The State of Urban Climate Finance: Financial Flows Towards Urban Adaptation and Support for Project Preparation

CITIES CLIMATE FINANCE LEADERSHIP ALLIANCE

UNDRR GETI
February 18th, 2021
Agenda

➢ Introduction to the Climate Policy Initiative and the Cities Climate Finance Leadership Alliance
➢ Urban Climate Finance Overview
➢ Deep Dive: State of Urban Climate Adaptation Finance
➢ Project Preparation Resource: The Green City Finance Directory
➢ Discussion
We are analysts and advisors with deep expertise in policy and finance.

We help governments, businesses, and financial institutions drive economic growth while addressing climate change.

We are unique in our focus on finance, our ability to get the right people to the table, and our analytical rigor.
Office across the world
in Brazil, Kenya, India, Indonesia, the United Kingdom, and the United States.

We also have projects in other places with high potential for impact.
The Cities Climate Finance Leadership Alliance is a coalition of leaders committed to deploying finance for city level climate action at scale by 2030.

The Alliance serves as the only multi-level and multi-stakeholder coalition aimed at closing the investment gap for urban and subnational climate projects and infrastructure worldwide.

**2014:** Launch of the Alliance by the previous UN Secretary General.

**2019:** The Alliance is officially renewed during the UNSG Climate Action Summit.
Alliance Members

SUPPLY
Public & Private Finance Institutions

ENABLERS
UN System, Research, Academic, NGOs, Foundations, Philanthropies

GATEKEEPERS
National governments (donor and aid-receiving countries)

DEMAND
City/subnational governments
Global city networks

FUNDERS
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

SECRETARIAT
Climate Policy Initiative
How?

**GOAL**

**MOBILIZE FINANCE** for city-level climate action at scale - 2030

**IMPACT**

**AMPLIFY AMBITION** and engagement for city-level finance

**BRIDGE DEMAND AND SUPPLY** along the investment chain for city-level climate-related finance
Making cities a **priority** by

- **Building awareness** of city finance needs and opportunities
- **Identifying existing solutions** and **gaps** in city-level climate-related finance
- **Supporting new investment solutions** that fill crucial gaps in cities climate finance
- **Crafting a strong global architecture** to support measurement and evaluation
Hosting the Leadership for Urban Climate Investment (LUCI)

- LUCI is a framework that elevates and tracks the activities of Alliance member initiative.
- Geared towards four ambitious targets related to urban climate finance and infrastructure development by 2025.
- Hosted by the Alliance, LUCI was initiated by a multi-stakeholder coalition led by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU) at the UN SG Climate Summit in 2019.

Visit the LUCI page: urbanclimateleaders.org

Targets

- 2000 cities have strengthened capacities in project preparation by 2025
- 1000 climate smart urban projects are bankable by 2025
- 1000 climate smart urban projects are linked to finance by 2025
- 100 climate smart urban projects successfully utilized new financing mechanisms by 2025
Urban Climate Finance

Introduction and context
Cities are at the forefront of the climate crisis

- Cities are key to achieving Paris Agreement objectives.
- Cities are at risk.
- The financial risk will increase.
- The urgency to act is clear.
- Urban climate friendly infrastructure projects are not realized at the scale and speed required.
We know that cities face major financing barriers

Despite the crucial role cities play, they face several barriers in unlocking the finance required to do so:

Institutional barriers
- Budget restrictions and the high levels of debt
- Capacity to prepare infrastructure projects
- Need for international funding to go through the national government

Financial
- Lack of creditworthiness
- Lack of investor-ready bankable projects of sufficient size and quality
- Potential low returns and high risk

Knowledge
- Lack of understanding re subnational level climate finance
- Private investor disconnect
- Administrative boundaries of cities
COVID-19 has increased many of these challenges

90% of COVID cases have been reported in urban areas (UN)

Strong impact of COVID on subnational budgets is expected in the medium-term in 4 key ways:

1. Significant decrease in local revenues
2. Increased spending on healthcare, social protection, and maintaining basic services
3. Capital expenditures put on hold – in some cases long-term capital spending being allocated to operational needs
4. Uneven assistance from national, international, and private sources
Opportunity to work with DFIs and governments to help effectively program USD 200 billion funding through cities

Of the ~USD 1 trillion recovery funds pledged to cities, 80% is for short-term liquidity, leaving **NEARLY USD 200 billion to remaining funds**.

