

Accelerating urban action for a carbon-free world

1. Urbanization and Carbon Emissions

The global urban population has spiralled upwards since the mid-twentieth century. Between 1950 and today, the population of cities around the world has more than quadrupled with over 4.2 billion people now living in urban environments according to the World Bank. Over the same time, the concentration of atmospheric carbon dioxide, a key indicator of global warming, has risen by over a third (figure 1) almost entirely due to human activity. Today, **cities account for about 75 per cent of the world's energy consumption** and are responsible for over **70 per cent of global greenhouse gas emissions**. The way cities are planned, built and managed, is key to reducing carbon emissions and keeping global warming within the limits set by the 2015 Paris Agreement on Climate Change.

This is especially important as cities and towns are projected to add a further 2.5 billion people in the next 30 years according to UNDESA, raising the **proportion of people in urban areas** from 55 percent today, to nearly **70 percent in 2050**. Urbanization is taking place most rapidly in the less developed regions of the world (figure 2). Currently, three times as many urban dwellers live in the less developed regions than in the more developed regions, and **90 per cent of new urban residents will live in Africa and Asia**. Most cities in developing Africa and Asia are still to be built, and the World Economic Forum projects two-thirds of the investments in urban infrastructure in Africa needed by 2050 have yet to be made. There is a window of opportunity to shape these cities in a way that reduces overall energy consumption and greenhouse gas (GHG) emissions.

The increasing population growth and migration to cities, in many cases caused by climate stress, create **challenges in providing basic services to urban residents**, particularly the poor. Ensuring that growing cities are compact, and that expansion takes place in a planned manner to accommodate the growing number of residents helps reduce their carbon footprint. Compact cities also make the provision of basic services such as waste management, transport, energy and water and sanitation more resource-efficient and financially viable. UN-Habitat therefore promotes a strategy that combines compact city planning together with good governance and equitable provision of basic services. Avoiding urban sprawl also reduces stress on ecosystems, promoting **a balanced coexistence between human settlements and nature**, and **contributes to the prevention of zoonotic diseases such as COVID-19**.

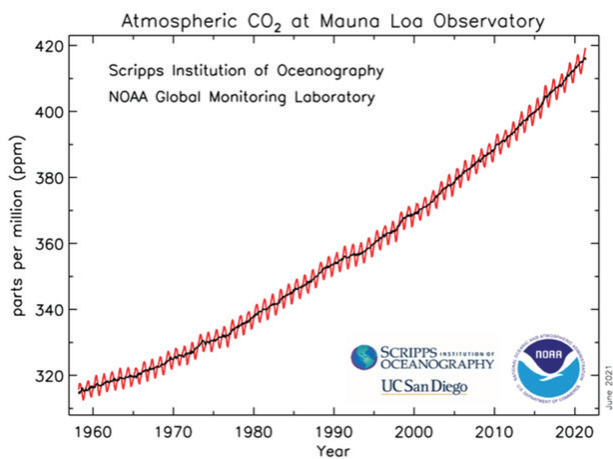


Figure 1: Atmospheric CO₂ concentrations measured at the Mauna Loa Atmospheric Baseline Observatory. Source: NOAA

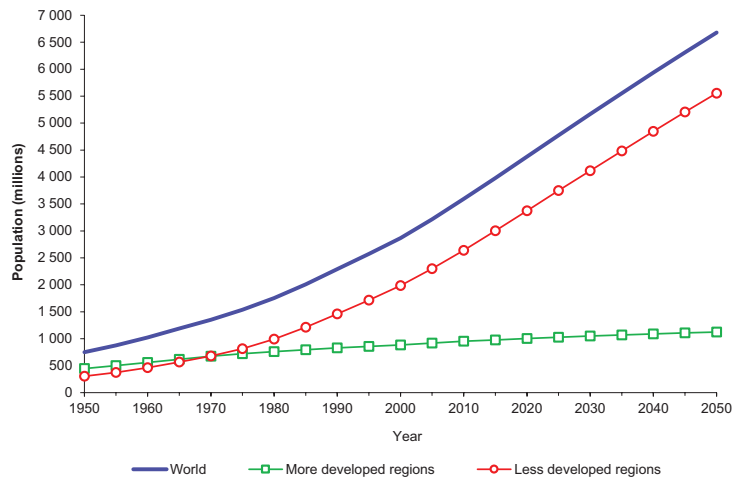


Figure 2: Estimated and projected global urban populations in more and less developed regions, 1950-2050. Source: UNDESA

2. The Paris Agreement, Urbanization and the New Urban Agenda

Adopted at COP-21 in 2015 and endorsed by 195 countries, the **Paris Agreement on Climate Change** sets the legally binding global aim of limiting global warming to well below 2, and preferably 1.5 degrees Celsius, compared to pre-industrial levels. These countries committed to action and strategies called **Nationally Determined Contributions (NDCs)**. Since the start of the second five-year cycle of NDCs in 2020, 86 countries have submitted new or updated NDCs to the UNFCCC Secretariat.

