



**CONSOLIDATED** 

# **City Climate Finance Gap Fund** Annual Report

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# Abbreviations and acronyms

BMWK	Federal Ministry for Economic Affairs and Climate Action of Germany
BMZ	Federal Ministry of Economic Cooperation and Development of Germany
C40	C40 Cities Climate Leadership Group
CCAP	Climate Change Action Plan
CCFLA	Cities Climate Finance Leadership Alliance
CDP	Carbon Disclosure Project
CIF	Cities Investment Facility
CoP	Community of Practice
CPI	Climate Policy Initiative
EIB	European Investment Bank
EOI	Expression of Interest
EU	European Union
Gap Fund	City Climate Finance Gap Fund
GCOM	Global Covenant of Mayors for Climate and Energy
GHG	Greenhouse Gas
GIZ	German Agency for International Cooperation
GPSC	Global Platform for Sustainable Cities
ICLEI	Local Governments for Sustainability
ICSI	International Coalition for Sustainable Infrastructure
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
LMICs	Low- and Middle-Income Countries
LUCI	Leadership for Urban Climate Investment
LUX	Luxembourg Ministry of Environment
MDTF	Multi-Donor Trust Fund
PPF	Project Preparation Facility
SCIS GSG	Sustainable City Infrastructure and Services Global Solutions Group
TDLC	Tokyo Development Learning Center
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

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# **Voices of Gap Fund Partners**

"We are proud to see that the Gap Fund has been successfully up and running for more than two years now and is showing impressive first results. Since its inception, demand for Gap Fund support has been constantly on the rise. This shows just how crucial TA is in the early phases of climate action planning and project preparation. With its unique and innovative approach, the Gap Fund helps unlock the urban investment needed to meet our global climate targets." – Government of Germany

"Three years later, the growing interest of local actors and authorities for the Gap Fund's support proves that we are moving in the right direction. We are heading towards the US\$ 100 million target, which is further proof of our commitment and joint efforts. The Gap Fund is gradually becoming a key partner for local climate action." – Luxembourg Ministry of Environment, Climate and Sustainable Development

"As the European Union Climate Bank, we see how critical the role of cities in tackling climate change is. Inside the European Union and globally, cities are facing up to the climate challenge while at the same time assuring a just transition, maintaining services and dealing with major cost increases impacting their investments. We are delighted that the Gap Fund can and is helping cities develop investable climate projects and thank donors for supporting a capital increase at the end of 2022 for this flagship initiative." – European Investment Bank

"Cities play a key role in reducing greenhouse gas emissions and increasing resilience to climate change impacts, while also achieving development outcomes. The Gap Fund is critical to strengthening climate action in cities by providing them with the capacities necessary for action planning and the prioritization of climate-smart urban investments." – World Bank

"In the face of climate change, cities not only prove their inherent ability for innovation, but equally for cooperation. Local governments are striving for joint solutions and upscaling efficient, effective, and impactful investments, to expand resilient and livable urban spaces. The reinforcing support from financial institutions and GIZ enables cities to get a further step towards feasibility, financing, and implementation." – GIZ

"The GCoM alliance builds an ever-stronger movement of cities and local governments taking ambitious actions for transformative change. The Gap Fund delivers substantial support to cities, accelerating access to financing, providing critical assistance to overcome common challenges and catalyzing climate transformative action." – Global Covenant of Mayors for Climate & Energy

"Project Preparation Facilities play a critical role in providing support and guidance, helping subnational governments to overcome barriers and develop investment-ready projects. Still, the majority of Project Preparation Facilities are eligible only for mature projects, and most of the local governments struggle to reach that stage. The Gap Fund is therefore particularly relevant for our work, as it addresses a pressing need by offering specialized technical assistance and tailor-made tools for early-stage project preparation." –ICLEI

"Cities are at the forefront of the climate crisis. They are not only critical to achieving global goals to limit climate change, but to protect people from its impacts, and advance climate-resilient development. However, cities continue to face acute challenges in accessing climate finance and need greater support to build pipelines of investment-ready projects, access finance, and close the investment gap." – Climate Finance Leadership Alliance

"C40 has been supporting cities around the world to develop science-based climate action plans aimed at collectively halving emissions and building healthy, equitable and resilient communities. The City Climate Finance Gap Fund plays a critical role in helping cities to take the next step and turn their plans into reality, by helping urban leaders identify and shape investment priorities." – C40



# I. Introduction

The City Climate Finance Gap Fund (the Gap Fund) is a multi-donor initiative established in September 2020 that aims to help cities in developing and emerging countries realize their climate ambitions by turning low carbon, climate-resilient ideas into strategies and finance-ready projects. The World Bank (WB) and the European Investment Bank (EIB) jointly implement the Gap Fund through two multi-donor trust funds (MDTFs) in close partnership with city networks and other key partners including C40, Global Covenant of Mayors for Climate and Energy (GCOM), Local Governments for Sustainability (ICLEI), and Cities Climate Finance Leadership Alliance (CCFLA).

This annual report summarizes the progress made by the Gap Fund in calendar year 2022, building upon the annual reports submitted by the WB and the EIB to their respective donors according to their agreed reporting frameworks and contractual agreements.

**Section 1** introduces the Gap Fund, its mission, and objectives as well as governance and implementation arrangements.

**Section 2** presents the implementation progress of the Gap Fund technical support for low-carbon and climate-resilient city development.

**Section 3** presents the implementation progress of knowledge generation and sharing activities.

**Section 4** presents the progress made in 2022 on the consolidated Gap Fund results framework.

**Section 5** provides an overview of the Gap Fund's contributions and expenditures as of the end of 2022.

**Section 6** presents a brief overview of the planned activities for 2023 including technical support, knowledge management, partnerships, and capacity development.





Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

GLOBAL COVENANT

**CLIMATE & ENERGY** 

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THE GOVERNMENT OF THE GRAND DUCHY OF LUXEMBOURG Ministry of the Environment, Climate and Sustainable Development



# I.1 Cities and Climate Change

Cities are key to reducing global greenhouse gas (GHG) emissions and enhancing climate change resilience across economies and societies. Cities harbor large populations and are growing fast in some regions. By 2050, 2.5 billion people are expected to migrate from rural to urban areas. Much of that migration—an estimated 90%—will happen in Africa and Asia (UN DESA, 2018). Many of these cities are low-lying or coastal cities vulnerable to climate change. According to the 2022 Intergovernmental Panel on Climate Change (IPCC) Report on Climate Change Impacts, Adaptation and Vulnerability, the number of people expected to live in urban areas exposed to climate change impacts has increased substantially. More than a billion people located in low-lying cities and settlements are expected to be at risk from coastal-specific climate hazards by 2050. Sea level rise increases in tropical cyclone storm surges, and more frequent and extreme precipitation will increase the number of people, area of urban land, and damages from flood hazard. It is estimated that an additional 350 million people living in urban areas could be exposed to water scarcity from severe droughts at 1.5°C warming, and 410.7 million at 2°C warming (IPCC AR6, 2022).

**Cities account for more than 70% of global energy related GHG emissions, with transport, waste, and buildings being the most significant contributors.** Efforts to successfully limit global warming hinge on cities' ability to innovate and act. The latest IPCC report on the Mitigation of Climate Change estimates that nearly 100 of the highest emitting urban areas account for approximately 18% of the global carbon footprint. Cities are facing a growing challenge of reducing emissions while also avoiding new ones. Scaling up investment in low-carbon and climate resilient urban infrastructure will be essential to achieve the goals of the Paris Agreement to limit the global temperature increase to well below 2°C and to strengthen climate change adaptation and resilience.

**Cities face challenges in achieving low-carbon, climate resilient urban development.** An estimated US\$93 trillion of sustainable infrastructure needs to be built by 2030–over 70% of which will be done in urban areas<sup>1</sup>. This low carbon investment entails higher capital expenditure required upfront for newer but costly technology to improve energy efficiency in buildings and power generation. It also includes anticipated efficiency gains and savings from transitioning to more energy-efficient urban development, reducing fossil fuel subsidies, and adopting more sustainable infrastructure solutions (Global Commission on the Economy and Climate 2016). The financing gap for sustainable infrastructure is massive. New infrastructure could cost Low- and Middle-Income Countries (LMICs) anywhere between two percent and eight percent of gross domestic product (GDP) per year up to 2030, depending on the quality and quantity of service aimed for and the spending efficiency achieved to reach this goal<sup>2</sup>.



<sup>&</sup>lt;sup>1</sup> The New Climate Economy Global Commission on the Economy and Climate report (2014) adopted a detailed sectoral analysis estimating global investment needs for sustainable infrastructure between 2015 and 2030. Using existing technologies and investment patterns as the business-as-usual scenario, the study projects that a total cumulative investment of \$88.61 trillion will be needed between 2015 and 2030, which then rises to \$93 trillion on a net basis when adopting a low carbon investment strategy.

<sup>&</sup>lt;sup>2</sup> Rozenberg, Julie, and Marianne Fay, eds. 2019. Beyond the Gap: How Countries Can Afford the Infrastructure They Need while Protecting the Planet. Sustainable Infrastructure Series. Washington, DC: World Bank. doi:10.1596/978-1-4648-1363-4. License: Creative Commons Attribution CC BY 3.0 IG

Future global GHG emission trends will, in part, depend on whether the infrastructure built in cities is aligned with the planetary boundaries<sup>3</sup> or whether investment decisions are made that lock in unsustainable, high carbon emitting and highly climate vulnerable development. However, with the right policies-and investments estimated at 4.5% of GDP-LMICs will be able to achieve the infrastructure-related sustainable development goals (SDGs) and stay on track to contain the average global temperature increase to two degrees Celsius<sup>4</sup> (World Bank 2019).

