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GCOM



1018

(6,000+ at the time of signing the Paris Agreement in 2015)2 2019 (12% increase

since 2018)

GCoM POPULATION



2018

1019 864 MILLION

(21% of the global urban population) (11% increase since 2018)

GCOM COULD REDUCE EMISSIONS BY



2018

by 2030 compared to BAU

1019 1.3 G+CO1e by 2030 compared

2018

by 2050 compared to BAU

to BAU

4 5

SINCE 2016

1,194 JURISDICTIONS ACROSS COUNTRIES

have declared

a Climate Emergency

INCLUDING 180 GCOM CITIES (only 6 national governments have

so far declared<sup>4</sup>)

Transformative climate action in cities can catalyse national economic prosperity and enhance quality of life for urban dwellers, while reducing global emissions. Over recent years, unprecedented high temperatures, floods and drought have severely affected cities worldwide and impacted nationally critical infrastructure, services and economic activities. National governments and cities need to work together to prepare for, and adapt to, the increased risk posed by climate change. While many nations have made climate commitments,

the world needs to do more to remain within 1.5 degrees of global temperature increase and protect the future of our planet. Global Covenant of Mayors for Climate & Energy (GCoM) cities are committed, now more than ever, to offering nations a vital and valuable solution to the climate crisis.

# 1. THE MOST SIGNIFICANT OPPORTUNITY TO ADDRESS THE **ESCALATING GLOBAL CLIMATE CRISIS LIES IN OUR CITIES**

#### Figure 1 (below)

Globally, there remains a huge gap between the emissions reductions stated in Nationally Determined Contributions (NDCs), and the reductions needed to keep the world within +1.5°C of warming. In 2030, the gap is estimated to be 13.4GtCO<sub>2</sub>e. Under existing targets, GCoM cities can be expected to avoid 2.3GtCO<sub>2</sub>e by 2030 compared with a business-as-usual scenario (BAU), and thereby fill 17% of the gap. The total urban emissions reduction potential globally represents 51% of the gap. By 2050, the global emissions gap widens to 36.9GtCO<sub>2</sub>e. Relatively few GCoM cities have set targets for 2050 so far. More widespread and more ambitious city action is needed to help address the global gap.<sup>6</sup>



Potential of GCoM cities to reduce global emissions gap between NDC and 1.5 degree warming scenario

GCoM cities' potential emissions reductions are equivalent to:

OVER
714 MILLION
HOMES' ELECTRICITY
USE FOR ONE YEAR

1,053
COAL-FIRED
POWER PLANTS
OPERATING
FOR ONE YEAR

OVER 870 MILLION PASSENGER VEHICLES DRIVEN FOR ONE YEAR<sup>5</sup> Climate Emergency, Urban Opportunity, a new report supported by the Global Covenant of Mayors, finds that it is technically feasible to reduce greenhouse gas emissions from urban areas globally by 90% by 2050. This would avoid an estimated 15.5GtCO $_2$ e over the next thirty years - more than the 2014 energy-related emissions of China and the United States combined, and over half of the energy-related emission reductions needed to stay on a 2°C pathway.

A comparative analysis of GCoM city commitments with the technically feasible urban abatement potential shows that existing GCoM city targets would already deliver a 35% reduction in emissions compared with the business-as-usual (BAU) scenario in 2030. The global urban abatement potential in 2030 is estimated at 45% compared with BAU, meaning that GCoM cities are aiming to deliver a significant part of the global potential. However, there is much more that GCoM cities could offer in 2050; current GCoM city targets will achieve a 57% reduction against the BAU scenario, whereas the technically feasible potential would be 90%.<sup>7</sup>

The success of our cities is pivotal to the success of our nations. National governments can help to harness the opportunities found in transitioning to zero-carbon and climate resilient cities, and provide the critical support needed to accelerate action. In doing so, nations will strengthen global progress towards the Paris Agreement goals while protecting the health and prosperity of citizens.



UNDER THE PARIS AGREEMENT, NATIONAL GOVERNMENTS COMMITTED TO INCREASE THEIR ABILITY TO ADAPT TO CLIMATE CHANGE.



