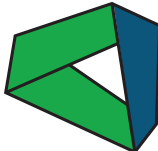




Banking on a Just and Green Recovery

Lessons from nine cities



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01

Introduction

- Climate action within cities can help to address the climate emergency** 05
- Climate change has an inequitable impact on city residents** 05
- Sustained investment and finance can strengthen climate action** 05
- Cities have already developed and scaled finance solutions for climate action** 07
- City climate finance gap** 07

02

Case studies: City climate finance in the context of a just and green recovery

- Case studies list** 10
- Case study context** 12
- Lessons learned: Accelerating cities access to climate infrastructure finance** 12
- FREETOWN** 18
- MELBOURNE** 22
- BANDAR LAMPUNG** 26
- BOGOTÁ** 30
- CAPE TOWN** 36
- SEOUL** 42
- ADDIS ABABA** 48
- ATHENS** 52
- HONG KONG & LOS ANGELES** 58

This report was designed and compiled by WSP (Adarsh Varma, Katherine Maxwell, Nicola McMillan, Manesh Ravji, Peter Hayakawa, Oliver Clay and Alice Creasy). The CFF team, in particular Aris Moro, Mehrnaz Ghojeh, and Valerie Brown, provided insights and comments throughout the process. The authors would also like to thank the members of the C40 Finance Advisory Group who volunteered their time and expertise to shape the report's narrative. Cover photo copy write is by Alistare Berg (Getty Images).

The CFF is a collaboration of the C40 Cities Climate Leadership Group and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The CFF supports cities in developing and emerging economies to develop finance-ready projects to reduce emissions in support of limiting global temperature rise to 1.5°C and strengthening resilience for the impacts of a warming climate.

The CFF is funded by the German Federal Ministry for Economic Development and Cooperation (BMZ), the Foreign, Commonwealth & Development Office (FCDO), Energy and Industrial Strategy (BEIS), and the French Development Agency (AFD).

Implementing agencies



Funding partners



01

INTRODUCTION

Banking on a just and green recovery



Climate action within cities can help to address the climate emergency

Cities are already home to over half of the world's population, and this is expected to continue to increase in the next few decades. Cities are key centres of economic, political, social, and cultural activity, accounting for 80% of global GDP. This also means that cities are responsible for over 70% of global energy-related carbon emissions. Cities need to play a critical role in addressing the climate emergency through deep reductions in current greenhouse gas emissions, but also preparing for resource efficient growth and implementing low-carbon infrastructure.

At the same time, cities also face serious climate risks. In the global south, over 90% of urban growth is either near climate hazard-prone areas or consists of vulnerable, informal, and unplanned settlements, according to the World Bank. Cities are now exploring climate action that can both decrease greenhouse gas emissions and strengthen urban resilience to reduce the impact of climate change on their populations.

Climate change has an unfair impact on city residents, as do other crises such as the COVID-19 pandemic

Climate action within cities can help to tackle the climate emergency but the wider benefits of climate action (e.g. improved health, public services, access to green space) are not always distributed fairly.

In cities, those living in informal communities, of lower income levels, migrants, women, older adults, and those from other under-represented communities are especially vulnerable to climate risks. These groups are also less likely to benefit from climate-related investments, such as green spaces in the city centre that are too far from where they live. Across Europe, for example, multiple country studies have shown that lower income neighbourhoods and cities have significantly less access to green space and parks. With over 880 million people globally living in informal settlements, the IPCC notes that development for these communities with low-carbon services and housing provides an important opportunity for low-carbon transition.

The COVID-19 pandemic has exposed these inequities within cities and has revealed the fragility of our economic, political, and social systems. It is now time for cities to focus their economic recovery efforts towards climate action that brings about just and equitable outcomes for vulnerable communities.

Sustained investment and finance can strengthen climate action

Cities need sustained investment to build critical urban infrastructure. To deliver on their ambitious climate commitments, cities need to access different short- and long-term routes for urban climate finance. The Cities Climate Finance Leadership Initiative (CCFLA) estimates that cities around the world require at least \$4.5 trillion USD in infrastructure investments per year to mitigate and adapt to the climate emergency. Cities need to access this funding, from various sources, to reduce greenhouse emissions and climate risks, but also to future-proof rapidly growing urban areas.

The COVID-19 pandemic has had a severe impact on the municipal finances of many cities, with one analysis showing an average 10% drop in city revenues across the world in 2020, with an average 5% increase in expenditure to respond to the pandemic. Despite this, finance options for cities' climate action are diverse and rapidly evolving, emerging as a key issue for policy makers and investors. There are many ways city officials are currently raising funds and can look to raise them in the future.

There has been an unprecedented amount of additional global government spending – around \$16 trillion USD – on COVID-19 response and economic recovery since 2020. However, recent research suggests that additional spend is concentrated in wealthier, global north countries. Moreover, this has not always been directed towards climate action. Therefore, funds have generally not gone to the at-risk communities in global south countries where they are needed most. For example, according to the International Energy Agency, only 2% of Covid recovery spending went to clean energy transition projects, whilst global greenhouse gas emissions have reached record levels.

Since the global pandemic, a World Resources Institute study of climate finance trends, following the pandemic in 17 developing countries, found that:

- Most had reduced public and private expenditure on climate action since the pandemic.
- Climate-specific international bilateral government funding dropped 4% due to COVID, and private funding also dropped.
- Even prior to the pandemic, extreme weather linked to climate change had already reduced available funding for climate mitigation in 1/3 of the countries studied. This is because the increased number of natural disasters has led to reallocation of resources away from planned projects.



Cities are innovating

Cities are finding innovative ways to finance and implement projects with a focus on inclusion, equity, and a green and just recovery. Crucially, they also are focusing on the basics: building partnerships; increasing their revenue collection to improve their creditworthiness; and incorporating climate action into their formal planning processes and strategies. However, cities in general lack tools to navigate the complex area of climate infrastructure finance. To address this, the C40 Cities Finance Facility have closely examined research on the state of cities' access to finance in light of the climate emergency and in the wake of the pandemic. The result is a set of diverse case studies of cities which are leading the way, with the aim of sharing actionable lessons for city officials and other stakeholders.

For example, Seoul has developed innovative financing schemes for city buildings, and the City of Los Angeles is using city funds to install solar power in lower income communities. Cape Town has issued its own green bond to address water management issues and support local employment opportunities, whilst Bogotá has positioned itself as a world capital of cycling through the development of an inclusive bike-sharing system.

What is climate finance and how do cities access it?

Climate finance is defined by the United Nations as local, national or transnational financing – drawn from public, private, and alternative sources of financing – which seeks to support mitigation and adaptation actions that will address climate change. The burgeoning field of climate finance is predicted to impact the whole global financial system, as governments and the private sector begin to formalise ways to link financial flows with lower emissions and addressing acute climate risks.

However, cities and investors should not draw too much distinction between climate-finance and traditional finance. Given their impact on global emissions and exposure to climate risk, cities should ensure that all their financial plans for infrastructure support robust climate action.

The formalisation of climate finance in both public funding and, increasingly, private sources means that cities should take steps to increase their access. However, cities are not single entities, but a complex web of institutions, including the city administration, utilities, and national or state-level bodies. In 2022, the IPCC argued that this complexity must be embraced as infrastructure projects for urban mitigation are often beyond the capacity of local municipality budgets, jurisdictions and institutions. Partnerships between cities and international institutions, national and regional governments, transnational networks and local stakeholders play a pivotal role in mobilizing global climate finance resources. City stakeholders should, therefore, be building partnerships locally and internationally for climate finance.

Addressing the city climate finance gap is crucial

Despite the initiatives taken by cities, recent research shows a significant gap between the amount of finance cities receive and the amount they need to meet the climate emergency, highlighting the urgent need for climate finance support.

In 2021, CCFLA analysed climate funding to cities from all sources, tracking \$384 billion USD for the year 2017/18. Their findings identified that:

- **Cities need more urban climate finance.** \$384 billion USD is less than 9% of the \$4.5 trillion USD (equivalent to more than 1% of global GDP) needed each year.
- **There is urgent need for adaptation finance.** Only between 2% and 9% (ca. \$7 billion USD) went to identifiable climate adaptation projects.
- **Cities in low- and middle-income countries do not have equal access to finance.** Less than 1% of finance went to Sub-Saharan Africa, and less than 3% to South America.
- **Transport is the most successful climate infrastructure sector for cities.** Over half of traceable city climate finance went towards transport (52%, or \$202 billion USD).



02

CASE STUDIES

City climate finance in the context of a just and green recovery



Our studies

The C40 Cities Finance Facility have collected nine case studies in this report that demonstrate practical lessons from cities about how to access finance and show that the case for direct city-led climate finance has never been stronger.

Before the COVID-19 pandemic and in its aftermath, many cities have leveraged climate infrastructure investment to support inclusive economic development and make cities more liveable for their inhabitants. At the same time, others are working to ensure economic development and recovery funding supports their climate ambitions. The cases all have a focus on inclusion, equity or just recovery principles, helping to show how cities are incorporating these crucial issues into their approach to financing projects.