Cities offer major opportunities to reduce global GHG emissions and bolster climate change resilience. According to the State of Cities Climate Finance Report published in 2021 by the City Climate Finance Leadership Alliance (CCFLA) with the support of the Gap Fund, greenhouse gas emissions in cities can be reduced by almost 90% by 2050 with technically feasible, widely available measures, potentially supporting 87 million jobs in 2030 and generating a global economic dividend of US\$ 24 trillion<sup>5</sup>. The International Finance Corporation (IFC) estimates that the waste, water, renewable energy, electric vehicles, public transport, and green buildings sectors in emerging markets alone represent sustainable investment opportunities amounting to US\$ 29.4 trillion by 2030<sup>6</sup>.

National governments, cities, and public and private financial institutions are also increasingly acknowledging the importance of cities for climate action and starting initiatives to address barriers to accessing climate finance. Cities are responding positively. More than 6,000 cities, representing 20% of urban residents worldwide, are signatories of the Global Covenant of Mayors (GCoM) and have developed climate action plans.

City governments face challenges to ensure resilient and climate smart urban development. These include limited capacity, lack of technical knowledge, and lack of access to upstream and downstream financing. Even if cities have drafted preliminary climate diagnostics or action plans, many do not have the means or capacity to take the next step.

<sup>3</sup> Planetary boundaries refer to the limits to maintain the Earth's atmosphere, oceans, and ecosystems in balance. Beyond these limits the earth system may not be able to self-regulate and cause irreversible damages in the environment

According to the CCFLA, a 2°C pathway creates a high probability of limiting the average global temperature rise to 2°C (3.6°F) above pre-industrial levels by 2100 and avoids the worst consequences of global climate change. In contrast, a business-as-usual (BAU) pathway is likely to lead to a rise in temperature of 4-6°C (7.2-10.8°F) above pre-industrial levels over the same period.

<sup>5</sup> CCFLA (2021), The State of Cities Climate Finance, Available at: https://www.climatepolicyinitiative.org/wpcontent/uploads/2021/06/2021-State-of-Cities-Finance-Executive-Summary.pdf

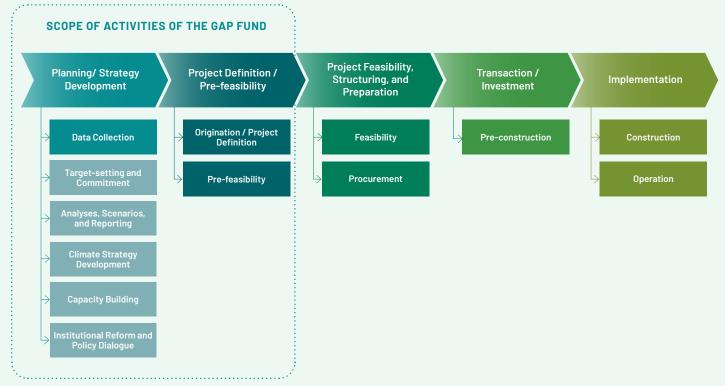
<sup>6</sup> IFC (2018), Climate Investment Opportunities in Cities. An IFC Analysis, Available at: https://www. ifc.org/wps/wcm/connect/875afb8f-de49-460e-a66a-dd2664452840/201811-CIOC-IFC-Analysis. pdf?MOD=AJPERES&CVID=mthPzYg

## 1.2 Gap Fund Mission and Objectives

The development objective of the Gap Fund is to help cities in LMICs transition toward low-carbon and climate-resilient pathways in line with global efforts to limit the temperature increase to 1.5°C above pre-industrial levels-the tipping point for climate change, beyond which the risk of extreme drought, wildfires, floods, and food shortages will increase dramatically. The initiative aims to increase funding for early-stage project preparation, helping cities to address climate adaptation and mitigation, along with capacity gaps at the municipal level.

In its efforts to achieve these goals, the Gap Fund assists cities in the early stages of project preparation (figure I-1). It provides:

- capacity building for low carbon and climate-resilient urban development;
- support for city climate strategy development and the generation of in-depth analytics to assess the climate action and resilience potential of plans, strategies, and investment programmes;
- project concept definition and components of pre-feasibility studies;
- prioritization of investments as part of a climate strategy or investment programme;
- strengthening the approaches used to project financing;
- sourcing additional support for later stages of project preparation; and
- potential support to fill in other project preparation gaps.



# FIGURE I-1: SCOPE OF SUPPORT PROVIDED BY THE GAP FUND

# 1.3 Gap Fund Governance and Implementation Arrangements

The Gap Fund provides support to cities through two implementing agencies: the World Bank (WB) and the European Investment Bank (EIB), which cooperates with German Agency for International Cooperation (GIZ). The World Bank and the EIB bring a unique mix of long-standing expertise in sustainable development, climate finance projects, and urban renewal. Each implementing agency administers a Multi-Donor Trust Fund (MTDF) with strong coordination between the separate World Bank and EIB Secretariats on partnerships, governance, and implementation under the "One Gap Fund" architecture (Figure I-2).

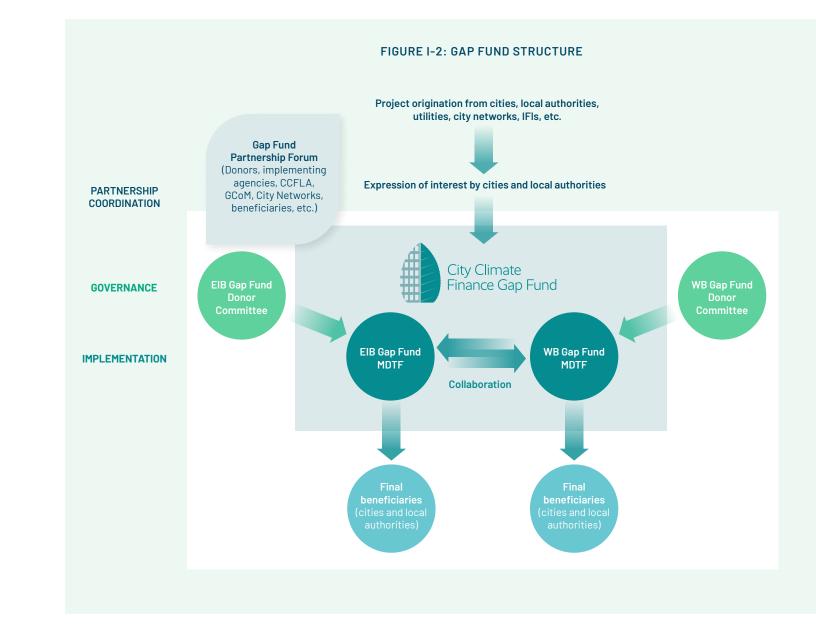
The One Gap Fund approach includes the following:

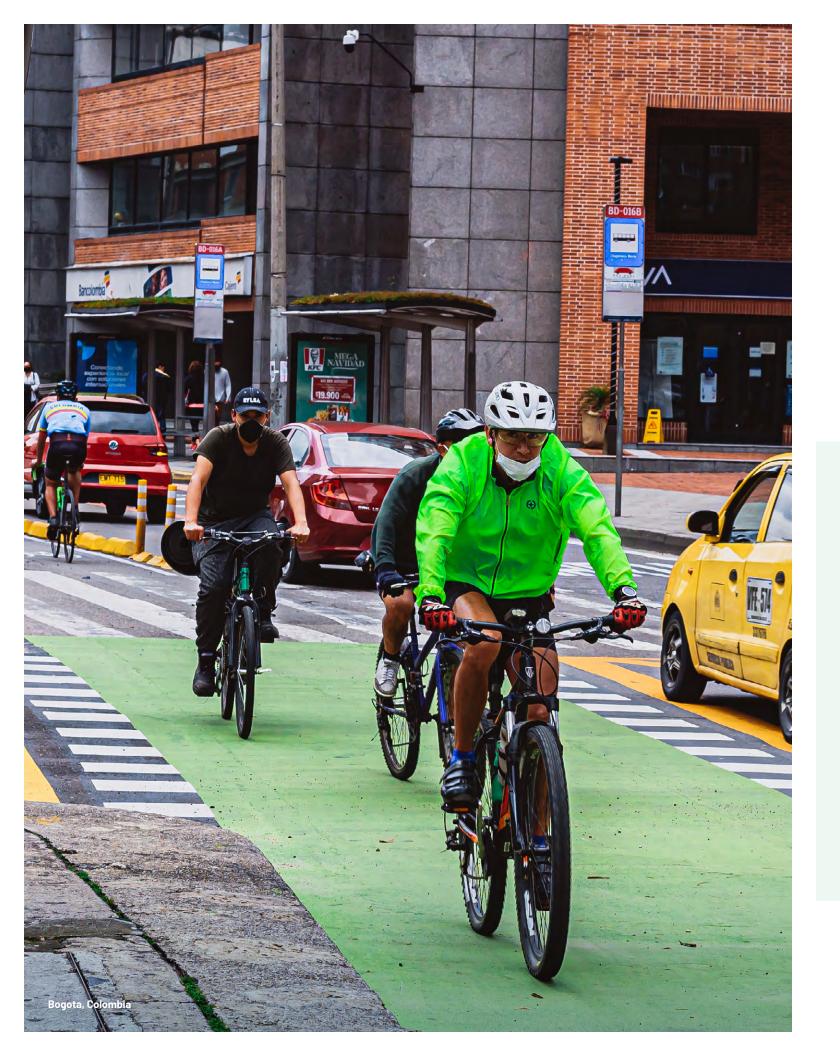
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- Mechanisms to ensure coordination between the World Bank and the EIB to screen expressions of interest and to agree on further processing by either of the multi-donor trust funds. These decisions are taken jointly during bi-weekly meetings of the two secretariats;
- Joint outreach, communication and informational activities carried out in cooperation with city networks and other key partners;
  - The "One Gap Fund" website offering information on the multi-donor trust funds. The website provides information on how cities can submit an expression of interest (EOI) to request funding for technical assistance. Additionally, it offers access to knowledge resources on climate-smart urban development. The website is hosted by the EIB and updated regularly in agreement with the World Bank and other partners.

