

2024

World Bank

# City Climate Finance Gap Fund Annual Report

July 1, 2023 to June 30, 2024

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World Bank. 2025. City Climate Finance Gap Fund Annual Report for Fiscal Year 2024. Washington D.C.

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# Abbreviations and acronyms

BMWK	German Federal Ministry for Economic Affairs and Climate Action
BMZ	German Federal Ministry of Economic Cooperation and Development
CAP	Climate Action Plan
CAR	Central African Republic
CCFLA	Cities Climate Finance Leadership Alliance
CRP	City Resilience Program
C40	C40 Cities Climate Leadership Group
EAP	East Asia Pacific
ECA	Europe and Central Asia
EIB	European Investment Bank
EOI	Expression of Interest
FY	Fiscal Year
GCOM	Global Covenant of Mayors for Climate and Energy
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GFDRR	Global Facility for Disaster Risk Reduction and Recovery
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GSG	Sustainable City Infrastructure and Services Global Solutions Group
HCMC	Ho Chi Minh City
ICLEI	Local Governments for Sustainability
IFC	International Finance Corporation
LAC	Latin America and the Caribbean
LMIC	Low- and Middle-Income Country
LUX	Luxembourg Ministry of the Environment, Climate and Biodiversity
MDTF	Multidonor Trust Fund
MENA	Middle East and North Africa
MRV	Monitoring, reporting and evaluation
NBS	Nature-based Solutions
SAR	South Asia
SSA	Sub-Saharan Africa
SWM	Solid Waste Management
ТА	Technical Assistance

# Foreword

Cities are drivers of productivity and economic development, playing a critical role in reducing poverty and promoting prosperity. While rapid urban growth creates new opportunities for development, it also positions cities as major contributors to climate change and makes them increasingly vulnerable to its impacts. Creating livable cities for a livable planet involves developing sustainable, resilient, and inclusive urban environments capable of addressing climate change. However, the changes also require addressing the financial and technical challenges that cities face in implementing effective climate action.

The City Climate Finance Gap Fund (Gap Fund) plays a critical role in creating transformative changes for cities. It aims to address the financial constraints that cities face to achieve their climate objectives by providing technical assistance (TA) for climate action planning and project preparation, as well as capacity building to scale up climate-smart urban development. This comprehensive approach supports low carbon, resilient, and sustainable cities, fostering livable communities to create a livable planet.

The Gap Fund has been assisting cities plan for climate action and translate their climate objectives into investments since 2021. It has demonstrated the importance of support during the early stages of project preparation to unlock the urban investments needed for climate-smart urban development and for improving the living conditions in low- and middle- income countries (LMICs).

The Gap Fund has become a critical actor in the climate finance space. Recognizing its impact, the Governments of Germany and Luxembourg committed additional contributions in 2023 from their initial capitalization of EUR 55 million (USD 56 million) to EUR 105 million (USD 108 million), establishing the Gap Fund as one of the largest early-stage technical assistance funds for cities and climate initiatives.

It is my pleasure to present the Gap Fund World Bank Annual Report for Fiscal Year 2024 (FY24), covering the period from July 1, 2023, to June 30, 2024. This report highlights the impact of the Gap Fund in cities and demonstrates how TA, capacity building, and partnerships are helping close the city climate finance gap.

We are grateful for the support received from our donors: the German Federal Ministry for Economic Affairs and Climate Action (BMWK); the German Federal Ministry for Economic Cooperation and Development (BMZ); and the Luxembourg Ministry of the Environment, Climate and Biodiversity(LUX). We also value the close collaboration with our implementing partner, the European Investment Bank (EIB), as well as our city network partners, including the Cities Climate Finance Leadership Alliance (CCFLA), the C40 Cities Climate Leadership Group (C40), the Global Covenant of Mayors for Climate and Energy (GCOM), and Local Governments for Sustainability (ICLEI). These partnerships have been critical in guiding the strategic direction of the Gap Fund.

#### **Ming Zhang**

Global Director, Infrastructure, Disaster Risk Management, and Urban Global Department, The World Bank

# Executive Summary

The City Climate Finance Gap Fund (World Bank Gap Fund) approved 31 TA grants totaling EUR 9.3 million—approximately USD 9.9 million—in FY24, which covers the period from July 1, 2023, to June 30, 2024. These grants support 86 cities across 23 countries in transforming their climate ambitions into finance-ready projects. The TA grants help cities develop climate action plans, identify and prioritize urban investments, prepare implementation frameworks for low carbon and sustainable mobility, assess technologies for climate-smart solid waste management (SWM), and identify nature-based solutions (NBS) for urban development. These measures represent a significant increase from FY23, during which 18 TA grants were approved to assist 59 cities in 17 countries in becoming low carbon and climate resilient.

A total of 17 TA grants were completed during FY24. These TAs supported the development of 33 city-formulated low carbon and climate resilient strategies, plans, and policies. Of these documents, 19 are adopted or are currently being implemented at the city level. In addition, the completed TAs identified 16 climate-smart urban projects with a total value of USD 926.2 million. Of these projects, 11, valued at USD 447.7 million, have been taken up for further preparation by the World Bank, other multilateral banks, trust funds, or local governments.

These developments represent significant progress on the World Bank Gap Fund results framework. Since the inception of the Gap Fund in September 2021 to the end of FY24, the fund supported by the World Bank has assisted the development of 46 city-formulated low carbon and climate resilient strategies, plans, and policies. This marks a significant increase from the 13 supported from inception through the end of FY23. Of these documents, 30 were approved or are being implemented at the city level by the end of FY24, an increase from the 11 documents approved or implemented from inception through the end of FY23.

