

COP26 Cooling - Glasgow UK, French Pavilion - Thursday 11th November 2021

Concrete Options to Raise Ambition and Action – The Case of Cities

KEY TAKEAWAYS

- 2020 was the warmest year on record. By 2100, cities could warm up by an average of 4°C. Even if the target of limiting warming to 1.5 degrees is met, 2.3 billion people will be exposed to severe heat waves. Extreme temperatures kill 5 million people a year, with heat-related deaths rising. In 2030, around 80 million full-time jobs could be lost worldwide due to heat stress, resulting in global economic losses of US\$2.3 trillion.
- Cooling is therefore essential for protection. Given the multiplicity of uses (food, health, production, transport, domestic uses), cooling-related emissions could triple by 2100. In addition, the emergence of new technologies (data centers, biotechnologies) is contributing to the increase in energy demand for cooling. For example, air conditioning accounts today for 8% of global emissions.



- This growing demand will generate a steady increase in electricity consumption which could become a major problem for the electricity infrastructure in the future.
- Most of the growth in cooling is in developing countries. For example, 4% of Indian households own an air conditioner compared to 90% in the USA. However, for several purposes, the demand for cooling is also increasing in cold countries.
- Cold storage capacity in developing countries along the chain is sometimes 10 times lower than in developed countries. This leads to significant food losses and health problems.
- Most refrigeration systems are based on vapor compression, which today poses 3 main issues: Material recycling, Energy used, Impact of fluids (7.8% of greenhouse gas emissions).

- To address the problem, we must first accept an established fact: **our energy consumption is increasing exponentially, and it emits greenhouse gases**. We must become aware of our consumption and **accept the planetary limits**, which we are exceeding.
- In this sense, several measures have been taken: the [F-Gas regulation in Europe](#), the need for low-emission refrigerants in the [Kigali amendment](#) to the [Montreal Protocol](#). We must **implement these objectives in practice in developing countries**. The Cool Coalition has launched "[Beating the Heat: a sustainable cooling handbook for cities](#)", which proposes concrete measures for implementation.
- We must act on **refrigeration systems** but also at the **global level** throughout the cold chain : passive solutions concerning the systems themselves, energy efficiency, transport, urban planning, implementation of nature-based solutions. At this level, **many actions still need to be put in place**. These efforts must be made in **existing buildings** but also in **all new ones**.



Cities are at the heart of these concerns.



- **Cities are warming twice as fast as the rest of the environment**. As urbanisation increases, efforts must massively focus on this issue. The opportunities and benefits of the effort to be made on cold are multiple. *Re-vegetation* of cities allows for cooling, resilience, return of biodiversity, better air quality, job creation. *Energy efficiency* allows a reduction in consumption, costs, production and pollution.
- In **Medellin**, the creation of **36 green corridors** in the city has **reduced the temperature by 4°C** on hot days. In the **United States**, the **greening of cities would save 12 billion dollars annually**. Bringing nature back into cities also meets the objectives of **reducing inequality**: allowing access to nature for everyone. In **Seoul**, a **waterfront corridor decreased temperature 3.3°C to 5.9°C** compared to a parallel road a few blocks away.
- The metropolis of **Lyon** in France has seen its temperature rise by 2°C in the last fifty years. A 44 million euro "**nature plan**" has therefore been launched to **green the city**, create ecological corridors, open new arboretums and analyse the plant species most likely to cope with global warming.

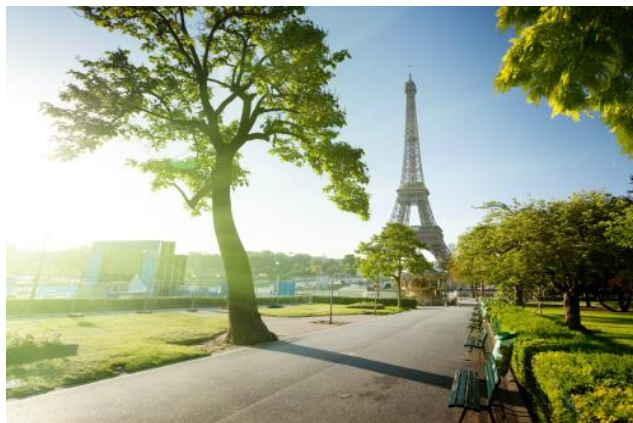
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In this context, following France's initiative at the G7 Biarritz for rapid action on cooling, France is launching a [France Leadership Guide on Efficient, Climate-Friendly Cooling](#).

- This guide is based on the **five priorities defined at COP26**: adaptation & resilience, nature, energy transition, transport and finance. This model is based on the [British guide UK leadership on sustainable cooling](#).
- The guide outlines several initiatives that France has already launched to accelerate action on efficient, climate friendly cooling: French national plan for adaptation to climate change, French guides on biodiversity, French leadership in greening buildings to provide thermal comforts, etc.



- France supports developing countries in the **implementation of pilot projects** that provide innovative solutions. In Senegal, for example, the creation of solar-powered cold rooms secures local fisheries and helps to combat global warming.
- This guide is intended to be a toolbox to give stakeholders the keys to grasp the subject. It brings together essential resources for action: [Cool toolbox](#), [CCAC resources](#), [Mooc on urban cooling](#), a [joint publication by AFD and ADEME highlights an analysis of 16 cities and the cooling solutions implemented there](#).
- **EVENT RECORDING & MATERIAL** : <https://coolcoalition.org/cop26-cooling-concrete-options-to-raise-ambition-and-action-the-case-of-cities/>