Cities in the global south often face higher climate risks and more difficult barriers to access funding. The case studies therefore mostly feature cities in middle- and low-income countries, but at the same time, highlight a diverse mix of locations, sectors, and finance routes.

Case studies list

Freetown, Sierra Leone - Engaged citizens and international finance to restore nature and increase the city's resilience.

Addis Ababa, Ethiopia - Committed to equitable Transport Oriented Development (TOD) to win investment for low-emission urban light rail.

Athens, Greece - Developed a natural capital financing facility to develop urban forests for low-income communities.

Cape Town, South Africa - Launched a municipal green bond to fund city climate and water infrastructure.

Bandar Lampung, Indonesia - Developed a Public-Private Partnership to fund modern water access for citizens and increase the city's climate resilience.

Bogotá, Colombia - Financed an inclusive public-bike-sharing networks through public and private sector collaboration.

Hong Kong, China and Los Angeles, USA - Deployed green employment and jobs schemes to support a just recovery from the COVID-19 pandemic.

Melbourne, Australia and Quito, Ecuador - Leveraged funding for COVID-19 response to develop climate-friendly, socially distanced bicycle infrastructure.

Seoul, South Korea - Decarbonised public and private sector buildings through green standards and regulations, boosting the local green economy.

Case study context

Each case study will summarise the city initiative, its context, and key lessons for other global cities, with a specific focus on answering the following questions:

- **Urban infrastructure sector and its link to the climate emergency:** What was the sector and how did this relate to the city's climate impact?
- **Finance routes:** What approaches did the city take to finance infrastructure initiatives?
- **Inclusion, equity and a just recovery from the COVID-19 pandemic:** How did the city incorporate issues like inclusive community engagement, affordability, or equitable employment into initiatives?

Lessons learned: Accelerating cities access to climate infrastructure finance

The case studies revealed four common lessons that would help cities overcome barriers to climate finance:

i. Cities need greater fiscal autonomy and budgetary space, as well as need updated national legal frameworks to support finance access.

National governments should give cities budgetary autonomy to take advantage of emerging finance opportunities. Updated national legal frameworks should also support Cities access to emerging finance routes.

- **Cities** are making the case to national governments for increased fiscal support and autonomy across key climate sectors, including legal framework changes that allow finance routes like municipal green bonds.
- **Cities** are improving their own fiscal position (and creditworthiness) through:
 - Streamlining financial governance and own-source revenue generation (municipal taxes, levies, fees, etc.)
 - Incorporating climate adaptation risks and mitigations into governance.
 - Developing pipelines of evidence-based "investment-ready" projects.
- **National governments** should invest in cities and grant more autonomy allowing them to develop multiple routes to finance.
- **National governments and international institutions** must ensure fiscal recovery finance supports needed climate infrastructure and equitable outcomes for frontline groups.



Linking budgetary autonomy to a green and just recovery

Around the world, cities often lack budgetary autonomy to pursue climate action. This issue is compounded in the developing world by a lack of fiscal leeway and high cost of servicing debt for economies most disrupted by the COVID-19 pandemic.

National governments should ensure that fiscal stimulus post-pandemic is focused on a green and just recovery and addresses the inequality of finance access in the global south. This should especially address the upcoming climate and social infrastructure needs from rapid growth in cities in the developing world. Cities should be targeted for increased finance as part of national climate planning. These efforts should incorporate inclusive engagement to gather input of groups most at risk from climate change.

During the pandemic, Melbourne and Quito took advantage of national, regional and city funding opportunities to integrate climate action into the response to the pandemic and subsequent recovery efforts to develop and implement cycling infrastructure.



ii. Cities need technical support to create investment-ready projects

Stakeholders should support city financial and technical skills and capacity with each new project, which will increase investor confidence in cities.

- **Cities** are investing in finance and technical skills for key sectors, build dedicated climate teams and incorporate climate consideration into all functions, especially finance and infrastructure.
- **Cities** should develop medium and long-term capital plans for investment-ready projects.
- **International institutions** should continue to upscale efforts to build cities' finance technical capacity.

Linking technical capacity to a green and just recovery

City-led infrastructure projects can build key momentum for growing different parts of the local green economy. Deliberately building the climate skills base over time can reassure potential investors about the viability of future projects and help turn cities into centres of innovative thinking to address upcoming climate and social infrastructure needs.

Freetown City Council has limited staff that can be allocated to projects development, with only around 550 full time city staff. The city launched their tree planting initiative as part of a larger Transform Freetown programme, that built community participation and voluntary technical expertise drawn locally and internationally to collect evidence and build a business case. While this approach can only partially address serious resource limitations, it has helped engage the city community in Freetown's long-term plans and increased the investment profile of the city internationally.



iii. Cities need standardised processes and ways to bundle projects to achieve economies of scale

Projects will be easier to scale and more attractive for investment if they are aggregated both from a demand (city-led) and supply (investor-led) perspectives. For example, this could be in the form of city-led local pipelines of bundled projects that could boost investor confidence, as well as investor-led bundled investment vehicles, that make it easier for cities to access them.

- **Cities** are aggregating their own projects (and working together with other local cities) to develop strategic programmes, de-risking individual projects.
- **International bodies and private investors** should continue efforts to create shareable support, guidance and templates for finance processes and bundle investment vehicles and support for cities to increase economies of scale.

Linking economies of scale to a green and just recovery

Aggregating projects could not only increase economies of scale, this approach can also reduce barriers to entry for lower-income cities and lower the short-term financial risk of investing in high-need places, e.g., cities with acute climate adaptation weather risks or those who could not otherwise qualify for finance.

Quezon City was the first of 10 cities that worked together on a shared insurance risk pooling platform, reducing the cost of insuring against acute physical climate risks at city-level.

iv. Ensure direct access to private and multilateral finance for cities

Key stakeholders, including investor and financial sector, should engage directly with cities, and view city climate infrastructure as a central target for the growing field of climate finance.

- **Cities** are seeking direct assistance from local and international institutions. They should also engage with their local business networks as well as the international private sector to build their profile with investors.
- **International institutions and private investors**, both regional and international, should directly engage with cities to create new routes to finance and easy to access. This should include innovative vehicles targeting areas of most need.

Linking direct investor engagement to a green and just recovery

All stakeholders should ensure city capital investment plans as well as private vehicles of finance are based upon science-based climate targets and equity principles. They must promote resilience to shocks, from pandemics to climate change, and plan for the expected impacts of urban growth, from informal settlements, migration changes, and beyond.

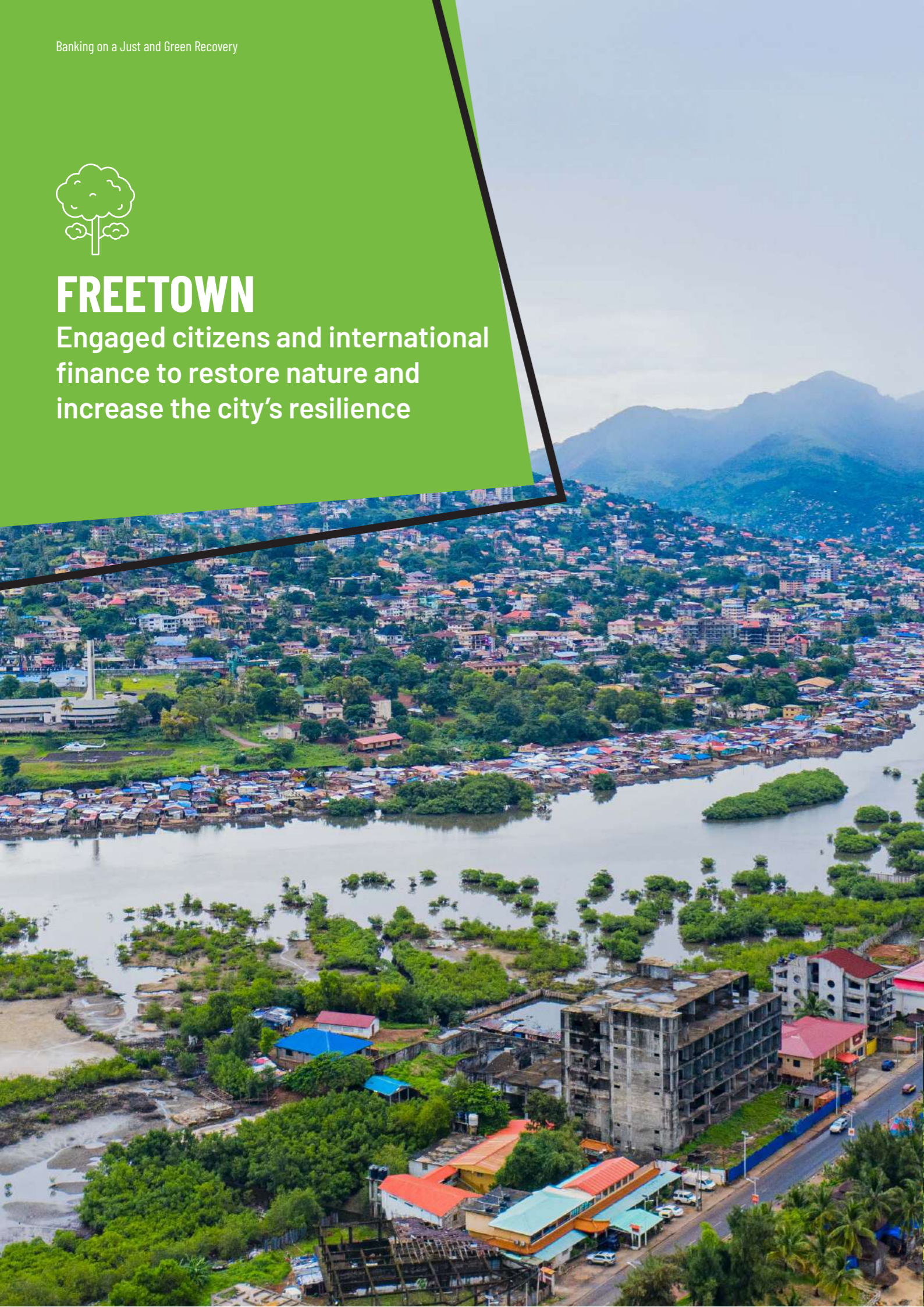
Linking finance to positive social and climate outcomes can steer more finance towards the developing world on better terms. Cities who do not have enough resources to qualify for finance using traditional measures of creditworthiness may benefit from emerging investments. These products pay for ecological, carbon or sustainable development outcomes in addition to or in place of financial returns.