NDCs vary by how enthusiastically countries embrace climate action in cities. A 2017 UN-Habitat review of the first NDC cycle found that **113 out of 164 NDCs showed strong or moderate urban content**. Most of these were framed in the context of adaptation to climate change, with **mitigation rarely featuring**. Surprisingly, some of the most urbanized countries have little explicit city-related content in their NDCs. It is encouraging, however, that NDCs from Asia and Africa contain the strongest urban elements.

According to recent estimates, the impact of current NDCs will result in a global temperature increase of 2.4 degrees Celsius by 2100. This is an improvement from previous estimates but will still miss the Paris Agreement targets and result in potentially catastrophic impacts on human settlements and ecosystems.

This scenario led to a global campaign to rally diverse urban actors including companies, cities, regions and financial institutions being launched on World Environment Day 2020 to “take rigorous and immediate action to halve global emissions by 2030 and deliver a healthier, fairer zero carbon world in time: the **‘Race to Zero’** campaign”. This global campaign, which reinforces the objectives of the Climate Ambition Alliance launched at the UN Secretary-General’s Climate Action Summit in September 2019, rallies 120 countries, 708 cities, 24 regions, 2,360 businesses, 163 large investors, and 624 Higher Education Institutions in the largest ever alliance committed to achieving net zero carbon emissions by 2050 at the latest - representing almost a quarter of global carbon dioxide emissions and over half of the world’s GDP.

Addressing a meeting of Mayors convened by C40 cities on 16 April 2021, the UN Secretary-General said:

“Cities are also on the frontlines of the climate crisis. More than half a billion urban residents already face rising sea levels and more frequent or severe storms. By mid-century more than 3.3 billion urban residents could be at risk from severe climate impacts. Cities also have an outsized carbon footprint. With just over half the global population, they emit more than 70% of global greenhouse gases. The COVID-19 pandemic is a global catastrophe. But investment in recovery is a generational opportunity to put climate action, clean energy and sustainable development at the heart of cities’ strategies and policies. How we design power generation, transport and buildings in cities – how we design the cities themselves - will be decisive in getting on track to achieve the Paris Agreement and the Sustainable Development Goals. We need a revolution in urban planning and in urban mobility: including better fuel efficiency; zero emission vehicles; and shifts toward walking, cycling, public transport, and shorter commutes. Cities stand to gain most from phasing out coal: clean air; green outdoor spaces; healthier people.”

UN Secretary-General António Guterres, at the Meeting with leading mayors supported by C40 Cities, 16 April 2021.

Rapid advances in technologies and the falling cost of renewable sources of energy have resulted in a shift to renewables as a source of energy. It is estimated that two-thirds of the global population live in countries where renewable sources are more competitive than energy generated from conventional fuels. Such gains on the supply side must be matched by action on the demand side to reduce overall energy consumption and to meet the Paris Agreement goals. Cities, the main centre of energy demand, must lead the Race to Zero.

It has been estimated that **GHG emissions from cities can be reduced by almost 90 per**

cent by 2050 using technically feasible, widely available mitigation measures (figure 3). This means that city actions can potentially reduce global emissions by over 70 per cent. This potential reduction can be achieved through a combination of measures that target the urban form in expanding cities as well as the buildings, transport, material efficiency and waste management sectors. Urban planning can steer urban growth towards low carbon urban development through advancing climate-friendly urban forms (compact, mixed land-use and connected and accessible cities) geared towards reducing vehicular trips and instead, encouraging the use of non-motorized transport such as walking and cycling.

Public and green areas play a key role as carbon sinks, in regulating temperature and reducing urban heat-island effects. Simultaneously, measures can be taken to improve access to basic services while reducing their carbon footprint. These could include better water demand management, waste-water treatment through nature based solutions, better municipal waste management and material recovery, uptake of micro-grids, renewable energy and net-metering, retrofitting buildings to improve their energy efficiency, promoting a transition to shared and public transport and the uptake of electric mobility.