THE VALUE OF NATIONALLY CRITICAL INFRASTRUCTURE IN URBAN AREAS AND THE POTENTIAL CONSEQUENCE OF INACTION MEANS CITIES URGENTLY NEED SUPPORT FROM NATIONAL GOVERNMENTS TO MOBILISE THE ACTION REQUIRED.

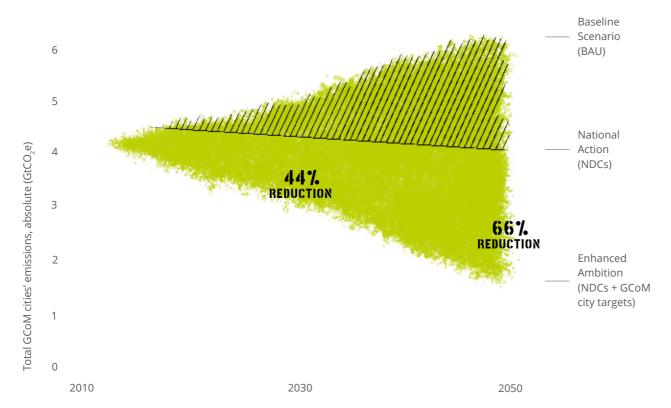






# 2. NATIONS CAN GALVANISE MORE AMBITIOUS CITY CLIMATE COMMITMENTS

With climate risk becoming ever more real for GCoM cities, they are setting ambitious targets to reduce emissions and transition to a climate safe future. Since urban areas are the source of around 70% of global emissions, city emissions reductions can contribute greatly to Nationally Determined Contributions (NDCs). To stave off the most catastrophic impacts of climate change, more ambitious targets - made possible when national governments better support their cities re needed. Many cities have already set targets in the with NDCs, and more can do so; but even more is possible when national governments support ties to achieve emissions reductions in line with a .5°C maximum warming scenario. It is in national interests to ensure that cities are supported to tablish 2050 targets that are compatible with the

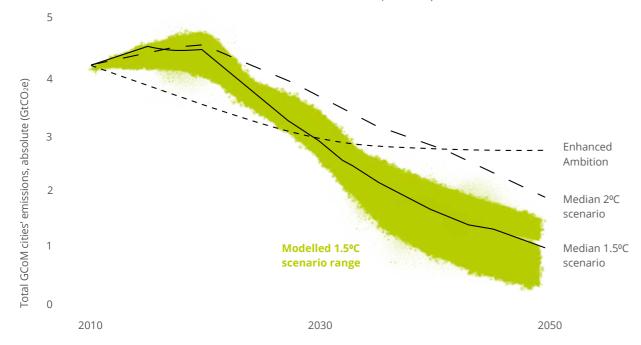


#### Figure 2 (above)

Through their existing emissions targets, GCoM cities ("enhanced ambition") are aiming to deliver potential emissions savings against a BAU ("baseline") scenario of 2.3 GtCO<sub>2</sub>e in 2030 and 4.2 GtCO<sub>2</sub>e in 2050. These savings represent a potential 44% reduction from the projected BAU emissions in 2030, and 66% reduction in 2050. Projected savings have increased since 2018; more cities are making more progress. (CDP-ICLEI Unified Reporting System and MyCovenant, n = 10,239 cities).

#### Figure 3 (below)

Until 2030, GCoM cities' targets are in line with a 1.5 degree pathway. But the "1.5°C scenario" highlights the remaining discrepancy between the current GCoM trajectory ("enhanced ambition") and the emissions reduction required by GCoM cities to limit global warming to +1.5°C. Even to meet a 2°C scenario, the "enhanced ambition" trajectory would need to decrease by another 30% by 2050. There is more to be done to strengthen city targets and plan for the longer term. Nations should promote greater city ambition and, in turn, draw on cities' momentum to strengthen NDCs. (CDP-ICLEI Unified Reporting System and MyCovenant, 2019, n=10,239 cities).10