**The Gap Fund Partnership Forum** provides a platform for sharing experiences and expertise and exchanging information and ideas. It also informs the overall strategy and direction of the Gap Fund. Current members of the Partnership Forum include representatives of the donors (Federal Ministry for Economic Affairs and Climate Action of Germany (BMWK), Federal Ministry of Economic Cooperation and Development of Germany (BMZ), Luxembourg Ministry of Environment, Climate and Sustainable Development), GCoM, ICLEI, C40 and CCFLA.

**Governance:** Donors provide strategic guidance and direction to both multi-donor trust funds through their respective donor committees. The donor committee meetings are held consecutively with participation from the World Bank and EIB Secretariats, which manage the fund's work, to ensure coordination and consistency between the two multi-donor trust funds. The donor committee meets formally once a year, while several informal meetings are organized to make sure the donors are kept up to date on the progress achieved by the Gap Fund.





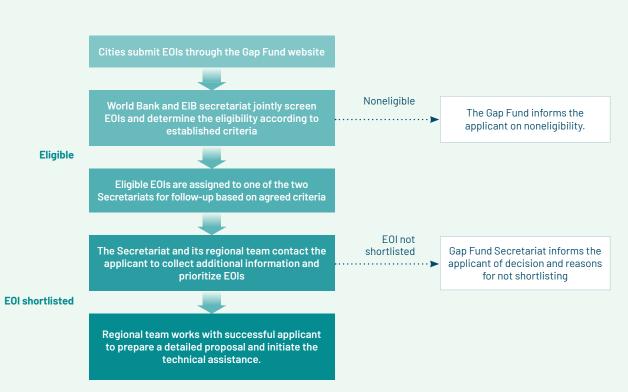
# II. Gap Fund Activities

The Gap Fund's mission and objectives are delivered through a set of complementary activities, namely:

- selection process is presented below (see figure II-1).
- and participating in workshops, webinars, and other outreach events.

Since its inception, the Gap Fund has initiated both technical support and knowledge sharing, outreach, and communication activities.





• Technical support to cities on the development or expansion of climate strategies, plans and policies, as well as identification, prioritization, and early-stage preparation of low-carbon and climate resilient projects. An overview of the application and

• Partnerships, knowledge sharing and information exchange, capacity development and standardization, to develop flagship reports, technical notes, and tools, organizing

# FIGURE II-1: OVERVIEW OF THE GAP FUND EOI REVIEW PROCESS

# II.1 Technical Support for Low-Carbon and Climate Resilient Urban Development

This section provides an overview of the technical support provided by the Gap Fund to foster lowcarbon and climate resilient urban development. It examines the EOIs received and describes the technical assistance activities approved in calendar year 2022.

# **II.1.1 ANALYSIS OF THE EXPRESSION OF INTERESTS RECEIVED**

The Gap Fund provides project preparation support to a broad range of cities and local authorities, and it accepts Expression of Interests (EOIs) on a rolling basis. The applicants can access the EOI forms through the Gap Fund website. Applicants are asked to identify the city's existing plans and studies and to clarify the type of support requested. The EIB and World Bank Secretariats then screen the received EOIs under the guidance of the eligibility criteria (figure II-1).

From inception, in late 2020, to end of 2022, the Gap Fund had received and screened a total of 287 EOIs. In calendar year 2021 and 2022, it received 131 and 110 EOIs, respectively. In terms of regional distribution<sup>7</sup>, the Gap Fund received EOIs from all regions. Figure II-2 presents the regional distribution of EOIs received in 2021 and 2022. The Sub-Saharan Africa and Latin American and Caribbean regions comprised the largest share of EOIs received in both years.

FIGURE II-2: REGIONAL DISTRIBUTION OF EOIS RECEIVED IN 2021 AND 2022

Of the 110 EOIs received and screened in 2022, 56 EOIs were eligible for support, equivalent to about 50% on average across all regions. An analysis of these EOIs determined that the most frequent reasons projects were not eligible for support include:

- with no direct link with a city administration;
- adaptation; and,
- and/or details of the program/project they are asking support on.

These results suggest that the most recurrent reasons projects were not eligible for Gap Fund support had a similar trend when compared to calendar year 2021, where the three most frequent reasons observed behind ineligibility of the application were: (1) ineligibility of the applicant (23%); (2) Others (12%); and (3) lack of a clear climate or urban focus (5%). See figure II-3 for further details.

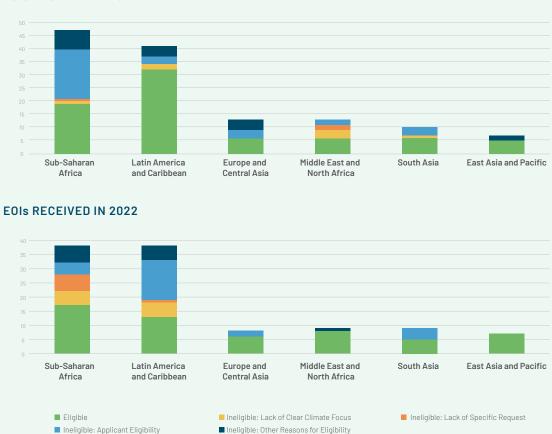
# FIGURE II-3: EOIs RECEIVED BY REGION AND ELIGIBILITY IN 2021 AND 2022

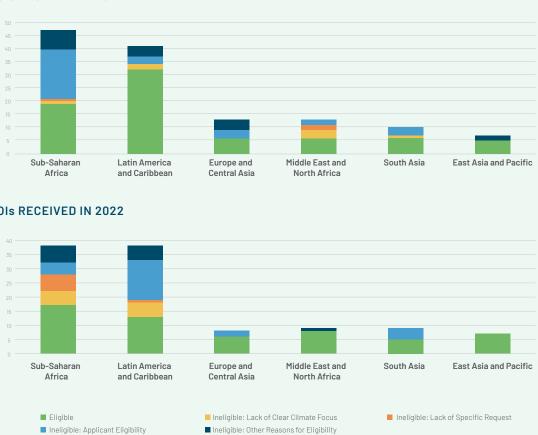


<sup>7</sup> This reports uses the regional definitions outlined in the following link; https://datahelpdesk.worldbank.org/ knowledgebase/articles/906519-world-bank-country-and-lending-groups.

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# **EOIs RECEIVED IN 2021**





• Eligibility of the applicant (22%). For instance, EOIs submitted by an individual or a private entity

• Others (11%), including incomplete applications and multiple submissions on the same request;

• Lack of a clear climate or urban focus (9%). For example, the EOI requests support for investment in municipal infrastructure without identifying a specific focus on climate mitigation or

Lack of specific request (6%). For example, EOIs do not clearly state the requested area of support

A further assessment of EOIs at the regional level (Figure II-3) suggests that regions performed differently in terms of number of eligible EOIs received. The Latin America and the Caribbean and Sub-Saharan Africa regions had the largest share of EOIs submitted totaling more than 70% in 2022. However, of these, only about half (50%) were eligible for Gap Fund support. In contrast, the Middle East and North Africa region and Europe and Central Asia regions submitted a small number of EOIs equivalent to 12% of EOIs received in 2022, but almost all of these were eligible. South Asia and East Asia performed in the middle.

The World Bank and EIB Secretariats will strive to continue drawing lessons from EOIs received and will update guidance and advice on how to formulate EOIs in future presentations of the Gap Fund and in the relevant section of the Gap Fund website.

# II.2 Technical Assistance Activities Approved in 2022

From Gap Fund inception to end of 2022, the Gap Fund approved technical assistance activities to support 110 cities in 41 countries. Specifically in 2022, the Gap Fund approved support to 66 cities in 23 countries. The sub-section below provides a summary of the activities supported.

# **II.2.1 TECHNICAL ASSISTANCE PROVIDED BY EIB AND GIZ**

The following technical assistance activities have been approved by EIB in 2022:

Low-Carbon mobility in Curitiba, Brazil. Recent mobility trends in Curitiba have seen an increase in the use of the private car relative to mass transport modes, which became more pronounced during the pandemic. The increased use of the private car has inevitably resulted in greater atmospheric pollution, carbon emissions and significant traffic congestion. There is an urgent need to invest in public transport to render this mode a more attractive alternative to the private car and thereby increase its share of urban mobility in the city. The Gap Fund will provide analysis of the existing transport and land use system and generate data needed to inform the modelling of a future mass transport service concession to be managed by a metropolitan transport agency.

Sustainable waste management in Rosario, Argentina. The city of Rosario has made strides toward a more circular economic model with the development of a composting facility and is seeking to build on this progress by scaling up its activities in sustainable waste management. Rosario proposes an expansion of the city's composting plant to install a dry biodigestion plant (including electricity and/or heat generation) for solid organic household waste. The Gap Fund will provide analysis of technically viable options for biogas and electricity and/or heat generation, considering different levels of waste separation at source as well as preliminary financial and economic analysis, with a view to potentially feeding electricity into the national grid.

Multiple climate-smart investments in Comayagua, Honduras. The city of Comayagua has a portfolio of planned projects intended to mitigate the effects of climate change, which includes a project supporting non-motorised transport in the old city centre. The proposed project comprises a street design intervention in the block of the historical

centre, the pedestrianisation of the Comayagua shopping promenade, the improvement of pedestrian crossings at 10 locations and parking facilities outside the city centre. The Gap Fund will help define the project area, identify potential locations for parking facilities outside the city centre and provide preliminary designs for some of the investments. The Gap Fund will also enable a quantification of the economic benefits and will help ensure any project risks are considered.

Energy efficient, resilient social housing in Tirana, Albania. The municipality of Tirana intends to build social housing to address the increasing cost of living in the city and, in doing so, to improve the city's resilience to climate change through sustainable building design. As part of this policy, the municipality has identified a strategic brownfield site that has the capacity to deliver homes for low-income groups as part of a larger residential development. The Gap Fund will support the municipality in the early stages of project preparation by setting the design parameters required to achieve appropriate energy efficiency levels and deliver homes that are well adapted to extreme weather events.

