CDP
DISCLOSURE INSIGHT ACTION

Latin America's Cities: Addressing the Climate Crisis through Urban Infrastructure at Scale

Latin American cities are increasingly feeling the impacts of climate change with **90% of cities in the region reporting to CDP-ICLEI Track that they face significant climate hazards, including consecutive years of record heat, drought, and flooding.**

90% of cities

reporting to CDP-ICLEI Track face significant climate hazards[1]

These hazards threaten to exacerbate existing resource inequalities across the urban landscape, where over **80% of the region's population resides.**

As of 2022, nine out of ten Latin American reporting cities have identified vulnerable populations that will be disproportionately impacted by these hazards.

Simultaneously, Latin American cities are taking action. Nearly half of all reporting cities have developed climate risk and vulnerability assessments to prepare for these challenges. The region reported a total of

472 pending climate-related projects

out of a global total of 1600+ projects[2].

While these figures demonstrate significant steps towards mitigating and adapting to climate change, **the region has one of the world's largest urban climate financing gaps based on capital invested relative to investment opportunity[3].**

About CDP

CDP is a global non-profit that runs the world's environmental disclosure system for companies, investors, public authorities, cities, states and regions. Over 14,000 organizations around the world disclosed data through CDP in 2021, including **more than 13,000 companies worth over 64% of global market capitalization, and over 1,200 cities, states and regions.**

Fully TCFD aligned, CDP holds the largest environmental database in the world, and CDP scores are widely used to drive investment and procurement decisions towards a zero carbon, sustainable and resilient economy.

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[1] 185 cities.
[2] This report was created using the data reported to CDP by cities through CDP-ICLEI Track in 2022. 998 cities globally, and 244 cities in Latin America, reported by 16th August 2022, and the information in this report is based on those responses. Our open-source cities, states and regions datasets can be downloaded for free from our Open Data Portal. For more information about annual disclosure, please visit the Cities page on our website.
[3] International Finance Corporation (IFC). 2018. Climate investment opportunities in emerging markets: an IFC analysis

To respond to the challenge of implementing climate-resilient infrastructure at scale, CDP Matchmaker provides insights and catalyzes action for sustainable and resilient infrastructure projects across the globe.

CDP, in partnership with ICLEI, engages with hundreds of local governments on environmental disclosure, helping them to measure and manage greenhouse gas (GHG) emissions, identify climate risks and set emissions reduction targets, along with actions to protect their most vulnerable populations. Greater project data visibility is key to accelerating local governments' access to the right types of financing opportunities and project support.

In 2022 local governments across Latin America reported a total of

472 projects

worth **US$7.6 billion**[4]

and seeking **US$4.9 billion** in investment

Looking beyond this initial disclosure and towards more granular financial reporting, there are indications that the scale of climate finance needed is even greater than is currently being reported. Given that the global gap for urban climate finance is currently estimated to be greater than US$4.5 trillion annually[5], to secure a sustainable, resilient, and equitable future; there is a need to reinforce cooperation among public and private actors to fill this investment gap.

As nearly half of cities report that they are seeking public financing, **this is an opportunity to align infrastructure business models with publicly stated commitments by national governments and development finance institutions towards climate goals.**

4 Total projects cost and investment needed is based on the 335 projects, out of 472, that self-reported costs.
5 The Cities Climate Finance Leadership Alliance (the Alliance). 2021. State of Cities Climate Finance 2021.