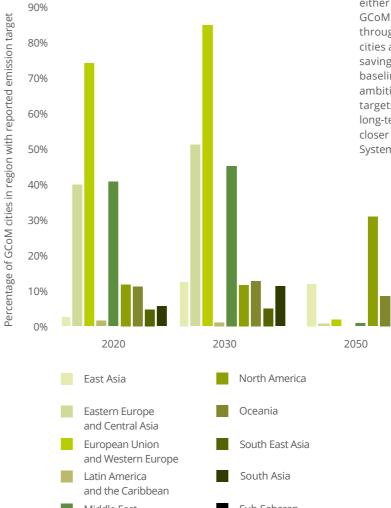


<sup>10</sup> Baseline refers to the business-as-usual emissions trajectory, assuming no intervention beyond current policies; National action takes into account declared Nationally Determined Contributions (NDCs); Enhanced ambition incorporates existing GCoM city commitments to reduce emissions, in addition to NDCs; 1.5°C scenario shows the emissions trajectory required to achieve a maximum +1.5°C global warming. The +1.5°C and 2°C scenarios indicate carbon emission limits for individual countries, global regions and cities, however require the thresholds to be met globally. Figure 3 presents the proportion of emissions associated with the GCoM cities. Limiting the temperature increase to below +1.5°C or even 2°C will also require efforts from the many cities who have not yet joined GCoM or set targets. This highlights the importance and potential power of growth across the GCoM alliance.

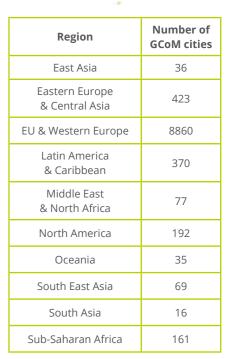
	Reporting Year	Target Year	
		2030	2050
Potential annual emissions savings from enhanced ambition scenario	2018	1.4	2.8
compared with business as usual (GtCO <sub>2</sub> e)	2019	2.3	4.2
Potential cumulative emissions savings from enhanced ambition scenario compared with business as usual (GtCO <sub>2</sub> e)	2018	17	60
	2019	24.3	90.2

#### Figure 4

77% of GCoM cities have set targets to reduce their emissions by 2030. On a regional basis, GCoM cities in the EU and Western Europe are most likely to have set either 2020 or 2030 targets. However, only 2.6% of all GCoM cities (261 cities) have so far adopted city targets through to 2050. By setting a target for 2050, these 261 cities alone have increased the potential 2050 emissions savings of GCoM cities by 6% compared with the baseline scenario, or 10% compared with the "enhanced ambition" scenario if those cities had not set 2050 targets. There is huge potential for more cities to adopt long-term targets and action plans, and move nations closer to a 1.5°C trajectory. (CDP-ICLEI Unified Reporting System and MyCovenant, 2019, n=10,239 cities).







TO ALIGN WITH A+1.5°C
PATHWAY, GCOM CITIES' EMISSIONS MUST REDUCE BY 31%
BY 2030
AND 76%
BY 2050.

CURRENTLY, 30% EMISSIONS REDUCTION IS EXPECTED BY 1030 AND 44% BY 1050. 26 M CITIES HAVE SET A 1050 EMISSIONS TARGET IN LINE WITH A 1.5°C PATHWAY.

THESE TARGETS
WILL REDUCE
GCOM
EMISSIONS
BY 10%
BEYOND
1030.



# 3. WHEN CITIES ARE AT RISK, NATIONS ARE AT RISK

GCoM cities report that they are already experiencing severe climate events, which are affecting their people, economies and physical environments. The private sector is also affected, as businesses rely on urban infrastructure to operate and investors are increasingly concerned about rising costs of climate events, and resultant isolation and depreciation of assets. Ultimately, where urban risks are not managed, the social and economic repercussions will extend to the national level through impacts on health and wellbeing, forced migration, business relocation, reduced productivity and interruption of supply chains, among others. Cities and nations must act together to mitigate these risks and adapt to changes already in effect.





# 4. CITIES ARE TAKING ACTION, AND GENERATING NATION-WIDE BENEFITS

GCoM cities are advancing action on adaptation and mitigation, offering exemplars and road-maps that other tiers of government can emulate. The benefits that cities foresee from climate action are valuable well beyond the city. With national coordination, these benefits can be scaled up and expanded to ensure equitable distribution of benefits across regions and communities. National governments can leverage competitive advantage from low carbon and resilient cities, which offer citizens and businesses a safe, clean and efficient place to thrive.



MyCovenant, 2019, n = 499).

\* Based on a sample of 1739 mitigation actions reported by GCoM cities to the CDP-ICLEI Unified Reporting System.