Energy efficient street lighting in Mataram, Indonesia. Mataram city is planning to both expand street light coverage and replace existing street lighting with more energy efficient models as part of its strategy to reduce GHG emissions and cut energy costs. This project has the potential to make a significant contribution to the city's GHG reduction targets given the power consumption of street lighting and the extent to which the city relies upon fossil fuels to meet its energy needs. The Gap Fund will provide a range of prefeasibility analyses required to define the scope of the project, including energy audit, preliminary financial and economic analysis, GHG reduction forecasts, risk analysis and recommendations on the appropriate lighting technology.

Investments for climate resilience in Portoviejo, Ecuador. The hilly topography of the city of Portoviejo and the intense rainfall it experiences periodically makes it particularly vulnerable to flooding. As part of its strategy to adapt to climatic risks, Portoviejo plans to establish a data collection network to quantify the meteorological and hydrological trends and map the associated risks affecting the city. The city government will use this data to inform the nature and extent of future investments in stormwater management and flood prevention in vulnerable areas of Portoviejo. The Gap Fund will assist the city in collecting the data, preparing preliminary designs of the future measurement network and for flood risk reduction measures and will formulate a set of priority actions for additional improvements in stormwater management.

Adaptation to increased coastal flooding risk in Savusavu, Fiji. Savusavu contends with the double risk of coastal erosion and sea level rises and the city is planning investments in coastal protection to address these challenges the city is seeking to employ a range of measures as part of a blue town model that integrates marine conservation and coastal protection with opportunities for economic development. The Gap Fund will support project preparation by assessing the options that may be deployed to effectively mitigate the risks of erosion and sea level rises, considering the costs and benefits (including cobenefits). The technical assistance will also include some elements of technical design and an examination of the scaling up and future funding possibilities.

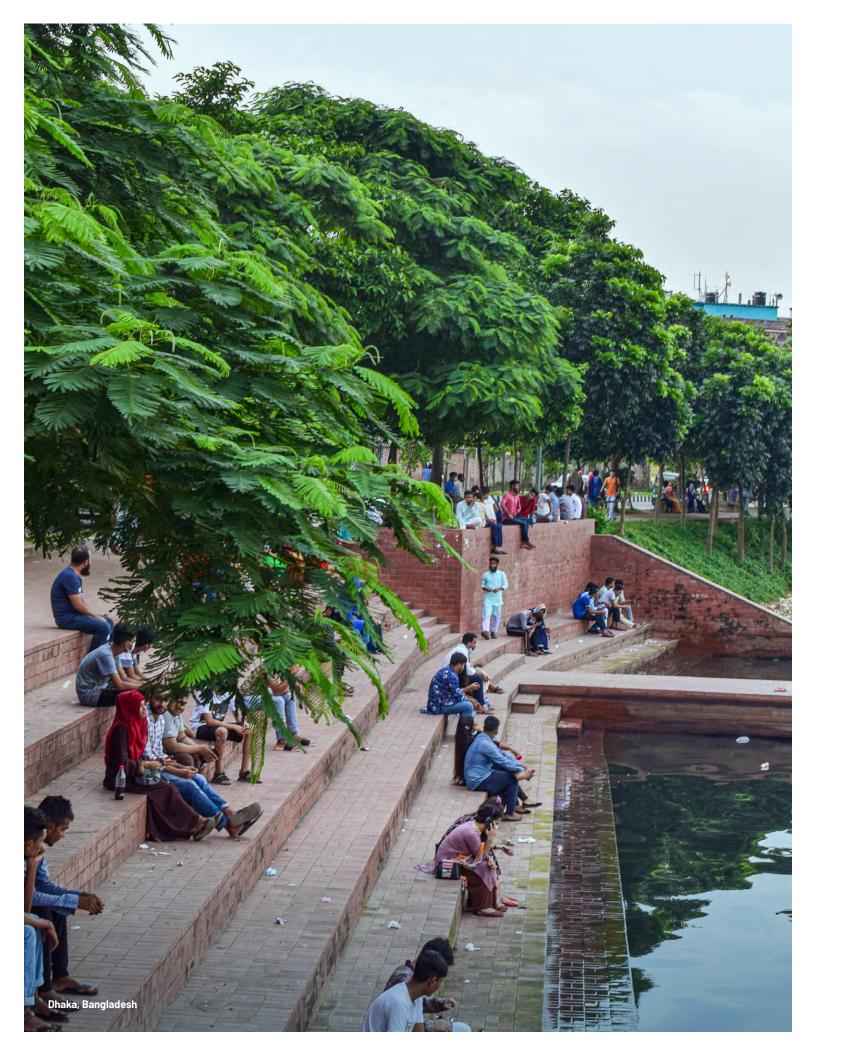
Sustainable urban drainage in Lusaka, Zambia. Climate change poses several interlinked risks in Lusaka, including flooding, degradation of groundwater and the erosion of green space. There is also the potential for these risks to become mutually reinforcing. In response to this risk, the city embarked on a multi-stakeholder planning exercise aimed at safeguarding water quality and improving resilience in the face of flood risk. An outcome of this planning process has been to identify potential investments that will advance these aims through, for example, improving wetland and local ecosystem management, preserving green spaces, and protecting groundwater by enhancing water supply and sanitation infrastructure. The Gap Fund will provide a pre-feasibility study on the various aspects of flood impact and define a project concept considering cost-benefit and wider economic effects.

Solar energy supporting new sustainable urban settlement in Zenata, Morocco. Zenata is a new, integrated urban development located in the periphery of Casablanca, which is intended to accommodate approximately 300,000 inhabitants and 100,000 jobs by 2040. The development represents an opportunity to establish a sustainable model for urban development and city living in Morocco. As part of its sustainable development policy, the Zenata Development Company intends to develop solar energy production to help meet the energy needs of the new urban area and potentially feed into the national grid. The Gap Fund will help assess the technical and financial viability of various options for harnessing solar energy thus enabling the company to make early-stage decisions on the scope and nature of investments in photovoltaic infrastructure.

Investments for climate resilience in Lagos, Nigeria. As part of its objective of transitioning to solar energy and off-grid solutions provided for in its Renewable Energy Plan, Lagos State plans to install solar photovoltaic panels in public schools and primary health centres in Ojodu, which is an underserved area with limited and unreliable grid access. The Gap Fund will provide a study on scaling up solar photovoltaic panels in public schools and primary health centers with a focus on locations connected to the grid taking Ojodu as a case study. In addition, the Gap Fund will provide project design and scope as well as a preliminary energy audit and preliminary cost benefit analysis as well as business model analysis.

Climate-proofing urban regeneration in Dhaka, Bangladesh. The size and rapid growth of Dhaka has brought the city into contact with increased flooding risk, which will only increase with climate change. The Dhaka Urban Regeneration Project is proposed to address these challenges with a range of measures, including the adaption of infrastructure to climate change, extending the network of green space, and widening the availability of sustainable mobility options. The Gap Fund will help integrate climate change adaption aspects of the project more fully by conducting a climate risk assessment, identifying the key entry points in the project for adaption measures and developing guidelines for integrating climate considerations in the planning and development of Dhaka.

Exploring the energy potential of biomass in Kericho, Kenya. The climate co-benefits of improving wastewater treatment is being explored by the city of Kericho in the context of a proposed waste-to-energy project. The project is intended to generate energy from biomass for industrial end-users. However, the technical parameters and general feasibility of the concept are not sufficiently well known for the project to proceed to full



preparation. The Gap Fund will address these early-stage challenges by developing the concept, assessing options, conducting cost benefit analysis, and exploring the potential for scaling up.

**Green corridor development in Palmas, Brazil.** The Sussuapara Conecta project aims to develop a linear urban park thereby providing a green mobility link between the central and northern areas of the city and expanding the city's carbon absorption capacity. The project is also expected to deliver a sustainable drainage resource and improve local biodiversity. These attributes are of value in the context of a dense urban settlement pattern and intense use of the private car. The Gap Fund will support project preparation by providing a survey of the hydraulic characteristics of the project site, landscape assessment, identification of public participation options and analysis of the potential financing possibilities.

**E-buses in Bogotá, Colombia.** The city of Bogotá has decided to target reductions in the GHG emissions of its transport sector. As part of this strategic objective, the city plans to electrify its extensive school bus fleet. However, a lack of background data, high costs and challenges in coordinating the various actors involved has stymied project preparation. The Gap Fund will support a pilot project for the electrification of Bogotá's school bus fleet serving both public and private schools. This support comprises the closing of data gaps to understand different business models in operation, consideration of possible financing structures, development of a stakeholder map and the drafting of a roadmap for the pilot phase.