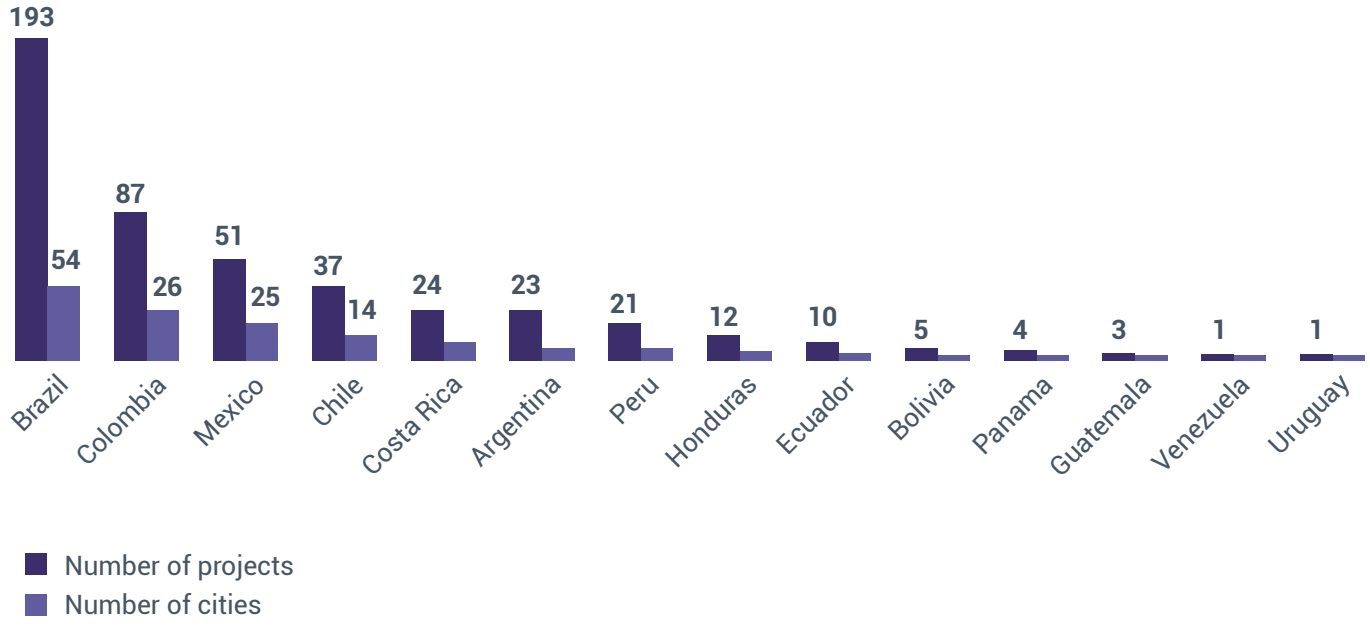
A Snapshot of City Climate Infrastructure Data:

The following analysis draws from self-reported data to CDP-ICLEI Track[6] via the 2022 cities questionnaire, where local governments can report pending climate infrastructure projects that are currently seeking funding or financing. Select case studies are used to demonstrate on-the-ground progress that cities are making.

Project data is reported by 161 cities across 14 countries in Latin America, where approximately 135 million people reside; approximately 20% of Latin America's total population.

Project data disclosed to CDP-ICLEI Track is a representative sample of the true magnitude of infrastructure investment needed across the region, highlighting pending climate projects that seek to reduce emissions, create quality jobs, and build more equitable and resilient communities.

Number of cities and projects reported



[6] CDP and ICLEI – Local Governments for Sustainability continue to enhance the leading global climate reporting platform for cities through its new questionnaire, aligned more closely with the needs of capital markets.The streamlined questionnaire raises the bar on tracking progress on cities climate action and simplifying the process for reporting cities.To reflect this new emphasis on tracking and action, the platform's name has also changed, from the CDP-ICLEI Unified Reporting System to CDP-ICLEI Track.

There are opportunities to accelerate early-stage projects

Nearly two-thirds (264) of all reported projects (472) are in the early stages of project development, demonstrating the potential role of technical assistance to help advance projects towards implementation. **In Latin America, project disclosure data indicates that most early-stage projects (166) are being reported primarily by small to mid-size cities**[7]. Further, of the 335 projects that reported costs, **234 projects are valued under US$2 million.** This points to an opportunity for project aggregation, given the challenge of financing small projects with high transaction costs.

