



Cities are at the forefront of the climate crisis; they're heating up at twice the average global rate and they're a major source of the greenhouse gases (GHGs) that are warming our planet.

How can sustainable urban cooling solutions help local governments protect cities and their residents from temperatures while also limiting further global warming?

As global temperatures rise, our cities are heating up at twice the average rate due to the urban heat island effect, a phenomenon by which human-made surfaces (e.g. high usage of concrete, steel, and glass, as well as diminished green space) create and capture heat, keeping temperatures high long after the sun has set. Across the world, cities could warm by as much as 4.4°F on average, which could be catastrophic for the health, wellbeing, security, and economic productivity of cities. 2.3 billion people could be exposed and vulnerable to extreme heat events.

The need for increased access to cooling to avoid extreme heat in our cities is undeniable, and doing nothing is not an option. Unfortunately, conventional cooling solutions are typically energy-intensive and use refrigerants with a high global warming potential (GWP) compounding the problem further by putting more strain on the planet.

Cities, with all their inhabitants, buildings, and infrastructure, are already responsible for more than 70% of the world's global carbon emissions.

Cooling appliances, such as air conditioners, are key drivers of emissions, with up to 10% of demand for electricity in cities being used for cooling. If cities do not take action, global emissions could rise by 1.5% by 2050, which could lead to additional temperature increases of 0.5°C by 2050.



Inspiring a Learning Community

USA

Leading by example can be done by ensuring all city-controlled assets (i.

Climate-friendly and

Substantive actions

Heat prevention training

11 SUSTAINABLE CITIES AND COMMUNITIES