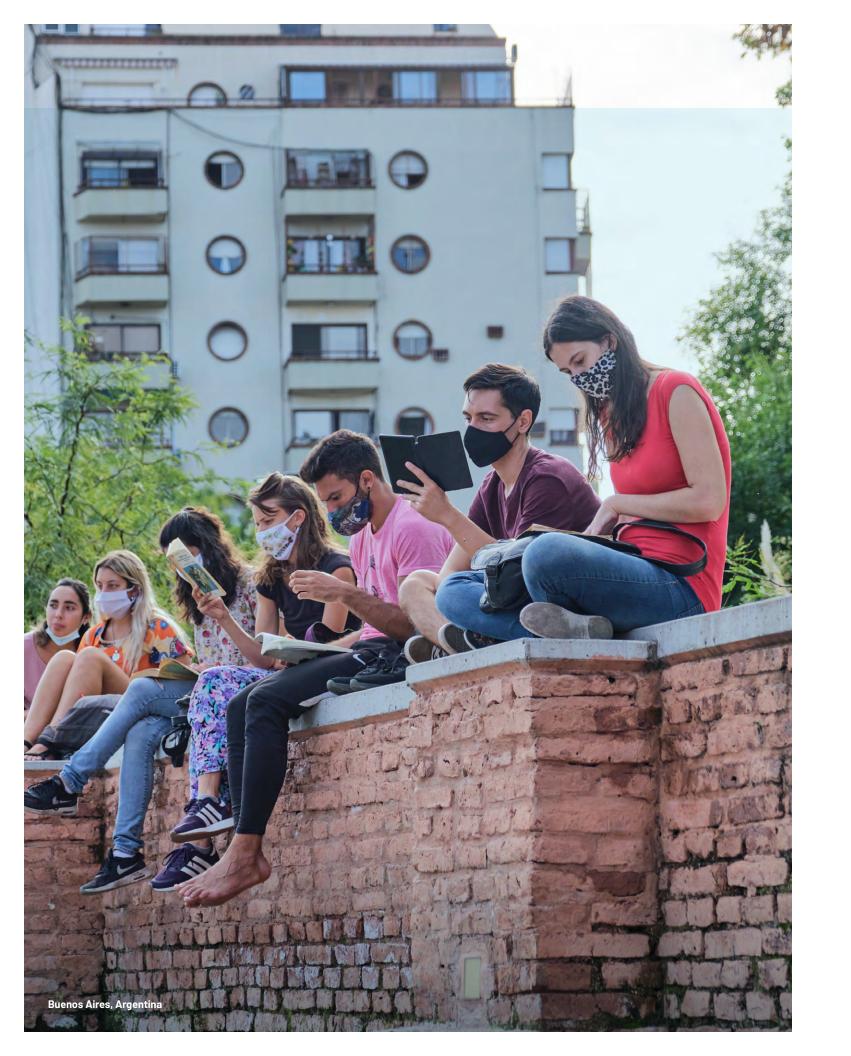
Harvesting solar energy in multiple cities in Argentina. The Argentinean network of municipalities tackling climate change (RAMCC) brings together more than 251 municipalities in Argentina committed to climate action. RAMCC has started considering the setting up of a trust fund for the purpose of jointly procuring renewable energy resources such as solar power systems. The Gap Fund will assist in planning the first phase of the trust fund aimed at procuring solar PV systems, which is expected to break the ground for further iterations and potential scaling up to cover larger numbers of municipalities. The assistance includes analysis of the relevant legal frameworks, electricity market conditions and business cases in the relevant regions and includes a technical pre-feasibility analysis in at least ten cities participating in the public procurement process. A preliminary assessment of social and environmental risks, including those related to architectural heritage will also be provided as part of the technical assistance.

**Sustainable urban mobility in Xianning, China.** The city of Xianning plans to develop two priority articulated bus corridors with modal feeder infrastructure connected to non-motorised transport. This will include new integrated approach to street design, which will allow for separating stormwater collectors from wastewater drainage systems, thereby increasing the city's ability to adapt to extreme rainfall. The Gap Fund will help define the project concept and support the city in applying the Sustainable Urban Mobility Planning Methodology under EU standards to harmonize the existing planning documents with their low carbon vision.

Map II-1 below presents the regiona approved by EIB in 2022.



Map II-1 below presents the regional breakdown of technical assistance activities



# II.2.2 TECHNICAL ASSISTANCE PROVIDED BY THE WORLD BANK

The following technical assistance activities have been approved by WB in 2022:

Climate-smart capital investments in multiple cities in Tanzania. The activity supports thirteen cities in Tanzania to align with the goals of the Paris Agreement by providing the regulatory basis for enabling public and private investment in urban infrastructure that will lower energy use and GHG emissions. It will also contribute to reducing heat island effects through added green spaces. These investments will explore (i) alternative lowcarbon construction materials; (ii) sustainable urban drainage concepts; (iii) erosion control and greening measures; and (iv) pedestrian pathways and non-motorized lanes, integration with public transit, and energy efficient street lighting.

Development of a platform for real-time monitoring of GHG emissions in multiple cities in Egypt, Turkey, and South Africa. The activity aims to develop a data platform to generate high frequency, near-real-time greenhouse gas emissions data by sector. Such data will help decision-makers analyze the relationship between urban activities and emissions and evaluate the impacts of urban climate change mitigation actions. The sectoral breakdown of emissions will help identify high-emission activities that require urgent mitigation. High frequency data would also help evaluate the impact of regulations and investments on emissions in near-real-time.

Support for the development of strategies for e-mobility adoption in Buenos Aires, Argentina. The activity supports the city's efforts to advance transport decarbonization goals through the development of strategies for electric mobility, considering aspects of regulation, infrastructure deployment and local production. The activity is aligned with the Argentina's Nationally Determined Contribution which highlights the transport sector as a critical sector for the country's climate mitigation and adaptation agenda.

Low-carbon and resilient investment identification, and policy reform plan for Phnom Penh, Cambodia. The activity supports the undertaking of a comprehensive technical assessment to help prepare the city for climate change, focusing on developing towards a more efficient low-carbon path. The assessment includes the adequacy of existing policies and institutional systems to deal with existing and emerging climate risks and to identify concrete capacity gaps for tackling the causes and minimizing the possible impacts of climate change and low-carbon city development.

Nature-based solutions (NbS) for a green and livable Bamako, Mali. The activity identifies potential NbS in areas with high levels of GHG emissions, heat island, and desertification in the Greater Bamako area. This effort will be followed by a cost-benefit analysis to prioritize and design NbS according to different scenarios and the potential for carbon sequestration, heat reduction, and other co-benefits. Solutions that are explored include public green spaces, urban agriculture, agroforestry, conservation of low-lying area and natural drainage.

Building energy-efficient housing strategies in Palembang, Musi Rawas, and Lubuklinggau, Indonesia. The activity supports the analysis of cost-benefit green and energy-efficient building construction. In addition, it supports the development of action plans to integrate green construction into government housing programs. The activity hopes to influence the One Million Housing program (a government program aiming to provide incentives for developers to build 220,000 units per annum for home ownership and to upgrade 160,000 units of substandard homes) and develop a blueprint to guide future development of green, energy-efficient, resilient, and inclusive housing strategies for cities.

Support for the operationalization of city-level climate change strategies and plans in Nairobi and Mombasa, Kenya. The activity supports the operationalization of citylevel climate change strategies and plans, towards localizing national climate change frameworks (laws, policies, and plans) at the city level. The activity focuses on (i) assessing city-wide climate smart readiness and enabling environments, (ii) providing technical support in developing and updating of GHG inventories at city level, and (iii) facilitating prioritization of bankable investments as identified in the Climate Action Plans, in accordance with city priorities.

Developing energy efficient and resilient housing strategies in Erdenet and Darkhan, Mongolia. The activity supports the development of data-based strategies to inform and prioritize potential international organizations' lending in the housing sector, and to optimize the design of the government-led affordable housing programs in the ger districts of Mongolia's largest secondary cities. The activity will strengthen existing housing programs and incentivize the use of resilient and low-carbon solutions.

Promoting NbS to increase climate and disaster resilience in Kigali, Rwanda. The activity aims to strengthen technical knowledge and capacity to facilitate the mainstreaming of NbS into future investments in the City of Kigali. It provides a technical guideline together with capacity building activities and technical recommendations on acceptable materials, indicative dimensions, locations, and preliminary installation guidelines. The activity will also test and apply the technical recommendations and associated costing template to a selected case study site.

Climate Vulnerability Assessment and Action Plan in Porto Alegre, Brazil. The activity supports the municipal government of Porto Alegre in the development of its climate vulnerability assessment, and establishment of institutional framework to develop the city's Climate Action Plan. The activity will identify and establish concrete priority measures for mitigating greenhouse gas emissions and adapting to climate change, based on the vulnerability study, and drawing on an existing inventory of greenhouse gas emissions.

Climate resilient development in Rajshahi, Basail, and Milandah, Bangladesh. The activity aims to improve understanding of climate change impacts and developing low-carbon and climate resilient urban development strategies in Rajshahi, Basail, and Milandah. It further supports the identification of key barriers in terms of institutional, financial, infrastructure, and service delivery frameworks to drive low-carbon and climate resilient urban growth, and help cities address these barriers by developing a long-term investment plan and financing strategy.

Smart and sustainable urban development in Amman, Jordan. The activity supports municipal authorities in the identification and assessment of opportunities for climate-smart and sustainable urban development in Amman. It also strengthens the Municipality's capacity for sustainable municipal finance and asset management for climate-smart investments through the development of a sustainable financing

framework for green investments.

Map II-2 below presents the regional breakdown of technical assistance activities approved by WB in 2022.

MAP II-2: MAP OF TECHNICAL ASSISTANCE ACTIVITIES APPROVED BY WB GAP FUND IN **CALENDAR YEAR 2022** 

Egypt, Multiple Cities

Mali, Bamako

Rwanda, Kigali

Brazil, Porto Alegre Argentina, Buenos Aires

**Turkey, Multiple Cities** 

Jordan, Amman

**Bangladesh, Multiple Cities** 

Cambodia, Phnom Penh

Mongolia, Erdenet & Darkhan

Kenya, Nairobi & Mombasa Tanzania, Multiple Cities

Indonesia, Multiple Cities

South Africa, Multiple Cities



# III. Partnerships, Knowledge and Information Sharing and Communication

The Gap Fund's knowledge and information sharing activities aim to address the following key barriers and challenges:

- carbon development, as well as in channeling climate finance to cities;
- the development community, and the private sector.

The following subsections highlight key progress made in 2022 on knowledge generation and information sharing.

# III.1 Knowledge Generation and Sharing

Activities carried out were based on a structured approach to identify knowledge gaps. The Gap Fund Secretariats organized consultations with regional teams to assess client demand and identify a list of activities and knowledge products. The Gap Fund organized a series of knowledge sharing events including webinars and in-person meetings and participated in regional and global conferences. Moreover, the Gap Fund produced several technical notes and analytical documents.

# **KNOWLEDGE GENERATION:**

The Gap Fund produced the following technical notes in 2022.

