

## Climate Change



The effects of urbanization and climate change are converging in dangerous ways. Cities are major contributors to climate change: although they cover less than 2 per cent of the earth's surface, cities consume 78 per cent of the world's energy and produce more than 60% of all carbon dioxide and significant amounts of other greenhouse gas emissions, mainly through energy generation, vehicles, industry, and biomass use. At the same time, cities and towns are heavily vulnerable to climate change. Hundreds of millions of people in urban areas across the world will be affected by rising sea levels, increased precipitation, inland floods, more frequent and stronger cyclones and storms, and periods of more extreme heat and cold.

In fact, many major coastal cities with populations of more than 10 million people are already under threat. Climate change may also negatively impact infrastructure and worsen access to basic urban services and quality of life in cities. In addition, most of the vital economic and social infrastructure, government facilities, and assets are located in cities. The most affected populations are the urban poor – i.e. slum dwellers in developing countries – who tend to live along river banks, on hillsides and slopes prone to landslides, near polluted grounds, on

decertified land, in unstable structures vulnerable to earthquakes, and along waterfronts in coastal areas.

Despite these risks, many cities have not yet addressed climate change. The reasons include a lack of relevant city policies and action plans; existence of regulations on urban planning and environment which have not been adjusted to manage climate change; slow response to climate disasters due to lack of capacity and resources; and lack of public awareness on climate variability and climate change-induced hazard mitigation. However, when properly planned, capacitated, and managed through the appropriate governance structures, cities can be places of innovation and efficiency. Together with their local authorities, they have the potential to diminish the causes of climate change (mitigation) and effectively protect themselves from its impacts (adaptation).

### Protecting themselves: cities and climate change adaptation

For most cities in developing countries, the pressure to adapt to climate change is mounting. The measures needed to help cities cope with climate change vary considerably depending on political, cultural, historical, and climatic conditions. Such measures can range from “working with nature” (e.g., placing a greater emphasis on coastal resource management, or protecting mangrove and natural reef ecosystems), to a concerted “climate-proofing” of infrastructure, including storm-drainage systems, water supply and treatment plants, as well as protection or relocation of energy or solid waste management facilities. Some coastal cities may need to plan for investments related to a rise in sea level.

In regions where droughts are more likely to occur, on the other hand, improved water saving and water management measures may be required. Of equal, if not greater, importance to such physical and infrastructural adaptations are a broad range of measures that reduce vulnerabilities and increase community resilience to climate change. These include:

- local economic development strategies
- community early warning systems
- better shelter options and participatory in-situ slum upgrading
- relocation of urban populations to appropriate or improved locations (when in-situ upgrading is not feasible)
- improved public health interventions
- urban and peri-urban agriculture that takes into consideration a changing climate

### Cities and climate change mitigation

More than half of the world’s greenhouse gas emissions come from urban areas. A number of cities around the world have shown farsighted leadership in setting targets and devising and

implementing plans to reduce these greenhouse gas emissions. Cities can reduce their greenhouse gas emissions while simultaneously addressing other pressing local environmental problems such as air pollution, waste, and transport, not to mention other challenges such as local economic development.

The challenge therefore is to link climate change to local environmental and other developmental priorities. On the supply side, there are strategies that make certain alternative sources of energy more attractive to users than fossil fuels. On the demand side, a better planned city with reduced urban sprawl, greener buildings, and better public transport can reduce a city's carbon footprint while at the same time providing a better quality of life for its citizens and an environment that is more attractive for business.

### UN-Habitat's work on climate change

UN-Habitat is already working with cities and other local governments in 20 developing countries in Africa, Asia, and Latin America to develop mitigation and adaptation strategies for climate change. The success of this adaptation depends critically on the availability of necessary resources, not only financial, but also knowledge, technical capability, institutional resources, and tools. Taking this into consideration, UN-Habitat delivers an integrated programme of assistance to local authorities to improve systems aimed at "climate proofing" urban infrastructure, and to ensure that climate change adaptation becomes a key component of infrastructure design and urban planning. At the national, regional, and global level, UN-Habitat works to raise awareness and to help counterparts to build the capacities needed to enable cities and local governments to address climate change effectively.

### UN-Habitat's Cities and Climate Change Initiative (CCCI)

UN-Habitat's Cities and Climate Change Initiative (CCCI) seeks to enhance the preparedness and mitigation activities of cities in developing and least developed countries. It emphasizes good governance, responsibility, leadership, and practical initiatives for local governments, communities, and citizens. Building on UN-Habitat's extensive experience in sustainable urban development, the Cities and Climate Change Initiative helps counterparts to develop and implement pro-poor and innovative climate change policies and strategies.

CCCI is also developing a suite of tools to support city leaders and practitioners in addressing the impact of climate change (adaptation) and to help reduce greenhouse gas emissions (mitigation). To these ends, UN-Habitat is working closely with a diverse range of partners: donors, government at all levels, other UN agencies, non-governmental organizations (NGOs), community-based organizations, institutions of research and higher learning, capacity building and training agencies, land and property organizations, and private sector entities, among others.

[Find out more about the Cities and Climate Change Initiative \(CCCI\)](#)



Learn about the Cities in Climate Change Initiative



Learn about the City Resilience Profiling Programme

<https://unhabitat.org/urban-themes/climate-change/>