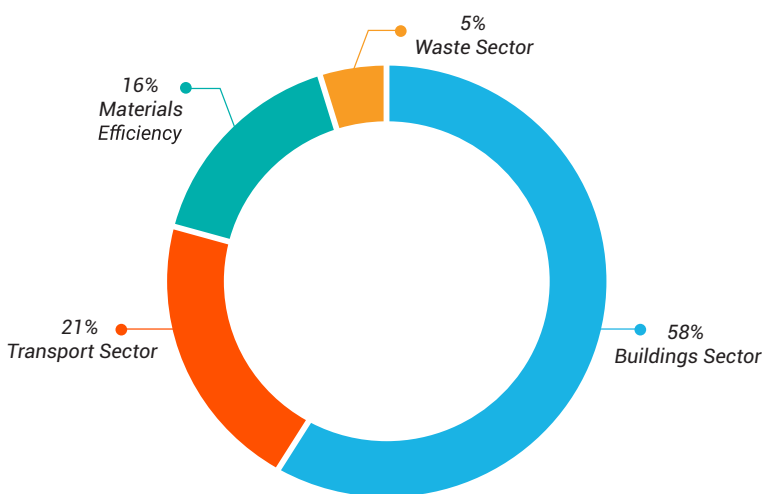


Figure 3: Sectoral breakdown of technically feasible and available mitigation measures to achieve a 90% greenhouse gas emission reduction. Source: UN-Habitat

Speaking on the topic of “From rapid urbanisation to the Green Shift” during the “European Development Days”, on 15 June 2021, UN-Habitat Executive Director, Maimunah Mohd. Sharif said:

“Urban transition can be an opportunity to change the way cities are organized, to leapfrog to more sustainable infrastructure, and deliver on the green transition. 70 per cent of all the infrastructure in 2030 is yet to be built. Decision-makers need to realise that they have the power to either support resilience, equality, and low-carbon development by the decisions they make today. Their indecision or lack of conviction will deprive future generations of a better future. It is really that simple “

Investors and businesses are playing a central role in the transition to a green economy.

Investments focused on environment, social and governance factors have surged recently. Cities in collaboration with national governments can attract investments, for example, for smart energy grids and buildings through enabling policies and incentives and by show-casing innovative projects as seen in the **SOLUTIONSplus** project bringing cities and entrepreneurs together to develop electric mobility.

The **New Urban Agenda**, the shared vision for a better and more sustainable urban future adopted at the UN's Habitat III conference in Quito, Ecuador, in October 2016, provides an enabling framework for implementing these measures. It sets out how cities and human

settlements should be planned, designed, governed and managed. Policy, legal and governance frameworks have an important role to play in increasing cities' resilience and in helping cities reducing their GHG emissions. They define urban forms, determine where land, infrastructure and basic services can be built, lay out the rules for planning and decision-making, and set the context within which urban authorities, local governments and communities are expected to fulfil their mandate and react to emerging challenges.

The New Urban Agenda comprehensively addresses these aspects and lays out a broad, multilevel, and cross-sectoral framework with a spatial focus that can accelerate global climate action and provide the means to localise the SDGs (figure 4).