Projects Maturity Status

264 projects — Early stage

201 projects — Mid-late stage

Type of Urban Area

287 projects — Small to mid-size cities

185 projects — Big cities

Of the 201 mid to late-stage projects, 86 were reported by big cities[8]. Big cities reported more costly and mature projects. While the average total project cost of all reported projects in Latin America is approximately US$25 million, this figure is significantly greater at ~US$50 million when only considering the average total project cost of big cities.

[7] Small to mid-size cities are considered in this factsheet as those that have less than 500 thousand inhabitants.
[8] Big cities are considered in this factsheet as those that have more or equal to 500 thousand inhabitants.

Project Sectors: Cities Demonstrate a Diverse Portfolio of Opportunities

Waste Management - **91 projects**

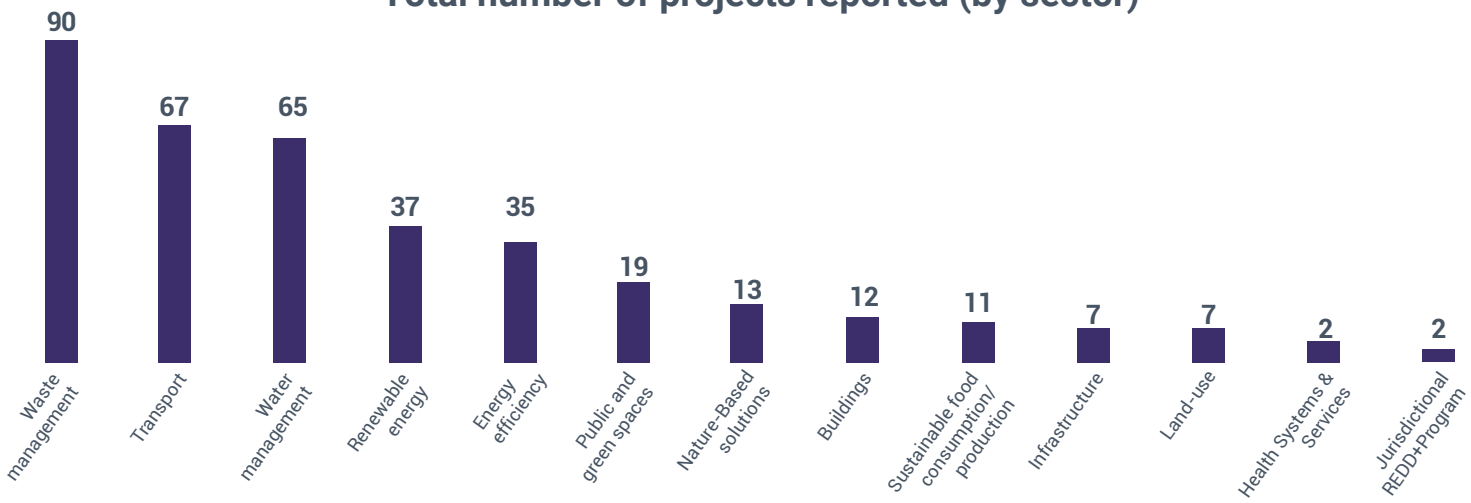
Transportation - **63 projects**

Water Management - **61 projects**

Waste management not only has the highest number of pending projects but is also seen to have one of the lowest reported project costs. Among the reported waste management projects, Latin American cities are looking to invest in the development of solid waste management plans and projects that focus on composting biodegradable waste, suggesting a need for more sustainable waste recovery and treatment processes.