Technical note on "City Climate Action Plan Analysis in Latin American and the Caribbean". This note provides policy makers and practitioners with an analysis and assessment of 30 city climate action plans prepared by cities in the Latin America and Caribbean region. It presents a comparative analysis of the mitigation and adaptation actions identified in the plans as priorities in various sectors, and how these vary based on climate, hazard risks and other variables. The analysis also identified gaps in the plans and recommends how cities preparing new climate action plans can learn from the strengths and limitations of the plans analyzed.

Technical note on "Implications of Electric Vehicles for Urban Public Space". This note serves as a primer for policy makers and practitioners on the need for cities to make urban land available to accommodate public electric vehicle charging infrastructure as a means of promoting electric mobility in cities.

i) knowledge and methodology gaps that exist in assessing urban level GHGs and low

ii) coordination across local and national government and the international community to achieve a whole-of-government and whole-of-economy approach with cities recognized as a core transformative lever to achieve climate action; and

iii) standardization and harmonization of approaches across cities, national strategies,

Technical note on "Low-Carbon Slum Upgrading". This note supports city officials and technical staff identify climate change mitigation aspects of slum upgrading, including how slum upgrading can improve quality of life while maintaining low GHG emissions, how low-carbon materials can be used in slum upgrading, and other aspects.

Technical note on "Global Urban Carbon Emissions - Data Sources". This note provides policy makers and technical staff with an assessment of different global data sets that estimate urban emissions. Further, it analyzes and compares their respective strengths and limitations.

Technical note on "Enhancing Climate Financing in China's Cities". This note provides policy makers and practitioners with an overview of the progress and prospect of climate finance in cities across China. It further analyzes and identifies barriers and gaps to promote climate finance in cities and makes recommendations to address these challenges.

# **KNOWLEDGE SHARING:**

The Gap Fund organized the following virtual events in 2022.

Technical Deep Dive on Low-carbon and Climate-Smart Cities (March 2022). Organized in collaboration with the World Bank Tokyo Development Learning Center (TDLC), the Global Platform for Sustainable Cities (GPSC), the World Bank's Sustainable City Infrastructure and Services Global Solutions Group (SCIS GSG), and the Climate-Smart Cities Community of Practice (CoP), this event provided seven World Bank country delegations to develop a deeper understanding of how cities can transition to low carbon development and climate-smart urbanization pathways.

Master Class on Low-Carbon City Development (March 2022). Organized in collaboration with SCIS GSG and the Climate-Smart Cities CoP, this event aimed to build the foundational knowledge and skills necessary to help urban teams and their client cities to better understand the impacts of climate change and transition to low-carbon development pathways.

Contribution to World Bank webinars (May 2022). Through the Climate-Smart Cities CoP, the Gap Fund contributed to five webinars on the following topics: climate action planning; electric vehicles; urban land, low-carbon smart cities; capital investment planning for climate action; near-real-time monitoring of city-level carbon emissions.

Low Carbon Smart Cities Webinar (June 2022). Organized in collaboration with GPSC, this event showcased practical examples from cities that have deployed smart technologies for carbon mitigation. It featured experts who presented low-carbon, smart solutions from Korea, Jordan, and the Netherlands.

# III.2 Outreach and Communication

The Gap Fund supported the organization and conduct of various events to raise awareness among potential beneficiaries and enhance partnership communication and outreach. In addition, it continued working with the Partner Communications Working Group comprising all Gap Fund partners (BMWK, BMZ, Lux, WB, EIB, GIZ, GCOM, ICLEI, C40, and CCFLA) to identify opportunities to raise awareness around the cities and climate agenda and increase the visibility of the Gap Fund among media, policy makers, national governments, donors, and local governments.

**Coordination with partners:** The Gap Fund continued collaborating and coordinating with focal points from each partner organization through the Partner Communications Working Group for a coordinated approach to information sharing, communications planning, and dissemination, and to align and amplify messaging, particularly in the run up to COP27 which was held in Egypt on November 6-18, 2022.

Outreach webinars: The Gap Fund, jointly with the Climate Smart Cities CoP and GPSC, organized a series of knowledge webinars on Scaling Up Climate Action in Cities. These virtual events were carried out from May through September to develop a deeper understanding on how cities can scale up climate action in key sectors. The sessions included:

- growth, and sustainable development.
- oriented development.
- approaches to achieving a circular economy.
- developing sustainable district heating/cooling systems.
- Panama, Brazil, Montenegro, and Sri Lanka.

Participation in regional and global conferences: The Gap Fund facilitates events and outreach coordination with key partners around the cities and climate agenda through the Partnership Forum and monthly calls with the Partner Communications Working Group. As a result, the Secretariats were invited to participate in the following virtual and in-person events to jointly present the Gap Fund.

 Importance of City-Level Climate Action (May 2022): This virtual event provided an overview of the importance of climate action at the city level for livability, economic

 Integrated Urban Planning, Sustainable Urban Transport, and Mobility (May 2022): This virtual event discussed the impacts of urban form on GHG emissions while exploring different approaches to sustainable urban transport and mobility, including transit-

Integrated Waste Management (June 2022): This virtual event explored good and emerging practices in green and inclusive solid waste management, as well as

• Energy Efficiency Approaches to Housing and Buildings (September 2022): This virtual event provided an overview of city-wide tools and approaches to energy efficiency in the building sector including: (a) retrofitting existing buildings, (b) updating building and energy codes, (c) promoting energy efficient affordable housing, and (d)

 Nature-Based Solutions and Greening of Urban Areas (September 2022): This virtual event focused on the adaptation and mitigation potential of integrating naturebased solutions and green urban infrastructure in the Democratic Republic of Congo,

- ICLEI World Congress: Developing Investment-ready Projects Workshop (May 2022)
- GCOM Asia: Climate Change Adaptation Training Workshop (May 2022)
- Innovate4Climate 2022: City Climate Finance Gap Fund Workshop "Mobilizing Climate Finance for Cities: Integrating City Level Climate Plans, Urban Development Plans, National Determined Contributions and Long-Term Climate Strategies." (May 2022)
- 11th World Urban Forum (WUF11)(June 2022).

The Gap Fund was presented in a series of different sessions organized by Gap Fund donors and partners. The sessions, which covered various topics including climate change and urban resilience, are highlighted below.

- Financing Green and Resilient Cities to Tackle Climate Change
- Annual Assembly of the Cities Climate Finance Leadership Alliance (CCFLA)
- Financing Urban Climate Adaptation
- Sustainable Construction in Cities
- Joining Forces to Unlock Finance for Green Transformation

During WUF11, the World Bank delegation also had bilateral conversations with donors on Gap Fund's progress and further collaborations.

- Connective Cities network: Insight Moment The City Resilience Action Planning Tool by DiMSUR and the City Climate Finance Gap Fund (July 2022)
- ICLEI Daring Cities (October 2022)
- GIZ Urban October event: Working Together: How Can GIZ Projects Bring Partner Cities Closer to Climate Finance (October 2022)
- United Nations Climate Change Conference (COP27) (November 2022) The City Climate Finance Gap Fund contributed to the following side events during COP27:
  - Supporting cities in preparing climate action projects: lessons learnt from urban technical assistance facilities
  - New IKI Calls: How to get into implementation Workshop organized by IKI, featuring FELICITY and Gap Fund
  - Accelerating Cities climate action through innovative solutions, public-private collaboration, and finance access – Event organized by the Global Covenant of Mayors, France Urbaine, and MEDEF
- UrbanShift Latin America: Finance Academy for Latin America Cities (November 2022)

# III.3 Partnerships

The Partnership Forum provides a platform for sharing experiences and expertise and exchanging information and ideas between key players in the city climate finance arena to inform the overall strategy and direction of the Gap Fund.

Partnership Forum meetings were held on February 25 and November 29, 2022, to provide a platform for sharing experiences and expertise. In addition to exchanging knowledge and ideas between key stakeholders in the city climate finance arena, these events help inform the overall strategy and direction of the Gap Fund. Participants included representatives from BMWK, BMZ, LUX, WB, EIB, GIZ, GCOM, ICLEI, CPI, CCFLA and C40.

The Gap Fund Secretariat also participated in different working groups convened by the different partners of the Gap Fund including Leadership for Urban Climate Investment (LUCI); CCFLA's Steering Committee, Assembly and Member meetings and Project Preparation Action Group; and GCOM's International Coalition for Sustainable Infrastructure (ICSI) Action Track on Financing.





# IV. Monitoring Results

Table III-1 presents the progress made framework.

# TABLE IV-1: GAP FUND 2021 AND 2022 CONSOLIDATED RESULTS FRAMEWORK

# OVE

The objective of the City Climate Finance Gap Fund countries transition towards low-carbon and climate temperature increase to 1.5°C above pre-industrial le

Expression of Interests (EOIs) submitted through th Fund website and jointly screened by the EIB and th Secretariats

# EIB Secretariat

Approved technical assistance activities

Number of Gap Fund supported projects that have b taken up for further preparation support or financing

# WB Secretariat

Approved technical assistance activities

Number of Gap Fund supported projects that have b taken up for further preparation support or financin

# Table III-1 presents the progress made in 2022 on the consolidated Gap Fund results

RALL IMPACT					
MDTF is to help cities in middle- income and low-income te- resilient pathways, in line with global efforts to limit levels.					
2021	2022				
131	110				
14	16				
N/A	N/A				
16	14				
N/A	3				
	b help cities in middle- inco t pathways, in line with glob 2021 131 14 N/A 16				

# **Financial Update** V.

This section provides an overview of the financial contributions to the Gap Fund since its inception and the amount spent by the Secretariats.

The Federal Ministry for Economic Affairs and Climate Action of Germany (BMWK), together with the Federal Ministry for Economic Cooperation and Development of Germany (BMZ) pledged EUR 30 million in December 2019 to the Gap Fund Multi-Donor Trust Fund managed by the World Bank and EIB. The Luxembourg Ministry of the Environment, Climate and Sustainable Development contributed an additional source of funding of EUR 10 million in December 2020. At the end of 2022, the EIB MDTF was increased by a further contribution of EUR 25 million from BMWK.

