments representing 127 million people, the GCoM alliance estimates that 40 million households may be facing energy poverty, defined approximately as the expenditure of income on energy services between 5% and 20% or more¹⁷. Analysis also estimates that up to 9% of people across GCoM cities and local governments do not have access to electricity¹⁸. While these estimations are preliminary and indicative, they reinforce the need for measurement, planning, and action to facilitate energy access and reduce energy poverty - especially for vulnerable populations who are most affected.

Across energy access, energy poverty, adaptation, and mitigation, GCoM cities and local governments are clearly responding and accelerating climate action. To unlock the full potential of the 100,000+ actions planned by GCoM signatories alone, national governments and international organizations have a clear opportunity to finance, support, and help cities and local governments implement these actions.



CHAPTER 4

CITIES DELIVERING ACTION

CHAPTER 4

CITIES DELIVERING CHANGE

With GCoM cities and local governments planning actions across mitigation, adaptation, as well as energy access and energy poverty, there is an ever-greater need to power the transformation of ambition into action with financing support. In its [2021 State of Cities Climate Finance Report](#), the Cities Climate Finance Leadership Alliance (CCFLA) reported that cities and local governments received USD 384 billion (EUR 330 billion) globally in 2017/18, including all source finance channelled by public and private actors towards climate mitigation and adaptation¹⁹. This represents around 7% of the USD 4.5-5.4 trillion (EUR 3.9-4.7 trillion) per year that CCFLA reports is needed to realize the full pipeline of city climate action, roughly equivalent to the entire 2019 gross domestic product (GDP) of the world's third-largest economy - Japan²⁰.

Moreover, only 9% of all tracked urban project-level data - USD 7 billion (EUR 6 billion) - was set aside for adaptation and resilience measures, highlighting the gap between mitigation and adaptation financing. Both the total flow and distribution of urban climate finance are far short of the transformative change required to meet the moment²¹.

\$690 BILLION

ESTIMATED COST OF REPORTED CLIMATE ACTIONS (IN USD)

11 MILLION

NEW JOBS CREATED FROM IMPLEMENTING CLIMATE ACTIONS



\$384 BILLION

CLIMATE FINANCING IN CITIES IN 2017/18 (IN USD)

\$4.5-5.4 TRILLION

ESTIMATED CLIMATE FINANCING NEEDED TO REALIZE CITY CLIMATE ACTIONS (IN USD)

Dakar, Senegal

National governments are already showing their ability to respond resoundingly in times of crisis. Worldwide funding for COVID-19 recovery measures now exceeds USD 3.4 trillion (EUR 2.9 trillion), with USD 850 billion (EUR 730 billion) earmarked for a ‘clean’ recovery²². Since 2020, an estimated USD 171 billion (EUR 147 billion) has been committed to climate finance across the buildings and energy sectors alone, highlighting both the capacity and willingness to finance action at national level²³.