FREETOWN

Engaged citizens and international finance to restore nature and increase the city's resilience



Freetown engages its citizens, development finance and corporate actors to halt deforestation and increase the city's resilience.



Freetown accessed direct funding increasing the city's vegetation by 50%

Project overview

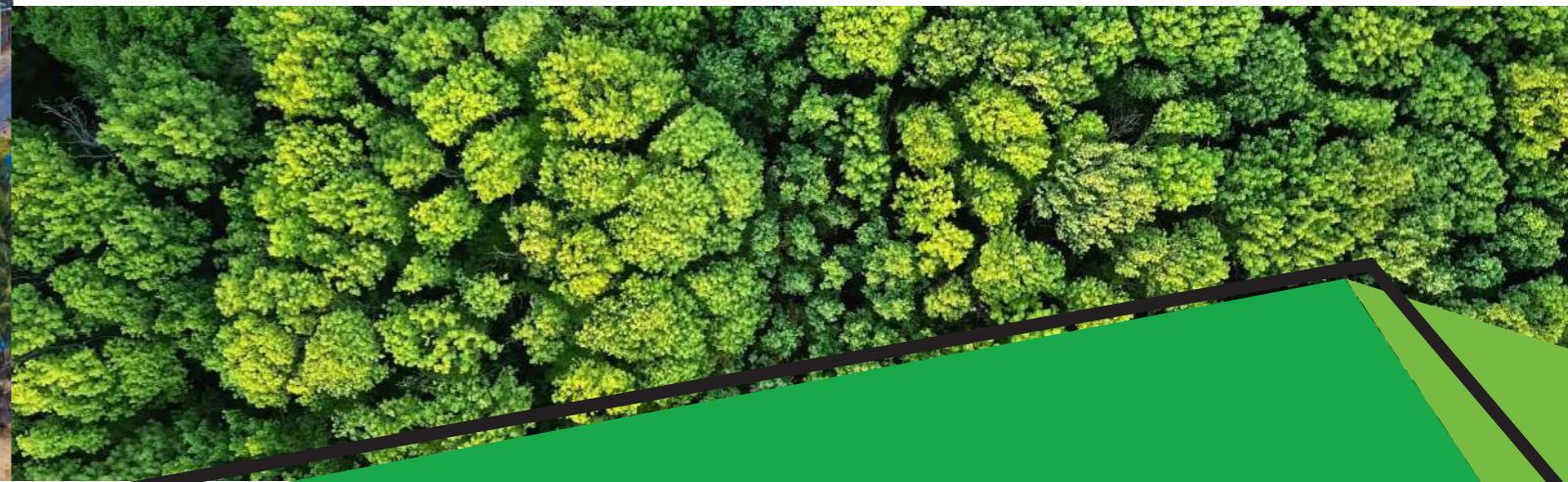
In Freetown, rapid unplanned urban growth has taken its toll on the natural landscape of the city. In 2017, a devastating landslide, partially caused by erosion from deforestation, killed over 1,000 people.

In January 2020, the Mayor of Freetown, Yvonne Aki-Sawyerr, launched 'Freetown the Tree Town', a 3-year programme aiming to plant one million trees to restore the city's hillsides and coastal mangroves. A million new trees is a simple, eye-catching target, but delivering the green infrastructure required may take more than a million.

The programme aims to increase canopy cover by 50% within the city and enhance the safety of vulnerable communities in informal settlements. It will ultimately restore 3,000 hectares of land and sequester approximately 76,000 tons of CO₂. The full ecosystem services from the trees planted during the initial three-year campaign will come later, around 2030, once they are more established.

As well as combating the effects of extreme weather, the program aims to build community resilience and boost local economies, especially in informal developments on the outskirts of the city. To improve the equitable distribution of trees and green space, 35% of areas targeted for new trees or vegetation are informal settlements that currently have low coverage.

This reforestation program has been supported by The World Bank's Resilient Urban Sierra Leone project. The program relies on community-led maintenance and monitoring to ensure its long-term effectiveness, including through digital fundraising tools.



Finance mechanism & amount

Sources of funding: Local government, Private companies, Local and international fundraising, Multilateral/national development banks.

Instrument: Funding from the World Bank; Crowdfunding; and project fundraising, payments for carbon credits/eco-system services



Engaged with 300 communities, 76 schools, 11 health facilities, and 66 religious institutions

Equity/COVID Just Recovery Impacts

#FreetownTheTreetown uses a community growing model, where reforestation is co-designed and co-managed by the community and the city government. Freetown residents are involved in decision-making on where trees are planted and receive payments to plant, grow and digitally track trees on a mobile TreeTracker app.

The city worked with community-based organisations to engage communities and identified residents willing to serve as tree stewards and who would plant trees on their private land. The programme has also engaged with local organisations such as schools, religious institutions, and healthcare facilities. This high-level of community engagement laid the groundwork for community-led monitoring of trees which has helped ensure an initial 95% survival rate for new trees and mangroves.

This program builds community resilience by targeting deforested areas that are vulnerable to rainy seasons, especially newer vulnerable developments in sloped areas or by rivers and streams in the city's outskirts.

The program has created over 1,000 green jobs along the value chain - 80% are <35 years and 48% are women and trained over 1000 Community Climate Action Ambassadors. Training also involved dialogue about climate hazards and reducing harmful practices, such as stone mining and charcoal burning.



Created 1,200 green jobs in tree planting communities funded by city-fundraising

How might these lessons be used in your city?

Pursue direct investor and community involvement

Rather than relying on transfers from the national government, the city has accessed direct funding from partners. Freetown has also drawn on significant community involvement which has enabled it to work on the scale required to realise significant (and marketable) adaptation and resilience benefits, planting 550,000 trees and 50,000 mangroves to date.



80% of the city's tree growers are aged 18-35 years and 44% are women

Invest in adaptation infrastructure to future-proof urban growth

The city, with the help of the World Bank, found that restoring tree cover in more vulnerable areas on the outskirts could help make these communities more resilient and improve living conditions. Future physical risks linked to rapid urban growth have been reduced, as tree planting limits erosion risk during the monsoon season.

Embed inclusive, long-term infrastructure planning

The wider Transform Freetown initiative allowed Freetown to make up for the lack of internal capacity and funding by drawing on local volunteers and international technical expertise. It also embedded community participation to create long-term strategic plans beyond nature restoration, such as climate, health, and mobility. Freetown intentionally designed this process to build citizens' confidence in the city's future and allowing them to have direct ownership in programs that affect them.

Building on initial success to develop multiple channels of finance

The city increasing its own-source city revenue collection to be able to directly engage with multilateral financing institutions such as the World Bank. Freetown has succeeded in accessing multiple sources of funding, such as development banks, philanthropies, corporates, and the broader Sierra Leone international diaspora.

In the space of a few short years, Freetown has leveraged this initiative to become one of the leaders in inclusive, innovative climate finance, building a digital tool to track trees and pay community planters. Building on the strength of the initial project, the city has won £1 million in funding from the Bloomberg Global Challenge to develop this digital tool for investors to buy, sell, and trade tokens and build a database of potential investors, including firms with supply chains into Sierra Leone.