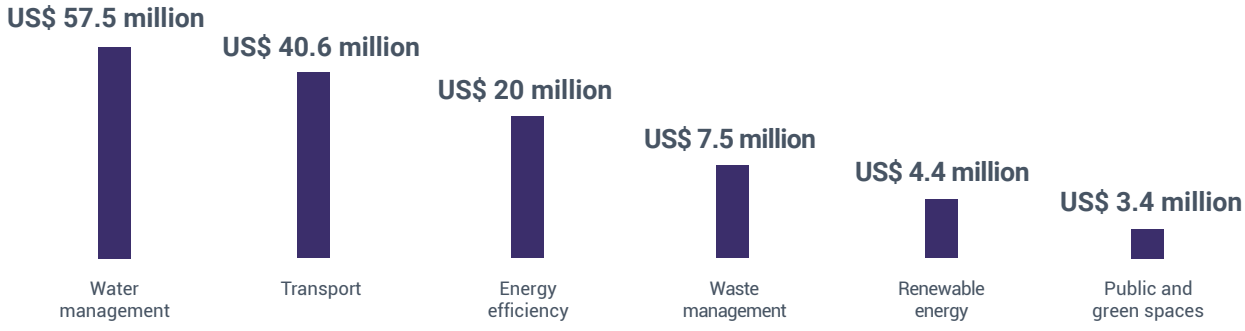
Latin American water-related projects include not only infrastructure for the collection and distribution of water but also improvement of urban and peri-urban water quality. Reported transportation projects are focused on developing electric or zero-emission transportation systems and improving the resilience of existing infrastructure.

Total number of projects reported (by sector)



Note: The total number of projects is 472. This total includes 96 projects classified as "other" that cities have reported to CDP-ICLEI Track. Projects in the "other" category range from urban resilience to climate policy and education initiatives. Many reported projects in this category are also applicable to multiple project sectors. A further 10 projects did not report the project sector.

Average project cost (by sector)

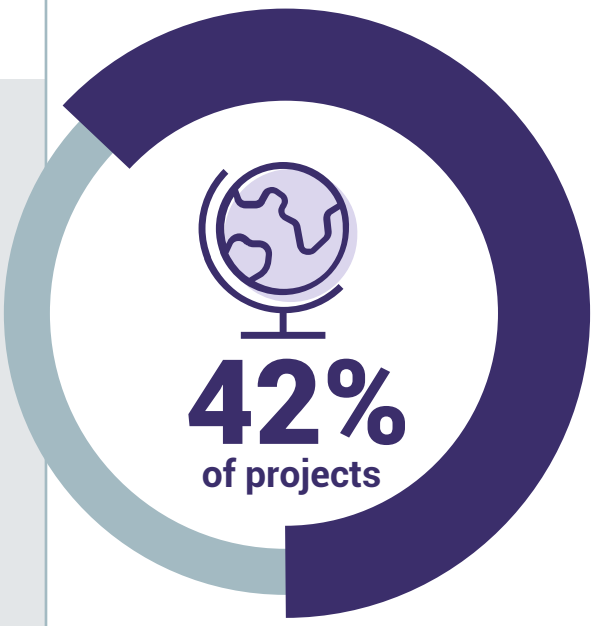


Note: Project sectors not depicted: Buildings, Nature-Based Solutions, Land-Use, Sustainable food consumption/production, Health Systems & Services and Jurisdictional REDD+ Program. Combined, these sectors have an average project cost of ~US$300,000.

Use of Finance Instruments: Financial Innovation is Key in Attracting Private Finance

Of the 254 reported projects that disclosed financing models, **42% reported that they are seeking public financing to advance towards implementation.** As most cities in Latin America do not have the fiscal autonomy needed to raise private finance; national development banks, federal governments, and other development finance institutions have a large role to play in financing urban climate infrastructure in the region. Additionally, **21% (54) of the reported projects have reported that they are considering more than one type of financing model**, including leveraging private investments, loans from commercial banks/international financial institutions, and the carbon markets.

By utilizing blended finance, municipalities may be able to access the range of financing instruments that can de-risk, catalyze, and finance projects in environments that may be lacking mature private sector engagement.



are seeking public financing to advance towards implementation.

As many cities report infrastructure projects without indicating the chosen financing instrument(s)[9], there is an opportunity for other sources of revenue through mechanisms like land value capture, user fees, and tax incentives, which offer alternative pathways for cities to support both economic growth and climate action.