GCOM CITIES REPORT CO-BENEFITS OF MITIGATION INCLUDING HEALTH, JOBS AND ECONOMIC GROWTH.

22% OF REPORTED MITIGATION CO-BENEFITS ARE RELATED TO ADAPTATION.<sup>19</sup> ACHIEVING THE GLOBAL URBAN EMISSIONS REDUCTION POTENTIAL WOULD REQUIRE AN INVESTMENT OF US\$1.83 TRILLION. PER YEAR.

BY 1030
THIS WOULD
GENERATE ANNUAL
RETURNS WORTH
US\$1.80
TRILLION,
AND SUPPORT
87 MILLION
JOBS PER YEAR.
BY 1050,
ANNUAL RETURNS
WOULD BE WORTH
US\$6.98
TRILLION.





# 5. NATIONAL GOVERNMENTS CAN UNLOCK URBAN OPPORTUNITY

The vital importance of ambitious city action on climate change is clear. We need cities to help address the global emissions gap to keep the world within +1.5°C of global warming. The case for national support to cities is also clear. Where cities are at risk, nations are at risk; and where cities act to reduce emissions and adapt to climate change, the benefits are accrued nation-wide.

Many GCoM cities are utilising sub-national and local funding to kick-start their transition to a zero-carbon and climate resilient future. However, cities often lack the resources and capacity to deliver the costly interventions that are needed.<sup>20</sup> Nations have a responsibility to help unlock city action and financing pathways, both to bolster NDCs and advance global progress towards the Paris Agreement goals, and to ensure fair and equitable distribution of benefits nationally through a just transition.



# **NATIONS MUST:**

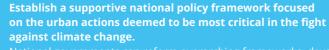
## Enhance funding to city governments.

National governments can generate income - and empower cities to increase their own income - to help fund low carbon and resilient urban projects. Governments can tag climate-related expenses in budgets, strengthen carbon taxes, eliminate fossil fuel subsidies and utilise other financial and fiscal instruments at the local level, such as land value capture rights and tax incentives for climate-smart developments. They can also shift budgets from expenditures in high emission infrastructure to more sustainable and resilient options, for example, through diverting funding from road projects to integrated public transport initiatives.

ACROSS ALL REGIONS, GCOM
CITIES IDENTIFIED BUDGETARY
CAPACITY AS THE MOST
SIGNIFICANT CHALLENGE TO
DELIVERING ADAPTATION ACTION.21



Facilitate greater access for cities to international finance, including helping to match urban projects with prospective investors. National governments have a role in advocating for greater flows of international finance directly to cities, and can provide cities with technical support and resources to develop a pipeline of investor-ready opportunities.



National governments can reform overarching frameworks, develop sector-specific strategies or introduce new policies that enable cities to take more ambitious action and achieve stretching targets.

Through an overarching national strategy for cities, nations can built upon the work cities are already undertaking, and ensure the unique needs and values of cities are recognised.







9G+CO, COULD BE CUT FROM THE BUILDINGS SECTOR IN CITIES BY 1050, USING TECHNICALLY FEASIBLE SOLUTIONS.

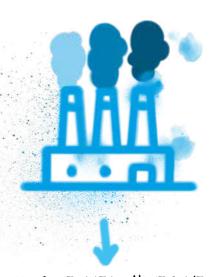


A FURTHER 3.1G+
COULD BE CUT FROM
THE TRANSPORT SECTOR.22

5.9G+ OF THIS REQUIRES
DECARBONISATION
OF NATIONAL
ELECTRICITY SUPPLIES.

Enable and promote the development of effective coalitions and alliances to support city action (public-public and public-private).

Collaboration with the private sector and other tiers of government will help to achieve integrated goals that consider interdependencies and mobilise support across sectors and administrative boundaries.





Ensure the equitable distribution of benefits from climate action nation-wide, to facilitate a just green transition.