MELBOURNE

Leveraged funding for COVID-19 response to develop climate-friendly, socially distanced bicycle infrastructure



Melbourne leveraged emergency funding to develop climate-friendly bicycle infrastructure in response to the COVID-19 pandemic

During the COVID-19 pandemic, Melbourne brought forward plans for the implementation of cycling infrastructure to adapt to significant increases in ridership. The city focused on cycling investment to allow residents to move sustainably around the city during the pandemic and to support climate ambitions.

The City of Melbourne and regional Victoria Recovery Fund (VRF) co-financed 40km of fast-tracked bike lanes. This infrastructure has helped to encourage active travel to limit the economic and social impact of the pandemic on urban residents.



Provision of safe, carbon-neutral, healthy, socially distanced modes of transport

The city provided these new lanes reduce reliance on cars and to improve connectivity during and after the pandemic. It is also part of Melbourne's '20 Minute Neighbourhoods' initiative, part of which involves reallocating car parking space to new bike lanes and green infrastructure, and de-prioritising car traffic. The 20-minute neighbourhood concept is all about 'living locally' - giving people the ability to meet most of their daily needs within a 20-minute return walk from home, with access to safe cycling and local transport options.

Finance mechanism & amount

- **Financial instruments:** Regional Development Funds.
- **Cost:** \$16m USD for first 20km of Melbourne's bike lanes.



Equity/COVID Just Recovery Impacts

Covid was a defining factor for the development of active travel infrastructure in Melbourne. The new lanes make bike travel safer for the increased number of cyclists during the pandemic, especially the growing numbers of bicycle delivery workers whose work has been vital throughout the crisis.

Cycle lanes and pedestrian infrastructure make city streets safer for users, reducing the number of cars on the road and, particularly, benefiting women, children, and the elderly, who are the most vulnerable road users. These groups are also the least likely to have access to a vehicle.



40km of bike lanes

How might these lessons be used in your city?

Promotion of active travel when public transport is unavailable.

Melbourne has had to address congested, car-filled roads producing significant air pollution. During the pandemic there was an added need to allow people to travel safely as many people were concerned about using busy public transport services.

Changing public space to support cycling also makes cities more liveable.

Melbourne has a '20-Minute Neighbourhood' principle which allows communities to 'live locally' by creating inclusive, vibrant, and healthy localities. Part of this plan requires safe cycling and walking networks.

Active travel supports local economies.

Melbourne understands the importance of linking various parts of the city together. Once established, walking, and cycling schemes tend to grow in popularity quickly as more citizens take advantage of them.



\$16m USD for first 20km of Melbourne's bike lanes

What other cities are doing / Additional Information

During the Covid pandemic there was a tenfold increase in cycling in Jakarta. In response to this the local authority implemented pop-up cycle lanes across all the busiest public transportation routes.

Melbourne's removal of parking spaces in the city centre is a strategy being also employed by other cities, like Paris, which committed to remove 140,000 parking spaces, equating to nearly half of their street parking. Removing on-street parking is emerging as an effective way to encourage lower levels of car ownership, reducing emissions and improving air quality.

Quito has installed 62.7km of bicycle lanes to encourage exercise, carbon-neutral travel options and space for physical distancing. The Paseo Dominical will be the focus, a 30km north-south route that connects the city. East-west routes will also be added to connect metro stops, hospitals, schools, and supermarkets. Focusing on signage, barriers and other basic safety features, Quito was able to install the first phase of bike lanes for only \$460,000 USD, helping them quickly respond to a 650% increase in city bike ridership in 2020 during the pandemic.

Quito has replicated a similar ciclovía scheme as Bogotá, by closing roads on Sundays between 8am-2pm to enable a safe and accessible "bicycle stroll" through the city. There are different routes for people, from flat, child-friendly avenues to routes connecting parks, art galleries, sporting facilities and craft markets. There is also a public bike scheme called BiciQuito.





BANDAR LAMPUNG

Developed a Public-Private Partnership to fund modern water access for citizens and increase the city's climate resilience



Bandar Lampung developed a public-private partnership to ensure clean water access for its residents.

Project overview

Bandar Lampung is a fast-growing city in Indonesia, with about 1.2 million residents. Climate-related extreme weather and flooding in the city has put stress on existing water systems and severely impacted those without piped water supply—limiting their access to clean water.

Until recently, only 20% of Bandar Lampung's residents had access to piped water supplies, with most relying on groundwater sources. Urban growth in Bandar Lampung will exacerbate these water supply issues as the water system deficit (the gap between supply and demand) is expected to grow by 250% between 2015 and 2040 without significant investment.

To address this, the city has committed to the Bandar Lampung Water Supply program. The project aims to provide piped water supplies to 100% of residents, with an interim goal of 46% by 2024. This requires significant infrastructure spending; the city has worked closely with the World Bank's Indonesia Infrastructure Guarantee Fund (IIGF) to develop a public-private partnership to finance and support this mission.

The Bandar Lampung Water Supply is a public-private partnership, involving financing and the construction of a bulk water supply system for Bandar Lampung, an approach that makes the financial investment required more viable. The project has allowed the city to raise nearly half of the \$84 million USD funds required from private sources through debt and equity financing.

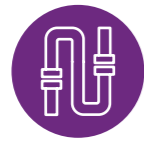


Public Private Partnership to support citizen resilience water security in Bandar Lampung



Finance mechanism & amount

This project has been funded through a public-private Partnership. The total cost of the project was USD\$81.48m and was funded, in part, by the Ministry of Finance, Ministry of Public Works and Housing, and the Bandar Lampung City Government with a possible project guarantee from the Indonesia Infrastructure Guarantee Fund (IIGF).



60,000 households / 300,000 people connected to the water supply

Equity/COVID

Unsafe drinking water creates health risks that negatively impact individuals and communities. Within Bandar Lampung access to clean water is a key challenge for at-risk groups, such as lower income communities living in informal settlements in a city with a 50% poverty rate. World Bank research demonstrates that water access can particularly impact women, who often take on the domestic duties within households.

Bandar Lampung's water supply project targets lower-income communities and informal dwellings. The project complements a range of related climate and social inclusion activities, including an innovative early flood warning system which includes training and capacity building for local vulnerable communities to plan and respond to disasters.



Expansion to 46% of population by 2024

How might these lessons be used in your city?

Strengthen partnerships to secure finance for projects. It took Bandar Lampung almost six years to launch their public/private initiative. However, many public/private partnerships fail because they do not have committed partners, or they have not taken time to develop a viable and profitable financial model. Bandar Lampung's successful experience shows the value of persistent effort over a long period of time to ensure that infrastructure is adequately financed.



70% debt / 30% equity public-private financing

Get support to navigate complexity

Bandar Lampung and the Indonesian government have worked with the World Bank over the long-term, which has supported them to:

- Build the evidence base for the specific inclusion, climate/environmental, health and economic benefits of water system development
- Navigate the complex public private partnership legal framework and development process
- Provide payment guarantees to ensure investor engagement

Consider sustainable development and urban growth in all decision-making

Bandar Lampung is a growing city and is placing increased pressure on drinking water supplies. According to the World Bank, water is a key sector for the future wellbeing of Bandar Lampung and is considered at risk from future changes to the climate.





BOGOTÁ

Financed an inclusive public bike-sharing network through public and private sector collaboration



Financed an inclusive public-bike-sharing system through public and private sector collaboration

Project overview

Bogotá has become one of the world's cycling capitals in recent decades, by building the largest network of cycling infrastructure in Latin America.

Pioneering cycling programmes in Bogotá - e.g., the world-leading ciclovía - date back to 1974. The city has now developed more than 360km of cycle lanes. These lanes enable citizens to travel safely around the city.

Cycling infrastructure eases congestion and reduces crowding on public transport, reducing transport emissions - a key issue in Colombia with over 20% of the country's GHG emissions coming from road transport. Cycle lanes also support the local economy by promoting economic activity in urban spaces and reducing inefficient land uses such as parking.

Despite this history, Bogotá has until recently been unable to implement a successful bike-sharing scheme, which would enable citizens to pick a bike up at a convenient location and drop it off elsewhere in the city. This has been largely due to a lack of public financing options and the high cost of maintenance.

To overcome this barrier, Bogotá is now pioneering an innovative financing mechanism, the "Scheme for the economic use of public space" or "CAMEP". Instead of the city investing and maintaining its own bike share system, CAMEP allows the city to work with a private operator who pays for the use of public land across the city. The city can still dictate minimum requirements and exert control to ensure accessibility to the bike-share system, with the private operator taking care of financing and maintaining the system's assets (e.g., bikes, stations, redistributing vehicles).

The new bike-sharing system is now set to launch, with 3,300 bikes across the neighbourhoods like Usaquén y La Candelaria, Chapinero, Barrios Unidos, and Santa Fe y La Candelaria.