[9] World Resouces Institute (WRI). 2020. Financing Low Carbon Infrastructure In Urban Areas In Brazil: Context, Barriers And Opportunities For Green And Climate Finance In Brazilian Cities

Latin American Cities Are Driving Impact

Case Studies from Select Cities

To demonstrate concrete action by cities, the four use cases below highlight the types of projects, financing mechanisms, and solutions that cities are elevating. They represent a range of sectors, project sizes, and countries, and are all active members of the **C40 Cities Climate Leadership Group** **or the Global Covenant of Mayors for Climate and Energy**.

Solar Farm

- **City:** Salvador, Bahia, Brazil
- **Area:** Renewable energy
- **Stage:** Early stage
- **Status of financing:** Seeking full funding
- **Seeking:** $5,733,135
- **Identified financing methods:** Onerous concession or a public private partnership

This project seeks to finance renewable energy generation through the installation of solar panels in Canabrava Park and on the roofs of the Bus Rapid Transit stations. This project will generate installed power of 5MW that will be used for public lighting and energy consumption across municipal public buildings. The system will be operated under a Public Private Partnership or concession and will supply a significant part of the energy demand of the Municipal Public Administration. At the end of the concession period, this asset will be reverted to public administration (build-operate-transfer).

Electric Vehicles

- **City:** Providencia, Chile
- **Area:** Transport
- **Stage:** Early stage
- **Status of financing:** Seeking partial funding
- **Seeking:** $431,899
- **Identified financing methods:** Partial public finance (own budget) and seeking additional funding

This project stems from the municipality's mobility objectives within its Local Energy Strategy and seeks to promote efficient energy sources that will reduce the environmental impact of municipal activities. Electric vehicles (EVs) present a series of social and environmental benefits and will position Providencia as a sustainable municipality by reducing noise, curbing emissions of pollutants, and offering additional co-benefits. Additionally, the municipality is working towards including electric vehicle charging points to promote its usage and accessibility.

Smart Parks

City: Lima, Peru

Area: Green areas

Stage: Early stage

Seeking: $488,482

Status of financing: Project not funded and seeking full funding

Identified financing methods: Not identified

The city of Lima will undertake a preliminary study to place climate sensors in parks and gardens to implement an intelligent irrigation system. These sensors will measure climatic variables — temperature, precipitation, soil moisture, and wind speed — to inform the city on how to improve water management. This information will be transmitted to a Geographic Information System (GIS) where municipal technicians manage irrigation in real time from their computers and detect incidents such as malfunctions or failures.

Urban Drainage Management

City: Cartagena de Indias, Colombia

Area: Water management

Stage: Early stage

Seeking: $378,111,450

Status of financing: Seeking partial funding

Identified financing methods: Project open to grants; public finance - own budget; private investment; loans from international financial institution

The District of Cartagena is seeking to develop an adequate system of stormwater drains to limit the harmful effects of rainfall in the region. Currently, only one of the city's rainwater drainage channels has been modified to prepare for extreme weather impacts. Only eight channels have detailed engineering plans and budgets, with a further 18 needing to be designed and engineered to meet urban drainage requirements.

Conclusion

While project data disclosed to CDP-ICLEI Track in 2022 highlights that Latin America has a significant number of pending climate projects, many of these projects are stalled in early stages of the project development cycle. There is an opportunity for small-mid sized cities to share lessons learned and best practices that can help coordinate and strengthen efforts to meet their climate goals. Aggregating projects through activities like bulk purchasing and power purchasing agreements will allow municipalities to be better positioned to attract higher volumes of finance and employ innovative financial instruments such as thematic bonds and blended finance to advance projects towards implementation.

Multilateral finance institutions and other multi-stakeholder organizations can support this movement by investing in technical assistance and coordinating solutions between the public and private sectors for a unified outcome that works for people and planet in the long term. This would not only have the potential to enhance existing projects in the pipeline, but also strengthen the climate resilience of future infrastructure projects.

This data was collected in partnership by
CDP and ICLEI – Local Governments for Sustainability

In partnership with

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