Yet, most funding is loosely or not yet programed, providing an opportunity for cities.
What can tracking urban climate finance tell us?

- **Evaluating progress and effectiveness** of climate smart urban transitions can be a **powerful tool for national and local policymakers**.

- This data goes beyond policy intentions to signify **what is happening on the ground**.

- Tracking gives us a **detailed snapshot** of the success and gaps by:
  - Mitigation/adaptation
  - Sector
  - Region
  - Source
Defining urban climate finance

**Urban climate finance**

Resources directed to activities limiting city-induced GHG emissions or aiming to address climate-related risks faced by cities, contributing to urban low carbon development or resilience.

- **Mitigation finance**
- **Adaptation finance**
How much climate finance is being invested in cities today?

• Over the next 10 years, 70% of global climate infrastructure spending is needed in urban areas

• This translates to a need of approximately USD 400 billion to 1.1 trillion per year by 2030 for low-emission and climate resilient infrastructure.

• At today’s investment rate, only ~50% of urban need is being met

• Climate mitigation projects attracted more than 90% of the total of global climate finance

*Estimates from Alliance, 2015. Currently being updated in the State of Cities Climate Finance Report to be released later this year. Check for updates at www.citiesclimatefinance.org
Urban Climate Adaptation Finance
Objectives

• Focus on the financial flows to urban climate adaptation
• Provide an overview and case studies of the financial instruments utilized
• Propose recommendations to increase urban adaptation finance
• Share a concrete resources that cities can utilize
Key Takeaways

- **USD 6.8 billion** was invested annually in 2017-2018 in urban adaptation finance projects.

- Falls short of the estimated **USD 11-20 billion needed by cities in emerging and developing countries** annually (WRI, 2019)

- **Extreme heat and flooding/sea level rise** were the most common **hazards** reported by city governments.
Cities are highly vulnerable to climate change risks

Figure 1. Number of Projects Reported by Climate Hazard, CDP Cities 2019

- Flood and sea level rise: 779
- Extreme hot temperature: 504
- Extreme precipitation: 466
- Water scarcity: 301
- Storm and wind: 241
- Mass movement: 224
- Wildfire: 121
- Chemical change: 78
- Extreme cold temperature: 63
- Biological hazards: 20
These climate risks have high associated project costs

**Figure 4. CDP Cities: Total Project Costs Reported by Climate Hazard**

- **Storm and wind**: $21.2 bn
- **Extreme precipitation**: $12.6 bn
- **Flood and sea level rise**: $2.2 bn
- **Chemical change**: $1.5 bn
- **Water scarcity**: $657 mn
- **Mass movement**: $310 mn
- **Extreme hot temperature**: $279 mn
- **Unknown**: $32 mn
- **Wildfire**: $28 mn
- **Extreme cold temperature**: $6 mn
- **Biological hazards**: $0.5 mn
Water and wastewater management received majority of finance, 2017/2018 (USD billion)

Total: USD 6.8 billion
Cities report a range of project types underway to address climate risk

Figure 7. CDP Cities: Total Projects Reported by Project Type

- Risk mapping, planning, and policy: 802
- Nature based solutions: 376
- Awareness or education campaign: 361
- Infrastructure resilience: 308
- Resilient water supply and efficient use measures: 305
- Warning and evacuation systems: 186
- Projects and policies targeted at those most vulnerable: 136
- Flood defense development: 124
- No action currently taken: 102
- Community cooling efforts: 90
- Disease prevention measures: 72
- Air quality initiatives: 40
- Other or Unknown: 16
# Urban adaptation financing sources