85% of journeys foot, bike or bus

Finance mechanism & amount

Cycling infrastructure has a relatively low capital cost but can be challenging to finance, with no easy way to generate revenue.

Bogotá's CAMEP solution is an innovative way to leverage investment and raise revenues at the scale required for the city. The city can rent out its assets in exchange for compensation and the delivery of a service by an experienced private sector partner.

Through the CAMEP system, the city can sell permits to operators of bike-sharing spaces, who then pay back the city to utilise public land. They, in turn, profit from operating the service and by selling advertising in the rented space. This innovative model greatly decreases the effort and funds the city needs to operate a formal bike-share system scheme. The city worked with elected officials to enable advertising, which was key for economic viability of the scheme.

The city worked with C40 Cities Finance Facility (CFF) and the German Federal Ministry for the Economic Cooperation. The competitive tenure process successfully raised \$10.4 million USD in investment from a private mobility operator and is set to launch in 152 sites across the city.



\$10.4 million USD invested by mobility company Tembici



Equity/COVID Just Recovery Impacts

In the CAMEP scheme, the city does not have to invest in bicycles or maintain them. However, the city has set minimum standards to ensure accessibility for all citizens and to promote inclusivity. In Bogotá's case, this includes provision for electric pedal-assisted bikes, innovative hand-pedal bikes, cargo bikes and children's bikes (as well as children's seats) and Braille on each bike station so that the service is accessible to a variety of users. Each bike station also has a QR code that links to a video for people to see how the scheme works.

The city is taking steps to ensure that rental locations are available across the city, including in lower income and underserved neighbourhoods. This includes areas like Santa Fe, a lower-income area that has seen an influx of thousands of Venezuelan migrants over the past few years.

Many of the 3,300 bikes in the system will be available across areas such as Santa Fe to help ensure that bike sharing increases access to those who cannot afford their own bike or who lack adequate space to store their own equipment.

The city has also been rolling out programmes to specifically support female cyclists. Bogotá has promoted the concept of ciclo-inclusión ('cycling inclusion') for many years, working to make cycling accessible for all ages, genders, and income levels. Around 30% of current riders are generally women - a percentage that is slowly growing.

The company running the scheme gives a percentage back to the city which has been invested in bike racks and repair stations. There are 300 public bike repair stations available for free for any bike users—reducing the cost of bike maintenance for many and allowing people to repair their bikes "on the go" throughout the city. This means that, even if people don't use the bike sharing system, they can still benefit from the parking spots and bike repair stands.



Innovative financing to bring scaled bike sharing across Bogotá.

How might these lessons be used in your city?

Long-term commitment to climate infrastructure can attract investment

Bogotá's decades of investments in cycling infrastructure and long-term commitment to cycling has been key. The CAMEP scheme builds on decades of city support to cycling, crowding in significant private investment and interest in Bogotá's cycling market

Develop policy steering tools to leverage public assets and incorporate equity

The city's ability to draw income from an asset on behalf of the community has been a significant innovation. The city is also showing how to use permitting powers to work collaboratively with private operators to ensure that the bike system is inclusive, accessible, and safe for citizens – and not only run for profit. Working with elected officials to ensure advertising revenue for operators was key for economic viability.

Build streets for communities and people, not cars

With considerable investment across decades, the city's commitment to cycling has helped lead to an impressive 85% of city journeys being on foot, bike, or bus. Bogota has learned that to reduce reliance on vehicles, cycling needs to be the most convenient option for people.

In megacities like Bogotá, the climate benefits of scaled bike sharing are considerable. For example, in another city, bike sharing across Shanghai in 2016 saved an estimated 25,240 CO₂ emissions.





CAPE TOWN

Launched a municipal green bond to fund city climate and water infrastructure

Cape Town issued a municipal green bond to fund climate and water infrastructure

Project overview

Frequent droughts in Cape Town have made climate change a salient issue, with the city coming close to running out of water in recent years.

The city has developed its climate finance portfolio as part of their efforts to address this emergency. In 2017, Cape Town issued its first municipal Green Bond, which was used to invest in projects which aligned with the city's mitigation and adaptation sustainability goals.

The bond issuance raised 1 billion Rand (the equivalent of approximately \$76 million USD) and has been used to fund low carbon transport, water management, coastal protection and energy efficiency projects across the city.

Cape Town chose to commission the city's first Green Bond as a way of matching the climate initiatives it was undertaking.

The green bond provided an opportunity to demonstrate the City's green credentials and to speak to different audiences (e.g., financial analysts and investors) which don't usually engage in conversations about sustainability.

This bond sent a clear message to the local and global investor community about Cape Town's priorities.

The Green Bond is the first in South Africa to meet the stringent Climate Bond Initiative taxonomy (CBI) requirements which ensures that projects are aligned with global Paris Agreement climate commitments. Rated GB1 (excellent) by Moody's, the bond was 4-times oversubscribed due to high investor uptake, demonstrating the potential of city-led green finance.

The bond has facilitated mainstream environmental sustainability across the City Council and has been an important tool in diversifying the City's funding portfolio.

Given the 'green bond' status, reporting requirements are higher than other bonds.



Cape Town is pioneering the use of Green Bonds to achieve sustainability goals

Finance mechanism & amount

- **Financial instrument:** Green Bond (private sector issuance)
- **Cost:** 1 billion Rand (roughly \$75 million)
- **Funding source:** Commercial Banks, International finance institutions



The Green Bond is the first of its kind in South Africa and the first to meet Climate Bond requirements

Equity/COVID Just Recovery Impacts

South Africa is one of the world's most unequal countries: the legacy of Apartheid can still be seen in Cape Town's spatial planning, which was originally designed to keep racial groups segregated. A lack of social mobility means that many parts of the city remain divided. This inequality is most evident in the city's suburbs and informal settlements, which have also been the places where the majority of rural migrants to the city have settled.

Given this unique context, a priority for Cape Town is to develop an 'inclusive city' by ensuring that mitigation and adaptation projects embed inclusivity considerations from the onset.

The city committed early on to link projects funded from its green bonds to its draft city climate action policy, which committed it to reorient service delivery to be "pro-poor", which they define as "ensuring that any infrastructure investment must leave poorer residents no worse off".

The policy recognised that lower income residents are most impacted by climate change and that projects are needed which provide benefits for low-income households or those in informal settlements.

To achieve this, Cape Town embedded social and human rights when assessing all potential water projects funded by the bonds. This ensured that all selected projects aligned with all relevant human rights requirements and sustainable development aims.

How might these lessons be used in your city?

Green bonds must go through a robust evaluation process

Cape Town has developed their green bond following robust criteria to ensure the projects adequately address climate change and are not an example of greenwashing. The bond was four times oversubscribed given high interest in this type of financial innovation.

The city's rigorous approach to both infrastructure project design and green finance helped to build market confidence.

Lay a foundation for innovative climate finance:

Cape Town increased investor interest by:

- Maintaining a high credit rating;
- Developing a pipeline of projects linked to adaptation and mitigation;
- Implementing a robust project tracking and information system.

Mainstream and climate targets and sustainability into infrastructure planning

The urgency of the drought led the city to incorporate climate and sustainability into their infrastructure planning which, in turn, allowed them to identify routes to access additional finance.

The green bond has helped to further mainstream sustainability across the City Council and has supported the City's long-term strategy of adapting to climate change.



The Bond was 4x oversubscribed, which demonstrates that there is an appetite for this financial approach



What other cities are doing

Green bonds, including municipal green bonds, are becoming an increasingly common feature of urban climate initiatives, and there are at least \$696 billion green bonds issued to date under the Climate Bonds Initiative criteria.

In Hong Kong, for example, the Government Green Bond Programme has been developed with the aim of developing the city's green finance, especially the green bond market. Proceeds raised under the Programme would be used to finance government projects with environmental benefits.

Similarly, the London Future Finance Facility, a sustainability banking facility that offers bespoke financial instruments for clean and resilient investment, has been heavily influenced by the work of Cape Town.





SEOUL

Decarbonised public and private sector buildings through green standards and regulations, boosting the local green economy



Seoul's Comprehensive Plan to Reduce Building Emissions

In Seoul, buildings account for 69% of city-wide greenhouse gas emissions. To address this, the Mayor's office has enacted several measures, including energy efficiency improvements, and tightened mandatory building standards on all new buildings. This programme aims to reduce overall GHG emissions from buildings and contribute to the city's emission reduction targets.

This action could help to reduce emissions considerably, given the sector's contribution and the city's size, and builds on previous building efficiency work which reduced the city's annual residential emissions by 15% by 2019 (over 700,000 tonnes of CO₂ equivalent per year).

New city-wide green building standards and emissions caps for very large privately owned buildings took effect from 2021 and for municipal and public sector buildings from 2024. The city has extended the rules to include most private sector buildings by 2025. The aim of this gradual approach is to ensure the targets are ambitious, but also realistic, and support the low carbon building market to grow over time and create the green jobs and skills-base required to reach the target of retrofitting 1 million buildings by 2026.