CONTRIBUTIONS TO THE GAP FUND	IMPLEMENTING AGENCY	DONOR CURRENCY (EUR Million)	AMOUNT PLEDGED RECEIVED (EUR Million)	AMOUNT (EUR Million)
BMWK	WB	EUR	10	10
BMZ	WB	EUR	20	20
LUX	WB	EUR	2	2
BMWK	EIB	EUR	40	40
LUX	EIB	EUR	8	6
TOTAL			80	78

# **TABLE V-1: DONOR CONTRIBUTIONS**

TABLE V-2: AMOUNT RECEIVED AND SPENT SINCE INCEPTION (SEPT 2020 - DEC 2022)

IMPLEMENTING AGENCY	AMOUNT RECEIVED (EUR Million)	AMOUNT SPENT (EUR Million)	REMAINING AMOUNT (EUR Million)
WB	32	4.26	27.74
EIB	46	3.61	42.39

# VI. Next Steps for the Gap Fund

As the Gap Fund moves into its third year of operations, 2023 will be crucial to continue consolidating its position in supporting low-carbon and climate resilient urban projects. The Gap Fund's impact and reach should grow as the technical support provided to cities and knowledge- sharing initiatives increase, and as technical assistance activities progress and reach completion.

Facilitating matchmaking between cities receiving Gap Fund support and other project preparation facilities or finance providers will also increase awareness. An increased focus on capacity development in areas addressed by the Gap Fund is also foreseen, and this has been factored into the capital increase to the EIB-GIZ Gap Fund made in December 2022.

Going forward, the Gap Fund will scale up its efforts to expand its portfolio of technical assistance activities and share the lessons learned from the completed activities.



# between cities.



**Partnerships:** The Gap Fund will continue to uphold the strong partnership and collaboration between donors, the World Bank, EIB, GIZ, city networks and other partners to identify and pursue opportunities to raise awareness about the Gap Fund across stakeholders, namely city governments, national governments, donors, and the climate finance community of practice.

The Partner Communications Working Group will continue to collaborate to increase the awareness of the impact of the Gap Fund. During 2023, the Working Group will also strategize how to promote the Gap Fund in COP28 in November 2023 and other relevant global conferences.



Capacity development: The Secretariats recognize the importance of capacity development in helping ensure the sustainability of the technical assistance provided by the Gap Fund and, thus, will increase its focus on capacity development in 2023. They plan to complement the technical support provided with a range of measures aimed at enhancing cities' capabilities in early-stage project preparation. These measures will be based upon the comparative advantages of both Secretariats. They will be coordinated as appropriate to amplify the positive impacts. The details of this capacity development will be elaborated during 2023 and reflected in the results framework.

Technical Assistance: In 2023, the Gap Fund will significantly scale up its efforts to provide technical support to low carbon and climate-resilient urban development. The Secretariat will also focus on providing technical support, monitoring progress, and tracking results achieved through the activities that have been initiated since the Gap Fund's inception. It will strive to take stock of lessons learned through these activities by continuing its monitoring and evaluation processes and promote the sharing of knowledge and experience

Through its new partnership with GCOM, the WB will raise awareness of Regional Covenants of Majors and cities about the Gap Fund. It will build knowledge on the opportunities and constraints for cities' low-carbon and climate-resilient development. Through this partnership between the WB and GCOM, city governments will receive support to identify appropriate programs and projects and formulate expression of interest to receive support from the Gap Fund.

The EIB will support ICLEI with a grant via GIZ for the purpose of providing and facilitating knowledge exchange and transfer on developing bankable, climate smart urban infrastructure projects. This will commence in early 2023 and will be achieved through facilitated interactive technical capacity building sessions and city "pairing-and-sharing", which is expected to enable cities to make more informed decisions, effectively engage investors and conduct financial planning of urban investments.



**Knowledge sharing:** EIB and WB will work with key partners of the Gap Fund to continue organizing in-person and virtual peer-to-peer learning and knowledge exchange activities at city, regional, or global level on low carbon and resilient urbanization. The Gap Fund will also focus its efforts on sharing lessons learned from technical assistance activities that have been finalized through different venues including workshops and events. In addition, project stories will be published on the WB website to showcase cities' achievements supported by the Gap Fund.

Knowledge generation: In addition to continue disseminating analytical work completed in 2022, the WB and EIB will also initiate the development of new technical notes based on the specific needs and demands emerging from the city-level technical assistance provided by the Gap Fund. In 2023, the Gap Fund will also finalize a flagship report on city climate finance gap in low- and middle-income countries.



**Matchmaking activities:** As the implementation of technical assistance activities progress, identifying financing sources that could provide further support for later stages of project implementation will become increasingly important. Attention will be placed in 2023 on the development of an approach on matchmaking activities. Matchmaking will require case-by-case discussions with a wide range of organizations. The SOURCE data management system developed and used by the EIB encompasses a dedicated functionality that allows to identify project program financing according to their eligibility criteria. The implementation of a pragmatic approach to apply this tool to matchmaking activity will also be planned in 2023.

# Annex

# Annex 1 – List of technical assistance activities approved by the Gap Fund by end of 2022

YEAR	INSTITUTION	ACTIVITY NAME	COUNTRY	CITY/IES
2021	EIB	Generation of Biogas from Organic Market Waste	Vanuatu	Port Vila
2021	EIB	Strengthening Data Systems for Improved Drinking Water Management	Ecuador	Cuenca
2021	EIB	Light rail from Rio Hondo to Buenavista	Mexico	Naucalpan
2021	EIB	Stormwater Masterplan	South Africa	Mbombela
2021	EIB	Green roofs combined with facades and opening of sealed surface	Montenegro	Podgorica
2021	EIB	Valorization of municipal waste and assessment of its mitigation potential	Morocco	Chefchaouen
2021	EIB	Greening of urban areas through the Alley 12.7km project	Ukraine	Vinnytsia
2021	EIB	Support to safe and climate friendly street design	Ukraine	Lviv
2021	EIB	Pre-feasibility of municipal organic waste treatment alternatives	Guatemala	Escuintla; San Jose; Iztapa
2021	EIB	Linear Parks	Brazil	Campinas
2021	EIB	Urban forest	Colombia	Santa Marta
2021	EIB	Business Model for Solar Tricycles	Côte d'Ivoire	Danané
2021	EIB	Jardim Maravilha Wetlands Park	Brazil	Rio de Janeiro
2021	EIB	Circular economy in municipal solid waste management	Uganda	Makindye; Nansana; Kira; Entebbe
2021	WB	Climate-Smart Urban Development and Urban Resilience in Ethiopia	Ethiopia	Addis Ababa
2021	WB	Low-carbon and resilient municipal service delivery in Ahmedabad city	India	Ahmedabad
2021	WB	Unlocking the full potential for low-carbon emissions and urban resilience	Democratic Republic of Congo	Kinshasa
2021	WB	Green, Low Carbon and Climate Resilient Prishtina	Kosovo	Prishtina
2021	WB	Towards a green housing program in Dakar	Senegal	Dakar
2021	WB	Building Resilient and Sustainable Cities in Indonesia	Indonesia	Semarang; Denpasar; Banjarmasin
2021	WB	Support for a climate resilient and low-carbon recovery in Mexican cities	Mexico	San Cristobal de las Casas; Tulum
2021	WB	Supporting Cities to develop Climate Action Planning in Morocco	Morocco	Fez-Meknes Region City of Fez

YEAR	INSTITUTION	ACTIVITY NAME	COUNTRY	CITY/IES
2021	WB	Ensuring sustainable urban transformation and climate smart development associated to a low carbon aerial transportation system in San Miguelito	Panama	San Miguelito
2021	WB	Vietnam: Climate-Smart City Action Plans	Vietnam	Vinh City; Ho Chi Minh City
2021	WB	Poltava Climate Change Mitigation and Adaptation Strategy	Ukraine	Poltava City
2021	WB	Low-carbon municipal service delivery of Solid Waste Management in selected cities of Karnataka	India	Mangalore and Kolar
2021	WB	Developing Energy-Efficient and Resilient Housing Strategies for key cities in Maldives	Maldives	Malé City; Hulhumalé; Thilafushi; Gulhi Falhu; Addu City; Fuvahmulah City
2021	WB	Low-Carbon Vital Neighborhoods Bogota - LAC Cities (Phase 1)	Colombia	Bogota
2021	WB	Climate-Smart City Investments for Quezon City	Philippines	Quezon City
2021	WB	Planning for Future Climate-resilient and Low-Carbon Reconstruction in the urban context in Yemen	Yemen	Aden
2022	EIB	Smart Street Lighting	Indonesia	Mataram
2022	EIB	Scaling up Solar PV in public schools and healthcare centers in Ojodu	Nigeria	Lagos
2022	EIB	Aménagement durable et intégré de l'éco-cité Zenata	Morocco	Zenata
2022	EIB	Feasibility for Waste-to-Energy Plants in Kenya	Kenya	Kericho
2022	EIB	Blue Town Model Coastal Protection Project	Fiji	Savusavu
2022	EIB	Social Housing in Kodër Kamëz,	Albania	Tirana
2022	EIB	Household waste treatment plant	Argentina	Rosario
2022	EIB	Public procurement of PV systems in small and medium-sized cities	Argentina	Marcos Juarez; Puerto Esperanza; Posadas; Belle Ville; Godoy Cruz; Lújan de Cuyo; San Martín de los Andes; Plottier; San Miguel; Mar del Plata
2022	EIB	Integrating Climate Perspectives in Dhaka Urban Regeneration Project	Bangladesh	Dhaka
2022	EIB	Reframe the urban mobility services system in Curitiba	Brazil	Curitiba