<table>
<thead>
<tr>
<th>Type of funds</th>
<th>Financing sources</th>
<th>Instruments</th>
<th>Urban application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>Municipal government</td>
<td>Local revenue generation</td>
<td>- Utility fees</td>
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<td></td>
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<td>- Open space funds/land value capture</td>
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<td>- General obligation bonds</td>
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<td>- Tax increases or allocation shifts</td>
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<td></td>
<td>State/provincial government</td>
<td>Grants, incentives, technical assistance funds</td>
<td>- National or state/provincial subsidies</td>
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<td>National government</td>
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<td>- Insurance</td>
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<td></td>
<td>- Tax advantages</td>
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<td></td>
<td>- Low-cost project debt</td>
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<td></td>
<td>- Infrastructure investment funds</td>
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<td></td>
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<td></td>
<td>- Shared taxes</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Funding transfers/revenue sharing</td>
</tr>
<tr>
<td>Development + Public Finance</td>
<td>National DFIs</td>
<td>Grants, project debt (low-cost or market rate), technical assistance funds</td>
<td>- Risk mitigation support of PPP</td>
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<td>Bilateral DFIs</td>
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<td>- Project level debt</td>
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<td>Multilateral DFIs</td>
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<td>- Project preparation facilities</td>
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<td></td>
<td></td>
<td></td>
<td>- Insurance</td>
</tr>
<tr>
<td>Public + Private</td>
<td>Climate Funds</td>
<td>Grants, debt, equity, guarantees</td>
<td>- Dedicated climate funding (i.e., Adaptation Fund)</td>
</tr>
<tr>
<td>Private</td>
<td>Commercial FIs</td>
<td>Project debt and equity (market-rate), guarantees</td>
<td>- Private risk mitigation</td>
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<td></td>
<td>PE/infrastructure funds</td>
<td>Project equity (market-rate)</td>
<td>- Urban infrastructure investment</td>
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<td></td>
<td>Institutional investors</td>
<td>Project debt and equity (market-rate)</td>
<td>- Urban infrastructure investment</td>
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<td>Private insurance</td>
<td>Insurance</td>
<td>- Public and private risk mitigation</td>
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<td>Corporate actors</td>
<td>Balance sheet financing and project equity (market-rate)</td>
<td>- Catastrophe bonds</td>
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<td></td>
<td>Households</td>
<td>Balance sheet financing, equity</td>
<td>- Parametric insurance</td>
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<td>Nonprofits</td>
<td>Grants, technical assistance</td>
<td>- Private risk mitigation</td>
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<td>- Philanthropies and foundations</td>
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<td>- Private donations</td>
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<td>- Microfinance</td>
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There are many options to finance urban climate adaptation projects and programs

- Cities must be aware of the possibilities
- Cities need more support in utilizing these instruments
- We need to ensure cities have more access to private finance
- Opportunity for urban networks to share knowledge
There are numerous barriers to financing urban adaptation

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Application to urban adaptation</th>
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<tbody>
<tr>
<td>Limited access to risk information</td>
<td>There may be limited data on climate hazards and impacts on communities, public, and private assets</td>
</tr>
<tr>
<td>Poor market environment</td>
<td>Market environment can be unsupportive towards adaptation investment, often be seen as having a less attractive ROI</td>
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<tr>
<td>High cost of projects and unknown value add</td>
<td>The value or benefit of the technology may be uncertain; private sector actors do not sufficiently consider climate risk in decisions.</td>
</tr>
<tr>
<td>Weakness of domestic insurance markets</td>
<td>There may not be a robust insurance ecosystem or awareness of insurance mechanisms</td>
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Case Studies
Case Study: Philippine cities address flooding through insurance risk pooling