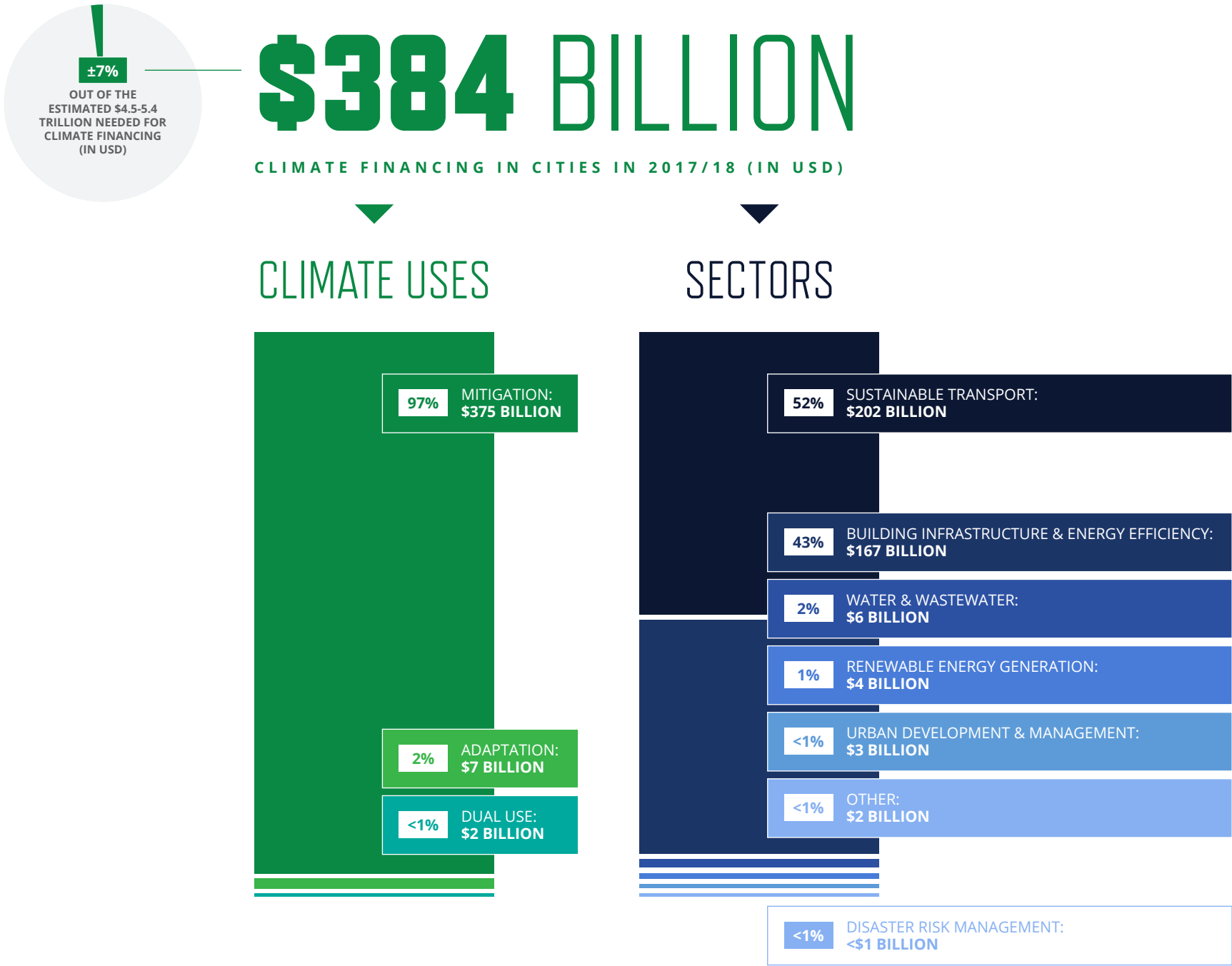
However, greater financing and support are needed if countries are to meet the goals of the Paris Agreement. To finance the 100,000+ climate actions in the pipeline that have yet to be implemented across the buildings and energy sectors alone, GCoM cities and local governments estimate a collective cost of USD 690 billion (EUR 593 billion)²⁴. Leveraging insights from the Coalition for Urban Transitions, implementing these actions alone could deliver up to 11 million new green jobs and significantly enhance urban resilience - both of which can help safeguard national prosperity^{[25][26]}. As national governments craft and implement ambitious recovery plans from the COVID-19 pandemic, strategically channelling resources towards city climate action can pay nationwide dividends.

Equitable distribution of climate action financing is also a critical component of ensuring a holistic global response to the climate crisis. Of the USD 12-15 trillion (EUR 10.3-12.9 trillion) in national stimulus packages for COVID-19, only 3-5% are committed to ‘green’ initiatives²⁷. More importantly, existing urban climate finance flows are overwhelmingly directed towards OECD countries and China. Low-income economies have received little attention, with CCFLA estimating annual average investment of just USD 3 billion (EUR 2.6 billion) for Sub Saharan Africa²⁸. Current finance flows are critically insufficient for the just and equitable wave of climate actions that need to be implemented at scale to meet the Paris Agreement goals.

Equally clear is the steady growth in the number of early-stage projects that cities and local governments seek to turn into bankable, investment-ready actions. As of October 2021, the City Climate Finance Gap Fund has received 151 submissions from local governments around the world²⁹. Of these, more than 40% are from cities and local governments in low- and middle-income countries across Sub Saharan Africa, with another 28% from Latin America and the Caribbean. Equitably unlocking finance flows from national government and private sector partners can help catalyze climate action in the communities who need it most, propelling them past capacity-related barriers.

Cities and local governments are demonstrating their sizable contributions to the climate fight in real time. Bolstering the volume of finance flows and ensuring equitable distribution to local governments low-income countries can strengthen the countries’ collective response to climate change. Nations, leveraging and supporting the efforts of their cities and local governments can go further and faster - together.

Breakdown of 2017-2018 Urban Climate Financing by Climate Uses and Sectors



APPENDIX

¹ The GCoM Common Reporting Framework (CRF) streamlines measurement and reporting procedures to ensure robust climate action planning, implementation, and monitoring in line with IPCC guidelines. The CRF facilitates opportunities for collaboration on city climate action and the global aggregation of data, while retaining the flexibility needed to meet specific local and regional circumstances.

² To meet its ambition, the Paris Agreement requires Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to submit Nationally Determined Contributions (NDCs) every five years - with the expectation of greater ambition, action, and quality of data after each round of submission (more information [here](#)). Through NDCs, national governments communicate their committed actions - among others - to reduce their fair share of global greenhouse gas (GHG) emissions relative to the goals of the Paris Agreement, and build resilience to adapt to the impacts of climate change.

³ ‘Further’ is defined as a signatory who is targeting lower per capita emissions compared to their respective country’s NDC; ‘Faster’ is defined as a signatory who is targeting a steeper average rate of emissions reduction compared to their respective country’s NDC. These figures are based on latest 2021 city reported data from both MyCovenant and the CDP-ICLEI Unified Reporting System, as well as NDCs submitted as of July 31, 2021.

⁴ For this analysis, a net-zero target is defined as either a 90+% baseline reduction target or a <0.2 tCO₂e per capita absolute reduction target.