YEAR	INSTITUTION	ACTIVITY NAME	COUNTRY	CITY/IES
2022	EIB	Sussuapara Conecta - the City's Green Infrastructure System	Brazil	Palmas
2022	EIB	Low Carbon City Sustainable Urban Transport Project	China	Xianning
2022	EIB	Electric School Bus Fleet	Colombia	Bogota
2022	EIB	Data and Priority Actions for Stormwater Management	Ecuador	Portoviejo
2022	EIB	Green Zone for Comayagua (ZVC)	Honduras	Comayagua
2022	EIB	Lusaka Flood Management for Climate Adaption and City Resilience	Zambia	Lusaka
2022	WB	Building energy-efficient housing strategies	Indonesia	Palembang; Musi Rawas; Lubuklinggau
2022	WB	Nature-Based Solutions for a Green and Livable Bamako	Mali	Bamako
2022	WB	City-wide Climate Resilient Strategies for Kenya's Two Metropolitan Cities	Kenya	Nairobi; Mombasa
2022	WB	Climate Smart Capital Investments in Tanzanian Cities	Tanzania	Arusha; Dodoma; Kigoma; Tabora; Geita; Ilemela; Kahama; Mwanza; Mbeya; Morogoro; Songea; Sumbawanga; Dar es Salaam
2022	WB	Climate resilient development in selected Bangladeshi cities	Bangladesh	Rajshahi; Basail; Milandah
2022	WB	Developing Energy-Efficient and Resilient Housing Strategies for key cities in Mongolia	Mongolia	Erdenet; Darkhan
2022	WB	Promote Nature-Based Solutions to Increase Climate and Disaster Resilience in the City of Kigali	Rwanda	Kigali
2022	WB	Cambodia Sustainable Cities Initiative	Cambodia	Phnom Penh
2022	WB	Developing a platform for real time monitoring of cities GHG emissions	Egypt/ South Africa/ Turkey	Cairo; Alexandria; Luxor; Shakh Zayed City; Johannesburg,
			Turkey	Tshwane; Ekurhuleni; eThekwini; Ordu, Trabzon; Adana; Manisa
2022	WB	Support for the development of strategies for electric mobility adoption in Buenos Aires, Argentina	Argentina	Tshwane; Ekurhuleni; eThekwini; Ordu, Trabzon; Adana;
2022 2022		electric mobility adoption in Buenos Aires,		Tshwane; Ekurhuleni; eThekwini; Ordu, Trabzon; Adana; Manisa

	INSTITUTION	ACTIVITY NAME	COUNTRY	CITY/IES
2022	EIB	Sussuapara Conecta - the City's Green Infrastructure System	Brazil	Palmas
2022	EIB	Low Carbon City Sustainable Urban Transport Project	China	Xianning
2022	EIB	Electric School Bus Fleet	Colombia	Bogota
2022	EIB	Data and Priority Actions for Stormwater Management	Ecuador	Portoviejo
2022	EIB	Green Zone for Comayagua (ZVC)	Honduras	Comayagua
2022	EIB	Lusaka Flood Management for Climate Adaption and City Resilience	Zambia	Lusaka
2022	WB	Building energy-efficient housing strategies	Indonesia	Palembang; Musi Rawas; Lubuklinggau
2022	WB	Nature-Based Solutions for a Green and Livable Bamako	Mali	Bamako
2022	WB	City-wide Climate Resilient Strategies for Kenya's Two Metropolitan Cities	Kenya	Nairobi; Mombasa
2022	WB	Climate Smart Capital Investments in Tanzanian Cities	Tanzania	Arusha; Dodoma; Kigoma; Tabora; Geita; Ilemela; Kahama; Mwanza; Mbeya; Morogoro; Songea; Sumbawanga; Dar es Salaam
2022	WB	Climate resilient development in selected Bangladeshi cities	Bangladesh	Rajshahi; Basail; Milandah
2022	WB	Developing Energy-Efficient and Resilient Housing Strategies for key cities in Mongolia	Mongolia	Erdenet; Darkhan
2022	WB	Promote Nature-Based Solutions to Increase Climate and Disaster Resilience in the City of Kigali	Rwanda	Kigali
	\//D	Cambodia Sustainable Cities Initiative	Cambodia	Phnom Penh
2022	VVD			
2022		Developing a platform for real time monitoring of cities GHG emissions	Egypt/ South Africa/ Turkey	Cairo; Alexandria; Luxor; Shakh Zayed City; Johannesburg, Tshwane; Ekurhuleni; eThekwini; Ordu, Trabzon; Adana; Manisa
-	WB		South Africa/	Luxor; Shakh Zayed City; Johannesburg, Tshwane; Ekurhuleni; eThekwini; Ordu, Trabzon; Adana;
2022	WB	of cities GHG emissions Support for the development of strategies for electric mobility adoption in Buenos Aires,	South Africa/ Turkey	Luxor; Shakh Zayed City; Johannesburg, Tshwane; Ekurhuleni; eThekwini; Ordu, Trabzon; Adana; Manisa

YEAR	INSTITUTION	ACTIVITY NAME	COUNTRY	CITY/IES
2022	EIB	Sussuapara Conecta - the City's Green Infrastructure System	Brazil	Palmas
2022	EIB	Low Carbon City Sustainable Urban Transport Project	China	Xianning
2022	EIB	Electric School Bus Fleet	Colombia	Bogota
2022	EIB	Data and Priority Actions for Stormwater Management	Ecuador	Portoviejo
2022	EIB	Green Zone for Comayagua (ZVC)	Honduras	Comayagua
2022	EIB	Lusaka Flood Management for Climate Adaption and City Resilience	Zambia	Lusaka
2022	WB	Building energy-efficient housing strategies	Indonesia	Palembang; Musi Rawas; Lubuklinggau
2022	WB	Nature-Based Solutions for a Green and Livable Bamako	Mali	Bamako
2022	WB	City-wide Climate Resilient Strategies for Kenya's Two Metropolitan Cities	Kenya	Nairobi; Mombasa
2022	WB	Climate Smart Capital Investments in Tanzanian Cities	Tanzania	Arusha; Dodoma; Kigoma; Tabora; Geita; Ilemela; Kahama; Mwanza; Mbeya; Morogoro; Songea; Sumbawanga; Dar es Salaam
2022	WB	Climate resilient development in selected Bangladeshi cities	Bangladesh	Rajshahi; Basail; Milandah
2022	WB	Developing Energy-Efficient and Resilient Housing Strategies for key cities in Mongolia	Mongolia	Erdenet; Darkhan
2022	WB	Promote Nature-Based Solutions to Increase Climate and Disaster Resilience in the City of Kigali	Rwanda	Kigali
2022	WB	Cambodia Sustainable Cities Initiative	Cambodia	Phnom Penh
2022	WB	Developing a platform for real time monitoring of cities GHG emissions	Egypt/ South Africa/ Turkey	Cairo; Alexandria; Luxor; Shakh Zayed City; Johannesburg, Tshwane; Ekurhuleni; eThekwini; Ordu, Trabzon; Adana; Manisa
2022	WB	Support for the development of strategies for electric mobility adoption in Buenos Aires, Argentina	Argentina	Buenos Aires
2022	WB	Porto Alegre Climate Vulnerability Assessment and Action Plan	Brazil	Porto Alegre

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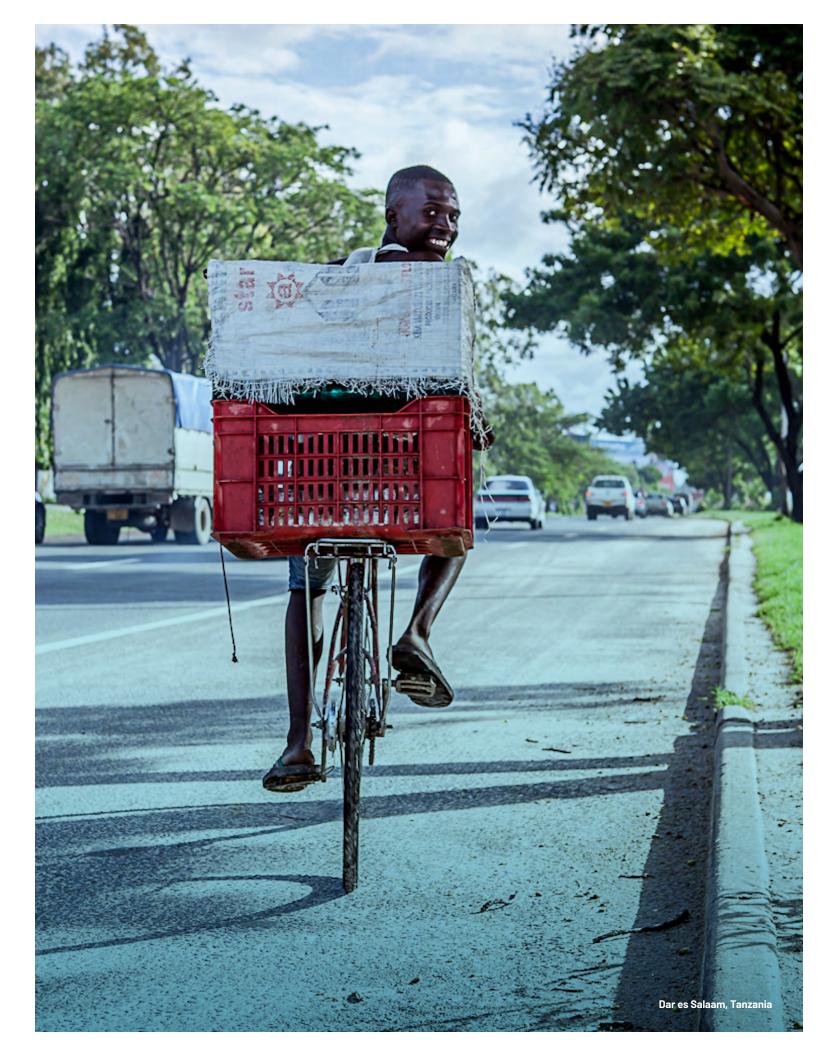
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