

District Cooling in Latin America and the Caribbean:

Accelerating Sustainable Cooling for Climate Action and Urban Resilience

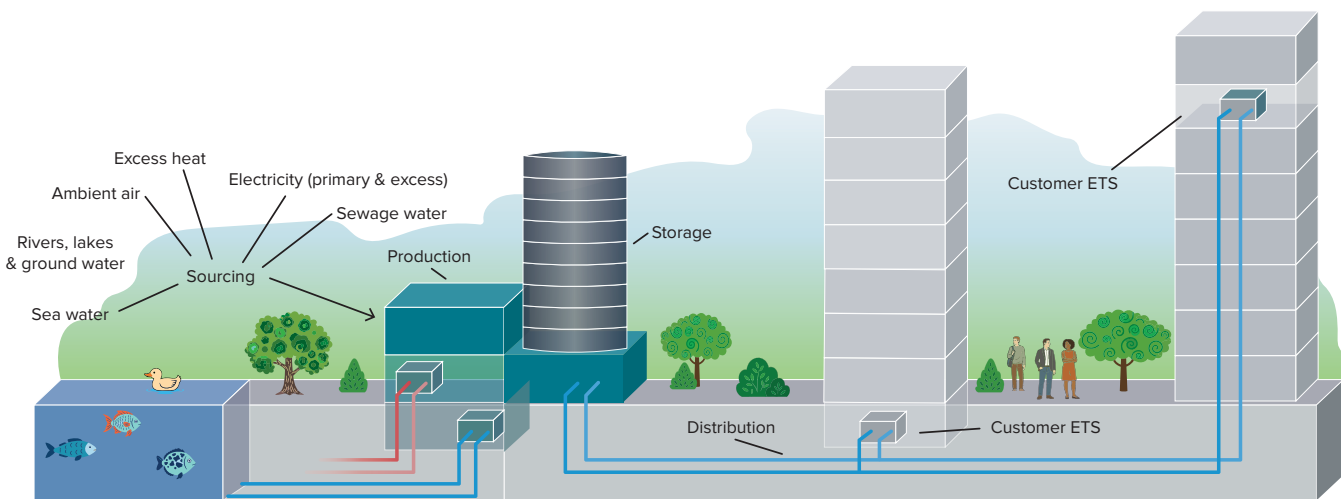
Cooling demand is the fastest-growing source of energy consumption in buildings worldwide and currently accounts for **16% of global electricity use in this sector**. In Latin America and the Caribbean (LAC), this demand could **double by 2040** if efficiency measures are not implemented, placing greater pressure on energy systems and the region’s climate commitments.

What is District Cooling?

District Cooling (DC) systems are efficient solutions that provide cooling to multiple buildings through a central plant and a network of insulated pipes. Instead of each building using individual air conditioning units, DC systems supply chilled water for air conditioning from shared infrastructure.

This approach:

- Is **2 to 10 times more efficient** than conventional cooling systems.
- Reduces **CO₂ emissions by 50% to 90%** by lowering energy consumption and the use of refrigerants with high global warming potential (high GWP).
- Has the potential to use renewable energy, seawater, and waste heat as energy sources.



Credit: adapted from DEVCCO.



The District Cooling Initiative in LAC

The initiative called “District Cooling in LAC”, funded by the European Union through the Euroclima Program and implemented by UNDP, seeks to establish the necessary conditions (regulatory, technical, institutional, and financial) to develop and finance DC projects in **Costa Rica, the Dominican Republic, Grenada, and Jamaica**.

Why District Cooling?



Climate impact: Reduces direct and indirect CO₂ emissions, supporting Nationally Determined Contributions (NDCs), carbon neutrality goals, and the Sustainable Development Goals (SDGs).



Economic benefits: Lowers operating costs for businesses and users; proven technologies and business models exist.



Advancing global goals: Contributes to the Kigali Amendment and the Montreal Protocol through refrigerant substitution, and to the Paris Agreement by including energy efficiency measures in NDCs.

Why now?

With EU support, LAC can take a leap toward sustainable cooling, accelerating climate action, social inclusion, and urban resilience.

Why are pre-investment phases key?

Creating a District Cooling system is not immediate; it requires several stages. The initial phases—pre-selection, pre-feasibility, and feasibility studies—are essential to ensure projects that are solid, inclusive, and financially viable.

These phases help to:

Reduce risks: by identifying technical, regulatory, and financial challenges before investing significant resources.

Optimize resources: by ensuring solutions respond to real demand and local context.

Attract investment: by building confidence among public and private actors through robust analysis and clear business models.

Soft Financial Close Development equity/debt secured



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How will we achieve this?

The project will focus its efforts on supporting countries to complete all pre-investment steps through four pillars:

1

Regulatory and legal frameworks: strengthen national regulations to enable market transformation for District Cooling.

2

Feasibility studies and business models: develop technical and financial analyses that demonstrate viability.

3

Financing: secure investments for at least two pilot projects through public-private partnerships and innovative mechanisms.

4

Knowledge and capacities: expand understanding of District Cooling through training and knowledge management, with a strong gender focus.

Learn more about how to scale District Cooling in Latin America and the Caribbean:

<https://www.undp.org/es/latin-america/our-focus/environment-and-energy/regionalprojects>

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