Philippine City Disaster Insurance Pool

**Instrument:** Insurance pool  
**Source:** Asian Development Bank

- The project aims to build resilience to flooding caused by heavy short-term rainfall. Ten cities were selected based on governance capacity, vulnerability, and data availability.
- The design of this pool was led by the Philippines Department of Finance, supported with TA from ADB.
- The pool is designed to provide post-disaster financing through a parametric insurance model.
- The Pool is part of a broad ‘local’ level strategy to address the need for rapid access to early recovery financing.
Case Study: Two complementary instruments for Dakar’s Stormwater and Solid Waste Management Resilience

Dakar Stormwater and Solid Waste Management Resilience

Instrument & Source: C40 Cities Finance Facility (instrument: technical assistance) and World Bank (instrument: low-cost debt)

- Dakar received support from the C40 Cities Finance Facility to prepare the project for hydraulic and landscaping redevelopment of a stormwater retention basin.
- The project aims to significantly reduce the vulnerability of residents in the affected district to flooding caused by heavy short-term rainfall.
- CFF supported the city in conducting technical studies for the hydraulic rehabilitation of the basin, consulted and involved residents for the redevelopment of the area and strengthened the capacities of city administration. The Facility’s assistance allowed the city to identify appropriate financing sources for the project with a focus on multilateral development banks (C40 Cities, 2020).
- To address similar climate risks in the city, in March 2020, the World Bank approved USD 125 million in International Development Association credit to support solid waste management system improvements. The project is expected to total USD 295 million with co-financing from AFD, AECID, the government of Senegal, and the private sector. (World Bank, 2020b)
THE GLOBAL INNOVATION LAB FOR CLIMATE FINANCE
Since 2014, the Lab has launched 49 solutions that tackle investment barriers in the most critical sectors and regions for action on climate change.

Number of Lab instruments:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Region</th>
<th>Count</th>
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<tbody>
<tr>
<td>Renewable Energy</td>
<td>Asia</td>
<td>22</td>
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<tr>
<td>Sustainable Cities</td>
<td>Africa</td>
<td>20</td>
</tr>
<tr>
<td>Climate Risk</td>
<td>Latin America</td>
<td>18</td>
</tr>
<tr>
<td>Agriculture, Land Use, Forestry</td>
<td>International</td>
<td>15</td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Energy Access</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>
$2.39+ bn mobilized by 49 instruments for climate action in developing countries

$370+ mn invested by Lab Member institutions

$2.0+ bn catalyzed in additional investment

Lab instruments have mobilized 200x what funders have invested in the Lab Secretariat
• The first commercial investment vehicle to focus on technologies and solutions for climate adaptation.
• Uses a blended finance structure to invest growth equity in companies delivering climate intelligence or physical products and services for resilience.

PROGRESS TO DATE
• Reached first close for USD 75 million from public and private investors at the end of 2019
• Identified 20 relevant climate resilience market segments totaling USD 130 billion of current spending and mapped more than 700 companies within these segments
• The first instrument to address water scarcity in Southern Africa by streamlining adaptation project financing into a single instrument

• Combines short-term construction financing from commercial banks with post-construction financing from long-term funders to increase flow of funding from both

• Taps into the abundant private capital available in local debt capital markets, which are not typically invested in infrastructure-related adaptation projects

PROGRESS TO DATE

• Developing set-up to start operations, legal work
• Developing financial and impact measuring processes
Supporting increased project preparation for climate smart infrastructure
Project preparation is critical in order to implement climate smart urban projects at scale

Many cities face major challenges in identifying and developing financially viable low-carbon and climate-resilient infrastructure projects.

Project Preparation Facilities (PPFs) assist cities by supporting activities in the project preparation stage of the project cycle with the goal of successfully connecting with finance.

- Concept/Design/Scoping
- Pre-feasibility
- Feasibility
- Implementation
Visit: greencityfinance.org
The City Climate Finance Gap Fund supports early-stage project preparation

Visit the website: www.citygapfund.org

Apply for support
Visit our website for more information related to urban climate finance

For these and other reports, visit: www.citiesclimatefinance.org
Thank you!

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