Through integrated regional strategies, policies and legal frameworks, national governments can help cities achieve their economic and social potential while ensuring fair distribution of benefits nation-wide

LOCAL GOVERNMENTS HAVE POWER
OVER LESS THAN ONE-THIRD OF THE
EMISSIONS REDUCTION POTENTIAL IN
THEIR CITIES. NATIONAL AND STATE
GOVERNMENTS HAVE POWER OVER
A FURTHER THIRD. MORE THAN
ONE-THIRD DEPENDS ON DIFFERENT
LEVELS OF GOVERNMENT WORKING
TOGETHER. THE FUTURE OF CITIES - AND
NATIONS - DEPENDS ON COLLABORATION.<sup>23</sup>

## REFERENCES

- 1. As of 1st August 2019.
- GCoM's precursor initiatives, the Compact of Mayors and the European Covenant of Mayors, are now merged in the GCoM.
- Excludes declarations by borough-level Councils within cities.
- 4. As of 20 November 2019. See <a href="https://climate-emergency-declarations-cover-15-million-citizens/">https://climate-emergency-declarations-cover-15-million-citizens/</a>
- 5. <a href="https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator">https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator</a>
- 6. Global emissions gap as reported by JRC Global Energy and Climate Outlook 2018. Global urban potential as reported by the Coalition for Urban Transitions in *Climate Emergency, Urban Opportunity*, 2019. GCoM city potential is reported by cities to the CDP-ICLEI Unified Reporting System and MyCovenant in 2019.
- 7. The methodologies are not a perfect match. For example, some GCoM cities have made commitments to reduce industrial emissions, which are excluded from the Urban Opportunity report. Meanwhile, the emissions inventories used by GCoM cities rarely include material efficiency, which is a major source of emission reductions in the Urban Opportunity report. Nonetheless, this analysis clearly shows that the 10,239 cities making commitments through GCoM are continuing to raise global climate ambition above the national pledges made under the Paris Agreement in 2015. Now, they need national governments to support them to go further and faster to avoid climate catastrophe.

- 8. Coalition for Urban Transitions, 2019. Climate Emergency, Urban Opportunity: How National Governments Can Secure Economic Prosperity and Avert Climate Catastrophe by Transforming Cities.
- Quote from Christiana Figueres Vice-Chair, Global Covenant of Mayors; Former Executive Secretary, UN Framework Convention on Climate Change (2010-2016).
- Scenarios from Joint Research Council Global Energy and Climate Outlook 2018, International Energy Agency Energy Technology Perspectives, Integrated Assessment Modeling Consortium - Various. Figure 3 presents a median scenario from these sources.
- 11. 'High risk' has been defined as those hazards that cities have reported as both 'high' probability and 'high' consequence.
- 12. CDP-ICLEI Unified Reporting System and MyCovenant, 2019, n = 2,759 hazards.
- 13. CDP-ICLEI Unified Reporting System and MyCovenant, 2019, n = 4,279 hazards.
- Analysis of GCoM city data in comparison with nationallevel statistics on 'readiness' from ND-GAIN, 2015.
   University of Notre Dame Global Adaptation Index Country Index Technical Report.
- 15. CDP, 2019, Major risk or rosy opportunity? Are companies ready for climate change?.
- 16. C40 Cities, 2018, The Future We Don't Want.
- 17. Refer back to reference 16.

- 18. Refer back to reference 8.
- 19. Based on data reported by 223 GCoM cities to the CDP-ICLEI Unified Reporting System, 2019. These cities reported 1,422 co-benefits related to their mitigation actions.
- 20. Refer back to reference 8.
- 21. Based on data from 416 GCoM cities reporting to the CDP-ICLEI Unified Reporting System, 2019.
- 22. Refer back to note 8.
- 23. Refer back to note 8.
- 24. Based on data reported by GCoM cities to the CDP-ICLEI Unified Reporting System, 2019, covering 1,216 mitigation actions and 1,109 adaptation actions.

# ABOUT THE GLOBAL COVENANT OF MAYORS FOR CLIMATE & ENERGY

The Global Covenant of Mayors for Climate & Energy is the largest global alliance of cities and local governments voluntarily committed to actively combatting climate change and transitioning to a low carbon and climate resilient economy. In partnership with local, regional and global city networks, the Global Covenant of Mayors has:

# 10,239 CITY SIGNATORIES ACROSS 6 **CONTINENTS AND 138** COUNTRIES

REPRESENTING OVER

864 MILLION PEOPLE OR OF THE GLOBAL POPULATION

# **LIMITATIONS**

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.

#### Funded by:





## **Regional and National Covenants**

























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