To support this transition equitably across the city, Seoul has launched a range of low or no-interest financing, such as the Energy Welfare Civic Fund and BRP (Building Retrofit Programme Loan Support Scheme), to ensure equitable impacts for low-income groups within the city and to focus on the deployment of on-site renewable energy.



Seoul's energy efficiency policies reduce emissions and grow the local green economy



Finance mechanism & amount

Financial instruments: Energy upgrade financing schemes; Pooled Procurement

Financial sources: Governments and municipalities

Amount: Ca. \$1.3 Billion USD. Overall, the city aims to invest \$10 trillion won (\$8.4 billion) in Seoul's Comprehensive Plan for Climate Action over the next five years.



The energy efficiency measures detailed in the comprehensive plan are set to create 20,000 jobs by 2026

Equity/COVID Just Recovery Impacts

Seoul has focused on equitable outcomes and a fair economic transition through several elements such as the creation of green jobs in the aftermath of the COVID-19 pandemic which aims to create 20,000 green jobs in the low carbon building and solar PV sector by 2022.

Setting high public sector standards aims to grow the market for low carbon building services to make the transition more affordable for businesses to comply. The extension of feed-in-tariffs to small onsite PV generators is also a significant incentive for smaller businesses and citizens.

Seoul is including both publicly owned buildings and private buildings within this programme. In addition, the city is prioritising specific low-income groups, such as single-parent families, public housing, senior centres, and childcare facilities when identifying which buildings to improve first.

The city has also introduced an Energy Welfare Civic Fund which is co-managed by residents, to help identify and deploy the funding for low-income households who might not otherwise benefit from these schemes. The fund is governed by a Management Committee made up of 20 experts in energy welfare and a Youth Volunteer Group composed of 45 college students promotes the fund.

The fund aims to address energy poverty by installing energy efficiency upgrades in low-income communities. These improvements reduce energy costs for heating and cooling (e.g., air conditioning) to help lower income or allow older citizens to adapt to increasing temperatures. The Energy Welfare Civic Fund also funds employment schemes allowing people to re-train people as energy consultants.

How might these lessons be used in your city?

Make the most of policy influence

In any city, especially a global 'megacity' like Seoul, policy changes which improve building performance can have a significant impact on emissions and community-preparedness for climate change. Regulations can provide market incentives for action across the city, as well as supporting the development of local green skills and businesses (e.g., the retrofit of buildings or manufacture and installation of solar PV). The introduction of new standards to reduce carbon from old building stock in the public and private sector, with future plans to ban fossil fuel heating from new builds in the future, provide great examples of the role that cities can play in taking globally significant climate action.

Take an integrated and strategic approach

Seoul began by tackling large public housing and municipal buildings, before implementing standards for the wider private sector. This gradual approach has helped to build capacity for compliance over time. The city has also introduced a range of other building measures, such as banning fossil fuels from future new buildings to increase the impact and overall contribution to net zero.

Build on existing programme successes

Seoul has developed several buildings-focused initiatives in recent years. Since 2013 it has introduced several city-wide green energy and building retrofit initiatives reducing annual residential emissions by 15% in 2019. This includes programmes for financing and low-interest loans, as well as a free advice service to support planning.

By understanding and building on existing work such as the Solar City Seoul Initiative (2017-2022) and One Less Nuclear Power Plant (2012-2017), the City can more accurately set targets and capitalise on existing momentum, knowledge, and resources. Moreover, the ability of the public and private sector to comply with the regulations is supported by previous efforts.



Investing US \$1.3 billion goal to upgrade 1 million old buildings into low-carbon buildings

What Other cities are doing

Energy efficiency has also been the focus in New York City, where a landmark municipal legislation was passed requiring building owners to meet strict greenhouse gas emission limits through energy efficiency and retrofits. However, this change in legislation could pass the costs of retrofit on to residents of affordable housing through rent rises.

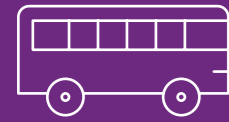
The city government carried out extensive community engagement work and decided to introduce an alternative compliance pathway to assist both those who rent and owners of affordable housing to realise the benefits of the climate action.

As an example, in New York, equity and inclusion has worked to mitigate the costs of decarbonisation for lower income residents. Different standards now apply to low-income housing, as well as scaled finance schemes available to ensure that those on the lowest income benefit from climate-transition building improvements subsidies.



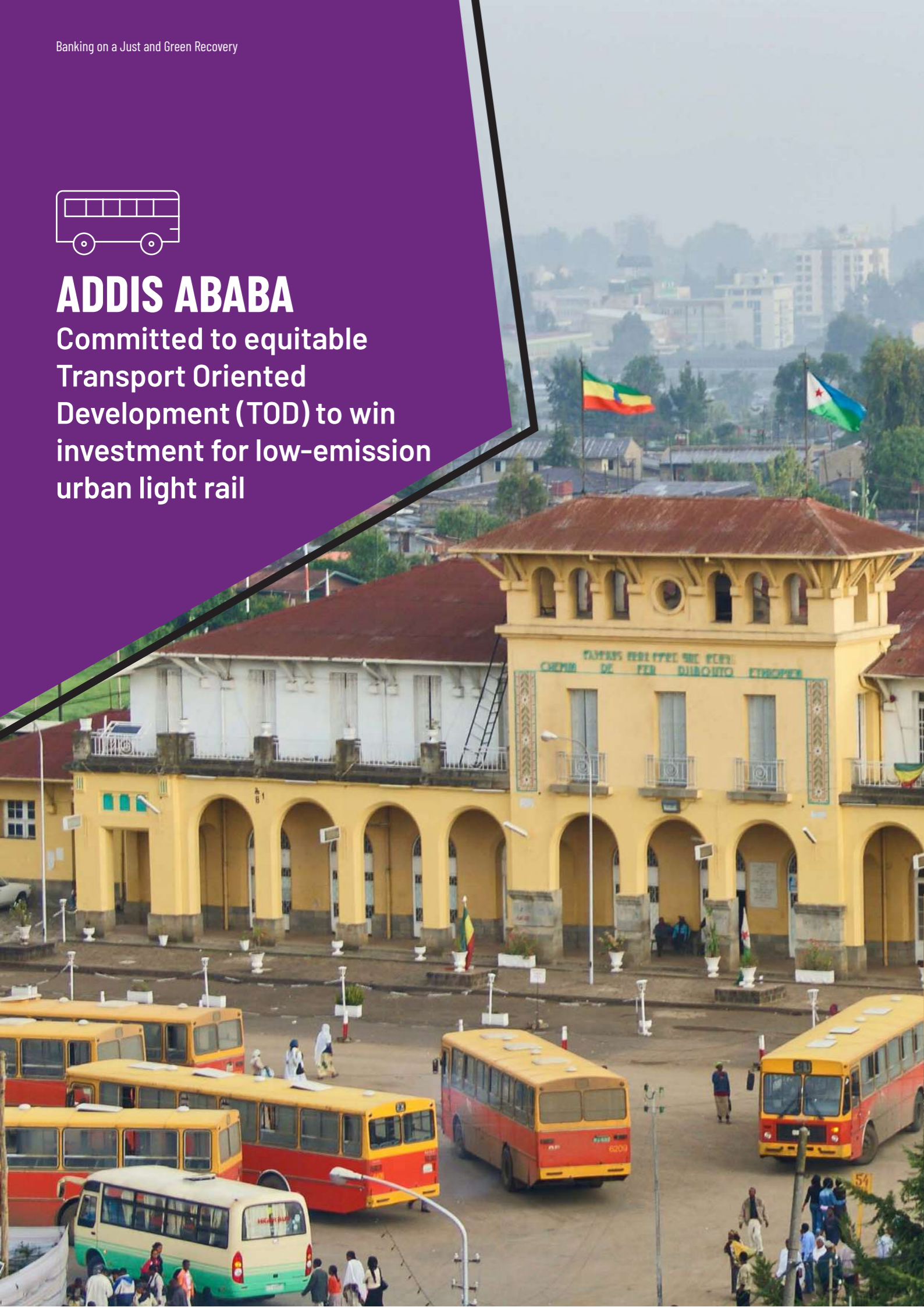
By 2026, the Comprehensive Plan is expected generate \$20 trillion won (\$16 billion)





ADDIS ABABA

Committed to equitable Transport Oriented Development (TOD) to win investment for low-emission urban light rail



Committed to equitable Transport Oriented Development (TOD) to attract investment for new, low-emission urban light rail system

Project overview

To support Ethiopia's goal to become a middle-income country by 2025, Addis Ababa and the national government have committed to developing a transport infrastructure to support its rapidly growing capital - a city with a population of 4.6 million.

Addis Ababa's projects are a key component of Ethiopia's Climate Resilient Green Economy (CRGE) framework.