⁵ The Cities Race to Zero is a global campaign led by the UN COP26 Presidency and High-Level Champions rallying non-state actors to take rigorous and immediate action to halve global emissions by 2030 and deliver a healthier, fairer zero carbon world in time.

⁶ The total 2050 urban emissions abatement potential of 15.5 GtCO₂e is taken from *Climate Emergency, Urban Opportunity* (CUT, 2019).

⁷ [Greenhouse Gas Equivalencies Calculator](#). US Environmental Protection Agency, 2021.

⁸ Total GHG emissions in the United States for 2019 were 6,558 million metric tons CO₂e. [Taken from the US Environmental Protection Agency](#).

⁹ [CO₂ Emissions from Commercial Aviation 2013, 2018, and 2019](#). The International Council on Clean Transportation, 2020.

¹⁰ In 2019, global energy-related CO₂ emissions amounted to 33 gigatons. [Taken from the International Energy Agency](#).

¹¹ *Climate Emergency, Urban Opportunity*. Coalition for Urban Transitions, 2019.

¹² Cities reported over 9,000 actions with associated emissions reduction potential. Population-weighting was used to regionally extrapolate this data by action category to estimate the total emissions reduction potential of over 104,000 future actions.

¹³ For this analysis, high risk hazards are defined as those reported to be both high impact and high likelihood.

¹⁴ As of 2020, the population for Bangladesh was estimated to be around 165 million people; the population for the Russian Federation was estimated to be around 144 million people. Data taken from the [World Bank Databank](#).

¹⁵ In addition to the groups already mentioned, high risk hazards also impact marginalized groups, migrants and displaced people, persons living in substandard housing, persons with chronic diseases, persons with disabilities, and unemployed persons.

¹⁶ [Tracking SDG7: The Energy Progress Report 2021](#).

¹⁷ Population-weighting was used to regionally extrapolate the energy poverty data reported by 147 cities representing 127 million people.

¹⁸ Population-weighting was used to regionally extrapolate the electrification ratio data by 195 cities representing 201 million people. This pilot data was reported to the CDP-ICLEI Unified Reporting System in 2021.

¹⁹ All USD-EUR conversions sourced from Oanda.com at an exchange rate of USD 1 = EUR 0.85931 as of 29 October 2021.

²⁰ According to the [World Bank](#), the 2019 GDP of Japan in current US Dollars was 5.149 trillion (EUR 4.4 trillion).

²¹ [2021 State of Cities Climate Finance Report](#). Cities Climate Finance Leadership Alliance, 2021.

²² [Global Recovery Observatory](#) at the Oxford University Centre for the Environment, 2021.

²³ [Energy Policy Tracker](#), International Institute for Sustainable Development, 2021.

²⁴ Cities reported over 1,500 actions with ‘Total Cost’ data. The subset of these in the energy and buildings sectors are worth over USD 44bn. Alongside this, cities also report 104,000 future actions yet to be implemented. Population-weighting was used to regionally extrapolate this data by action category to estimate the total investment cost of over 104,000 future actions.

²⁵ [The Economic Case for Greening the Global Recovery through Cities](#), Coalition for Urban Transitions, 2020.

²⁶ Cities reported co-benefit data for 778 mitigation actions in the energy and building sectors. In 24% of cases, cities identified ‘enhanced resilience’ as a co-benefit.

²⁷ [C40 Mayor’s Statement for a Green and Just Recovery](#). C40 Cities, 2021.

²⁸ [2021 State of Cities Climate Finance Report](#). Cities Climate Finance Leadership Alliance, 2021.

²⁹ Implemented by the World Bank and European Investment Bank in partnership with the Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ), the City Climate Finance Gap Fund is focused on helping cities in developing and emerging countries turn low-carbon, climate-resilient ideas into finance-ready projects.

GCoM is the largest global alliance for city climate leadership, uniting a global coalition of over 11,000 cities and local governments representing over 1 billion people and 100+ supporting partners. The cities and partners of GCoM share a long-term vision of supporting voluntary action to combat climate change and towards a resilient and low-emission society. GCoM serves cities and local governments by mobilizing and supporting ambitious, measurable, planned climate and energy action in their communities by working with city/regional networks, national governments, and other partners to achieve our vision.

The Global Covenant of Mayors is co-chaired by Frans Timmermans, Executive Vice President for the European Green Deal at the European Commission, and Michael Bloomberg, UN Secretary-General's Special Envoy for Climate Ambition and Solutions, and Founder of Bloomberg LP and Bloomberg Philanthropies.

This report is based on self-reported data from GCoM cities reporting through the CDP-ICLEI Unified Reporting System and European Union MyCovenant platforms. Data has been checked for overall logic, but has not been verified at source. Where cities have reported insufficient data to support a robust analysis, these findings have been excluded. Where appropriate, the number of cities on which a particular analysis is based has been highlighted within the report. For further information about the methodology and assumptions behind this report, please refer to the accompanying technical appendix available at www.globalcovenantofmayors.org.

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