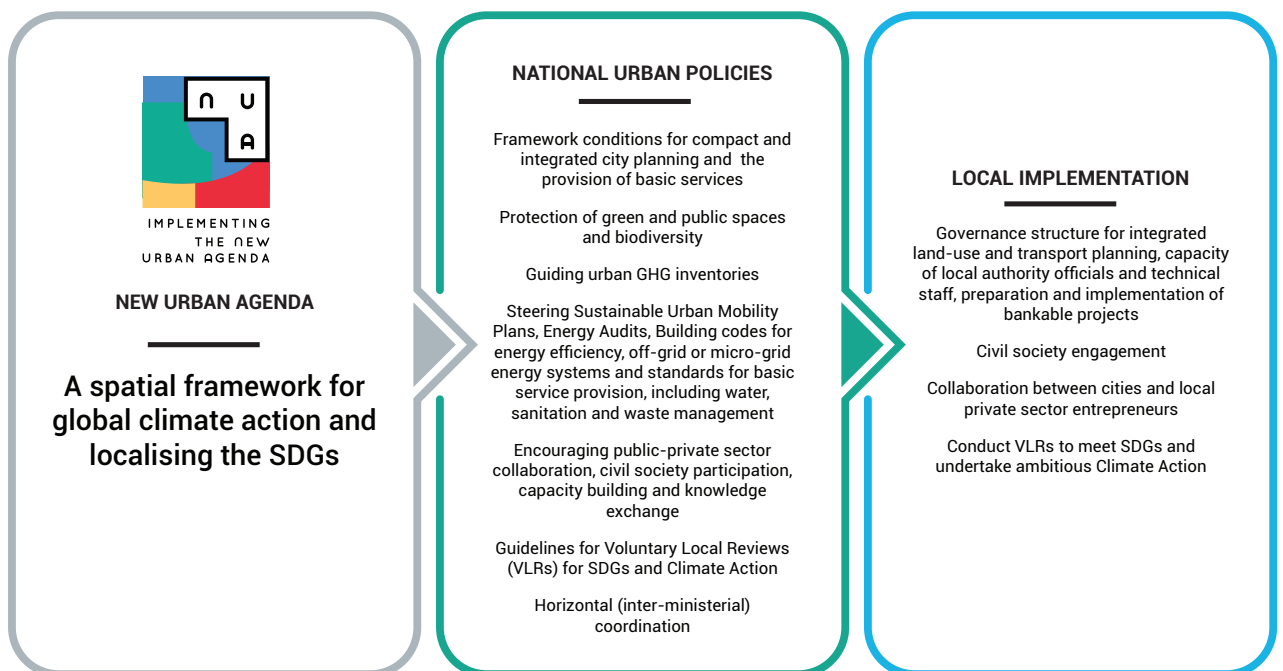


Figure 4: Framework for localising SDGs

3. COVID-19 and Building Back Greener

While devastating in its impact, the COVID-19 pandemic has highlighted some important lessons to address the climate crisis. For example, the increase in remote working should ease traffic congestion in the long term and reduce the perceived need for ever-increasing road construction to meet the demand for car-based travel. At the same time facilities for walking and cycling must be improved and urban transport should become more low-carbon and inclusive. Access to reliable and clean energy is essential for a range of activities ranging from remote working, household lighting and cooking and maintenance of cold chains for the delivery of medicines and vaccines. The crisis has also highlighted the need to improve basic services such as water supply, sanitation, and waste management particularly for the poor who live informal settlements and bear a disproportionate burden of the risk from such infectious diseases.

The fiscal stimulus programmes now being rolled out in many countries are also emerging as trial runs for carbon-neutrality and a better ecological future for cities. How countries arrive at their climate strategy will vary, but these investments provide a basis for countries, cities and communities to commit more effectively to renewable energy, sustainable production and consumption patterns, and better management of natural resources, food systems and waste.

- Response and relief funding should be targeted to improve basic services for the poor and for nature-based solutions

and ecosystem services that integrate blue, green and grey infrastructure into regional open space and basic service networks, helping regions enhance their climate resilience and advance their socio-economic recovery.

- Some national governments have responded to the impacts of COVID-19 by channelling financial assistance through municipal governments and communities, providing much-needed funds while ensuring these are allocated to local needs and priorities. For example, in Canada, the government has amended the 'Investing in Canada Infrastructure Programme' to allow provinces and municipalities to access federal funding to undertake a range of local projects, such as upgrading schools and hospitals to investing in green spaces and cycling lanes, to **"support longer-term goals of sustainable, economically healthy, low-carbon, and inclusive communities"**.

To be truly effective, these changes need to be accompanied by a broader shift in the way cities and neighbourhoods are planned and managed with investments in infrastructure leading to energy savings, a reduction in greenhouse gas emissions and increased low-carbon mobility planning to promote a green transition as outlined in UN-Habitat's Report on **Cities and Pandemics: Towards a more just, green and healthy future**.

4. World Habitat Day 2021

Mandated by the General Assembly in 1985, **World Habitat Day** is observed on the first Monday of every October, followed by events held worldwide throughout **'Urban October'**. Its purpose is to reflect on the state of our towns and cities, to recall the right of all to adequate shelter, basic services and social and economic opportunities, and to remember that we all have

the power and the responsibility to shape the future of our cities and towns, and to promote sustainable urban development policies.

The theme of World Habitat Day 2021 is **Accelerating urban action for a carbon-free world** which is particularly relevant in light of the upcoming COP-26, scheduled to take place in Glasgow, UK, from 1-12 November 2021.

In line with the World Habitat Day theme, UN-Habitat is calling for cities to accelerate urban climate action and in particular:

- In the run-up to COP-26, invites cities to join the Global "Race to Zero" Campaign, as well as UN-Habitat's **#ClimateAction4Cities Campaign** and to share their solutions.
- Offers technical assistance and capacity building support to cities in planning and implementing climate-targeted actions including planning for more compact and walkable cities, support in enhancing national building codes, sustainable building and construction practices, improving public and non-motorised transport, introducing electric mobility, promoting clean energy generation in cities and improving waste management and provision of water and sanitation.
- Offers support to develop basic services/ infrastructure projects and social housing – to attract multilateral and other financing – including climate investment to build back better and greener with a "just and green recovery".
- Offers support in conducting **Voluntary Local Reviews** to assess progress against both the Sustainable Development Goals and the Paris Agreement goals and present findings in forums such as the High Level review of the New Urban Agenda, planned for early 2022.
- Facilitates the exchange of lessons learnt and best practices among cities.
- To join UN-Habitat's **Waste Wise Cities programme** which aims at 'A Thousand and One Waste Wise Cities' by the World Urban Forum 2022 in Katowice, Poland.



"With our attention focused on responding and recovering from the COVID-19 crises, let us ensure that every action we take today, every investment and support we mobilise, stimulates more sustainable, low-carbon and resilient development pathways that leave no one and no place behind."

UN-Habitat Executive Director
Maimunah Mohd Sharif

Enhancing Nationally Determined Contributions through Urban Climate Action