Since 2011, the country has developed an innovative Light Rail Transit (LRT) and broader Transport Oriented Development (TOD) strategy to improve urban mobility. Launched in 2015, the LRT was the first of its kind in sub-Saharan Africa. Alongside it, 300 express buses have been deployed on the city's roads. These buses have been assembled locally, increasing the capacity of the Ethiopian manufacturing industry.

The project has been successfully funded by a \$475 million USD concessional loan from China's import export bank. However, this project continues to face operational shortfalls and uncertain levels of continued capital investment.



Addis finances transport-oriented development that promotes sustainable and inclusive growth.



Finance mechanism & amount

Financial source: government (Ethiopian government, 15%), multilateral/national development banks (Chinese import/export bank, 85%), International Financial Institutions (e.g., World Bank, technical assistance, and capacity building).

Instrument: International climate finance (competitive finance/concessional loan).



\$475 million USD raised for initial light rail component in 2011

Equity/COVID Just Recovery Impacts

In Addis Ababa reliable and affordable daily transport has been inaccessible for many residents who must walk or use over-crowded minibuses to travel. Increasing car ownership in the city is causing congestion, pollution, and problems related to safety, health, and productivity.

Inter-connected transport hubs that are affordable, safe, and accessible to all have increased access to opportunities and services across the city, as well as reducing congestion and air pollution. The 300 express buses running alongside the LRT have been designed to be accessible to those with disabilities or limited mobility.

Spatial inclusion and place are central to the TOD and LRT projects, which aim to better connect poorly planned city expansion areas. In 2020/21 the city developed a transport master plan, which includes analysis of journeys across the city to plan for future spatial inclusion.

This development is not only beneficial to communities across the city but acts as an enabler for economic growth. The project has directly employed at least 5,000 people to date. Some assets, such as the 300 express buses, have been assembled locally, increasing the capacity of the Ethiopian manufacturing industry to build transport equipment for export.

Population density has increased around LRT hubs, facilitating more walkability as residential, commercial, and retail services cluster closer together. This has cut travel times by shortening distances, substituting trips, and reducing queues.



300 additional modern express buses launched in 2016 to match increase in transport demand and support LRT

How might these lessons be used in your city?

Launching advanced systems like LRT requires economies of scale and long-term planning

Addis Ababa and the ERC successfully launched the 34km LRT system in 2015, the first major project of its kind in sub-Saharan Africa. Ridership grew to over 200,000 per day within the first few years. The project is part of a long-term strategy of Transport-Oriented Development, integrated at the national level to advance Ethiopia's ambition to become a middle-income country. This ambition was kicked off through this project, a substantial \$475m investment in a technology which has never been deployed in sub-Saharan Africa. This investment shows Addis Ababa's commitment to the agenda.

Reducing road congestion brings a range of benefits – The LRT has significantly reduced road congestion. However, the LRT could only partially address the rising transport demand in the growing city. In recognition of this, the city is studying spatial demand forecasts as they evolve while accessing financing for further LRT development as the city grows. Addis Ababa also developed additional modes of transport to support the LRT, including the launch of 300 express buses.

Integrate TOD into city master plans – Ongoing efforts have focused on integrating the TOD into a formal city 2030 transport master plan, finalised in 2020/21. This plan focuses on spatial inclusion and exploring innovative public and private financing options, informed by analysis of journey origin and destinations to support future planning. This formal planning approach incorporating issues like freight transport planning, as well as future public transport growth needs, provides key assurance that future projects can be attractive investment opportunities from an international finance perspective.



The emission reductions from the LRT line amounts to 170,138 tonnes of CO2e by 2030





ATHENS

Developed a natural capital financing facility to develop urban forests for low-income communities



Athens is creating a resilient city using nature-based solutions

Project overview

Home to 3 million people in its metropolitan area, in recent years Athens has been experiencing rising summer temperatures and more frequent extreme heat events due to climate change.

To address this, Athens has developed the 2030 Athens Resilience Strategy structured around four pillars – an open city, a green city, a proactive city, and a vibrant city. With investments planned in sectors such as energy, waste, tourism, culture, and public spaces, the plan is Greece’s first integrated climate mitigation and adaptation strategy.

Through the strength of this innovative plan, Athens is now working with the European Investment Bank (EIB) to finance the ‘green city’ pillar of the Resilience Strategy to implement nature-based solutions for climate change adaptation and resilience to extreme heat and surface flooding. Athens is Europe’s first recipient city of the EIB’s Natural Capital Finance Facility (NCCF): the investment is being used to build urban forests and green corridor projects.



Athens promotes green resilience thanks to the support of the EIB’s Natural Capital Financing Facility



Finance mechanism & amount

Athens has secured loan financing from multi-lateral organisations to develop nature-based solutions:

- €5m for urban forests and green corridors, making Athens the first Recipient of the Natural Capital Finance Facility (NCFF). The NCFF instrument finances projects that have positive biodiversity/nature-based solutions.
- Partly due to the strength of their Resilience plan, an additional €55m loan from European Investment Bank (EIB) was issued for green infrastructure, mobility, and adaptation. Loan is low interest with no payment in the first five years.
- Financing and Technical Assistance to support preparation, design, implementation, and monitoring of projects, including an additional €500k in initial funding from EIB.



€5 million loan from EIB's NCFF to support regeneration, transport, culture, and other resilience areas

Equity/COVID Just Recovery Impacts

The Municipality's budget has been cut by 60% since 2011 and the city is faced with numerous social challenges such as mass unemployment, aging infrastructure, an aging population, and the Mediterranean refugee crisis.

The City's Resilience Plan prioritises consideration of frontline groups in climate planning, including for the 25% of Athens' residents who experience energy poverty. Energy poverty is a significant challenge for the city, affecting residents both in the winter and in the summer. The Resilience Strategy sets out actions to tackle this issue including energy saving awareness raising campaigns. The creation and improvement of green corridors throughout the city supported by the NCFF can help by providing shelters from the summer heat while also allowing for trips to be made through shaded areas.

The Plan lays out different ways to leverage investment to promote positive economic impacts on neighbourhoods and to enhance social inclusion.

Inclusive community engagement was a key component in the development of the Resilience Strategy. The city collaborated with 140 organisations and 900 citizens, who participated in 40 workshops, conferences, or public events to develop the Strategy. Based on public consultation, the Strategy also takes a holistic approach to the concept of resilience, engaging not only with climate change but a host of social, cultural, and economic challenges.

Urban forests improve air quality, provide vital shade, reduce the urban heat island effect, and make the city more pleasant, desirable, and habitable. The programme also supports biodiversity through prioritising local species of trees which are well-suited to the local environment.

How might these lessons be used in your city?

Use robust planning to win support and funding – Athens leveraged their 2030 Resilience Strategy to successfully engage with many initiatives to finance their evidence-based plans. For example, the city leveraged early technical support from the EIB's NCFF, which identified and funded green space opportunities across the city and obtained technical assistance from partners such as C40 Cities who helped develop the plan.

Engage in long-term planning and real action commitments – The 2030 Athens Resilience Framework acts as a lens to analyse complex city systems and to enable change with 65 action commitments and 53 supporting actions. By adopting a proactive vision, Athens aims to plan for current and future social and environmental challenges. The robust plan enabled the city to make the most of funding opportunities from the EIB.

Prioritise nature-based and ecosystem service solutions – Active efforts to improve the ecosystem services offered by green infrastructure mitigates the problem of urban heat islands, as well as improving air quality and making the city a more pleasant place to live.

Promote active travel and nature through green corridors – Green corridors and squares, or long, continuous interconnected green spaces, provide vital shading and cooling. They also facilitate more active travel throughout the year as the urban environment is a more pleasant and healthier place to move through. By using these corridors to link existing green spaces, Athens significantly enhances biodiversity and provides long stretches of shade for people alike to travel across the city.



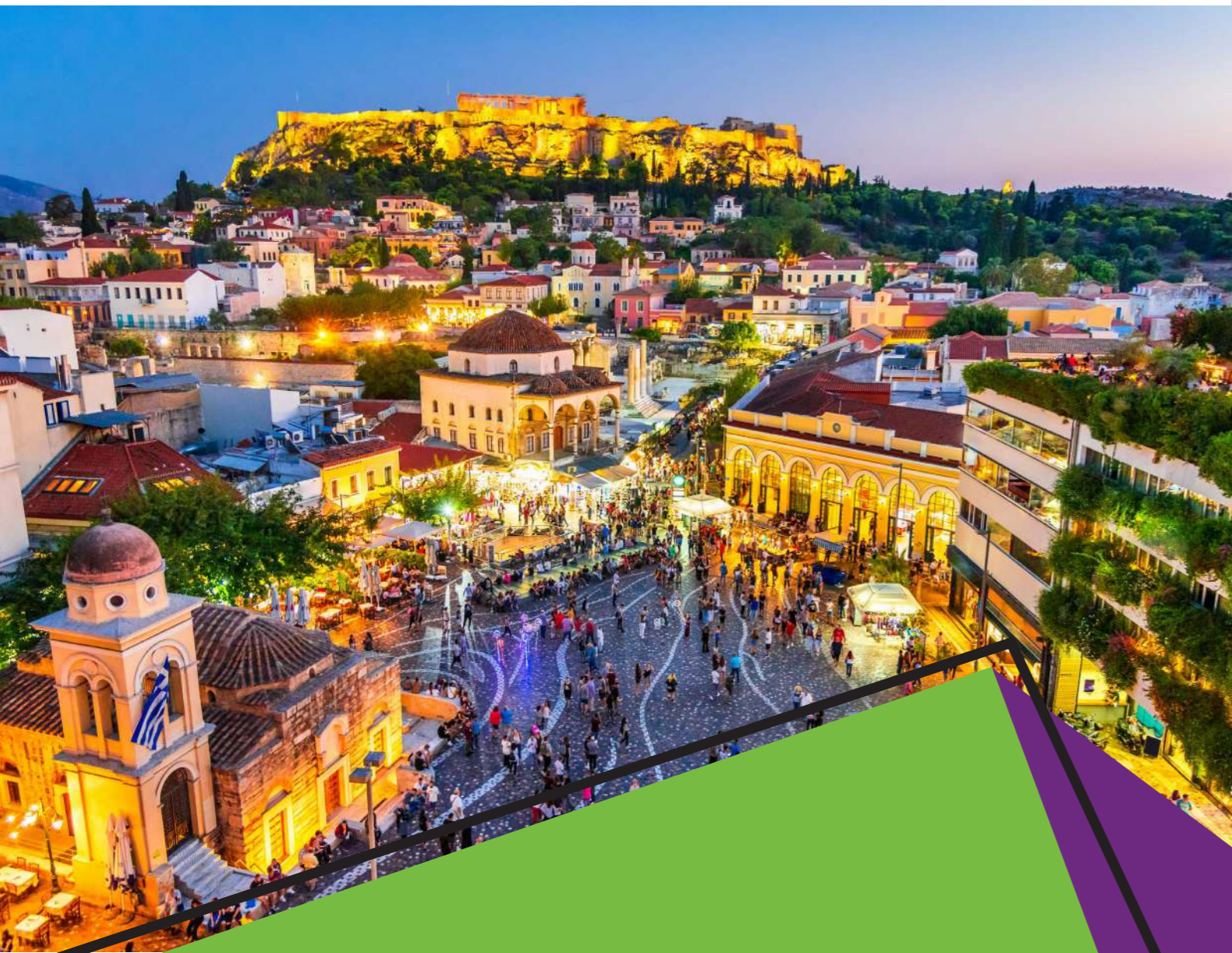
Four Pillars, 65 actions, 53 supporting actions, including Greece's first integrated climate adaptation plan

What other cities are doing

Extreme heat is a pressing issue that cities across the globe are coming to terms with. From Vancouver to Melbourne, urban areas are developing strategies to address this. These measures range from emergency response strategies, such as providing cooling centres, to long-term plans to increase urban greening, improved building standards, and altering the material fabric of the city.



The city collaborated with 140 organizations and 900 citizens to develop the Resilience Strategy





HONG KONG AND LOS ANGELES

Deployed green employment and jobs schemes to support a just recovery from the COVID-19 pandemic



Hong Kong and Los Angeles

Project overview

The pandemic has had a significant impact on opportunities in countries across the world with certain groups – such as young people and those in disadvantaged communities – particularly hard hit. Hong Kong and Los Angeles are two cities that have taken steps to address this challenge by providing targeted employment schemes that provide jobs and develop ‘green’ skills.

COVID caused a significant rise in unemployment in Hong Kong with rates of unemployment hitting 7.2% in February 2020. This number rose to 15.6% among 20–24-year-olds. In response the government launched several employment schemes, including targeted opportunities for young people and for those interested in environmental careers. One example is the Green Employment Scheme which subsidises private companies and suitable organisations to employ graduates working in areas related to environmental protection, ecological conservation, green energy and energy conservation, climate change, and sustainable development

At the end of February 2021, the number of jobs created through these initiatives stood at around 31,000, including about 15,800 jobs in the Government and about 15,600 jobs in the non-governmental sector. 40% of these jobs were aimed at young people.

The creation of green jobs has also been a focus for Los Angeles, which has invested in several renewable energy training programmes as part of its local Green New Deal. These renewable energy training programmes have focused on employing local people to deliver the projects, accelerating local economic recovery from the COVID-19 pandemic.

One example of this is the GRID Alternatives Solar Powered Homes and Jobs Programme, which partners with affordable housing organisations, job training groups, government agencies, municipalities, utilities, and local communities to create and install solar projects that serve low-income households. GRID Alternatives is the nation’s largest non-profit installer of clean energy technologies.



HK and LA deliver renewable, efficient energy and a just economic recovery through green employment

Finance mechanism & amount

Mechanism: City climate funds

Source: Hong Kong: Governments, Infrastructure/specialist funds

Source: Los Angeles: The GRID Alternatives programme has been largely funded by the California Department of Community Services and Development. The money for this programme comes mainly from proceeds of California’s cap-and-trade program as part of California’s Climate Investments. GRID Alternatives also brings additional funding through philanthropic donations, equipment partnerships, and local rebates and investments.

Cost - Los Angeles: Not available

Cost - Hong Kong: Scheme part of larger HK\$6.6 billion/year Anti-epidemic Fund



HK: Over 40% of jobs created are junior level, enabling young people to access employment opportunities



Equity/COVID

In Hong Kong employment schemes have focused on providing opportunities for people of different skill sets and qualifications. Young people have been particularly hard hit by the lack of employment opportunities during the pandemic. Not only have many employers frozen recruitment programmes, but the mental health impacts of the pandemic have been felt particularly keenly by young people across the world. To address this, over 40% of the jobs created as part of this initiative are aimed at relatively junior levels.

One of the flagship employment initiatives includes a programme to subsidise private companies and suitable organisations to employ graduates working across a range of different disciplines, including opportunities in the environmental sector. The initiative provides employers with a monthly subsidy for each eligible graduate for a period of 18 months.

Inclusion is a key element of Los Angeles’s GRID Alternatives programme, which provides equal employment opportunities regardless of race, colour, religion, etc., and incorporates the voices of those most impacted by the climate crisis in delivery and workforce decisions.

The programme of work has installed solar panels, at no cost, on the homes of almost 2000 low-income families and helped 200 individuals gain skills and employment after release from incarceration. The solar PV panels have helped to reduce the energy bills of low-income households.

GRID Alternatives offer a range of workforce training programmes, including programmes that help to provide pathways to technical careers for women, highlighting the voices of women of colour in the industry, and providing national leadership on solar workforce diversity.



How might these lessons be used in your city?

Hong Kong

Tackling unemployment during Covid-19- Hong Kong successfully designed and implemented several employment schemes to tackle the challenge of unemployment which had been exacerbated by the pandemic. Through forging partnerships with organisations across the region the Government was able to create over 31,000 jobs by the end of February 2021.

Create opportunities for young people to join the green economy: Hong Kong's employment schemes were designed to create opportunities for young people, as this is a group which has been particularly hard hit by the pandemic. Hong Kong's experience has shown a high level of interest in green and climate-oriented work from young people, as well as a high level of interest from employers in engaging with them on these issues. By linking the Covid economic recovery scheme to climate action, the city developed its green skills base and contributed to its strategy to become a world centre of green finance.

Los Angeles

Local renewables to combat fuel poverty – LA's GRID Alternatives Solar Powered Homes and Jobs Program has installed solar panels at no cost on the homes of almost 2000 low-income families, lowering emissions but also protecting low-income families during times of highly volatile energy prices.

Upskilling to support rehabilitation – The city helped 200 individuals gain skills and employment after release from incarceration in areas of climate action and energy that are set to be in high demand for the foreseeable future and businesses and governments turn their focus to the climate emergency.

What Other cities are doing

Barcelona is another city working to link economic inclusion, a just recovery from the pandemic, and city-led climate action. The city has a department for Social Rights, whose Labora programme worked with the city's PAEs to train and employ citizens experiencing long-term unemployment to become energy advisors in the programme. 80% of the advisors supported by the PAE programme had re-entered the job market after one year.



LA: Installed almost 2000 solar PV panels for low-income homes

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The CFF is a collaboration of the C40 Cities Climate Leadership Group and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The CFF supports cities in developing and emerging economies to develop finance-ready projects to reduce emissions in support of limiting global temperature rise to 1.5°C and strengthening resilience for the impacts of a warming climate.

The CFF is funded by the German Federal Ministry for Economic Development and Cooperation (BMZ), the UK Department for Business, Energy and Industrial Strategy (BEIS), and the French Development Agency (AFD).

Suggested reference: C40 CFF. 2022. Banking on a Just and Green Recovery.