Twenty-two climate-smart urban projects were identified, with an estimated total value of USD 1.5 billion from the inception of the Gap Fund to the end of FY24. This represents a significant increase from the six projects, valued at USD 637 million, identified from inception to the end of FY23. Furthermore, both number and estimated costs of projects that have been taken up for further preparation have also increased. By the end of FY24, 17 projects valued at USD 926 million have been taken up for further preparation to the projects valued at USD 926 million have been taken up for further preparation, compared to five projects valued at USD 471 million from inception up to FY23.

The World Bank Gap Fund produced two technical notes in FY24: (i) "Embodied Carbon Emissions" and (ii) "Carbon Monitor Cities 2.0: Tracking Urban Emissions in Near Real-Time". These publications provide insight and guidance for urban practitioners on the implementation of climate mitigation actions. In addition, the World Bank Gap Fund co-organized an in-person technical deep dive on cities and climate change in Tokyo and Kyoto, Japan, and six virtual webinars on low carbon and climate resilient urban development topics, including lessons learned from the TA provided by the Gap Fund.

The World Bank Gap Fund has been supervising a recipient-executed grant to the Global Covenant of Mayors for Climate and Energy (GCoM) to raise awareness among cities

about the Gap Fund, support them to identify projects, and organize capacity building activities on the type of support available and the application process. This partnership has led to the delivery of 55 awareness-raising events, 45 technical workshops, and the formulation and submission of 41 expression of interest (EOIs) for Gap Fund TA. As part of the implementation and supervision of the grant, GCoM hosted a partnership workshop in February 2024. The workshop aimed to continue strengthening their capacity to support cities, refine and streamline collaboration mechanisms, and identify key events, milestones, and knowledge products.

The World Bank Gap Fund will continue to advance its efforts to close the city climate finance gap in FY25. It aims to approve 30 to 35 new TA grants and continue fostering knowledge generation and sharing. It will co-produce two flagship reports: one addressing the challenges and opportunities for closing the city climate finance gap, and another for analyzing trends in solid waste management covering technical and operational aspects, and environmental and social impacts. In addition, it will co-organize in-person workshops and webinars. The World Bank Gap Fund will continue to leverage its partnership with GCoM to raise awareness about the Gap Fund and increase cities' capabilities to identify project ideas and submit quality EOIs.

# my Commencement & Housekeer

# LIVABLE CITIES ACADEMY

# INTEGRATED URBAN FLOOD RISK MANAGEMENT

16-20 SEPTEMBER '24 CAPE TOWN, SOUTH AFRICA CHAPTER

# Introduction

The Gap Fund is a multidonor initiative established in September 2021 that aims to help cities in developing and emerging countries realize their climate ambitions by turning low carbon and climate resilient ideas into strategies and finance-ready projects.

The World Bank and the European Investment Bank (EIB) jointly implement the Gap Fund. Each institution administers a multi-donor trust fund (MDTF) in close coordination with donors, comprising the German Federal Ministry for Economic Affairs and Climate Action (BMWK), the German Federal Ministry for Economic Cooperation and Development (BMZ), and the Luxembourg Ministry of the Environment, Climate and Biodiversity (LUX). Additionally, the Gap Fund collaborates with city networks and other key partners including the C40 Cities Climate Leadership Group (C40), GCOM, the Local Governments for Sustainability (ICLEI), and the Cities Climate Finance Leadership Alliance (CCFLA).

This annual report summarizes the progress made by the World Bank Gap Fund during FY24, which started on July 1, 2023, and ended on June 30, 2024.

- Section 1 provides an overview of the Gap Fund, its mission, and objectives as well as governance and implementation arrangements.
- Section 2 presents the implementation progress of the World Bank Gap Fund activities under Track 1 on technical assistance for low carbon and climate resilient development.
- Section 3 presents the implementation progress of the World Bank Gap Fund activities under Track 2 on partnerships, knowledge generation, and information sharing.
- Section 4 presents the progress made in FY24 on the World Bank Gap Fund results framework.
- Section 5 provides an overview of the contributions to the World Bank Gap Fund and expenditures as of the end of FY24.
- Section 6 presents a brief overview of the planned activities for FY25 including technical assistance, knowledge management, partnerships, and capacity development.

### Program context - cities and climate change

Over the past 50 years, the world has witnessed a quadrupling of urban population and a rapidly changing climate. Cities are drivers of productivity and wealth creation for both countries and subnational regions, accounting for 80 percent of global gross domestic product (GDP). This makes them critical for reducing poverty and delivering shared prosperity. While such rapid growth in cities creates new opportunities, it also makes them major contributors to climate change and increasingly vulnerable to more frequent and extreme weather events.

Cities in LMICs face the highest projected exposure to future climate change related hazards, and their economies are hardest hit by weather and climate shocks. More frequent and extreme rainfall events could flood urban infrastructure designed using specific event intensity, duration, and frequency that can be exceeded by many climate-induced extreme events. Most of the population exposed to heatwaves will live in urban centers, which will experience higher temperatures than surrounding areas due to the urban heat island effect. Even at prevalent global warming levels, urban areas are experiencing significant impacts from climate change. Some major cities have experienced mean local warming of beyond 1.5 degrees Celsius.<sup>1</sup>

Efforts to successfully limit global warming hinge on cities' ability to lead in reducing GHG emissions. The share of global GHG emissions that can be attributed to activities in urban areas has increased from 62 percent in 2015 to 67–72 percent in 2020.<sup>2</sup> While cities in LMICs contribute to a very small fraction of global emissions at present, the combination of rapid urbanization and economic growth could result in a surge of emissions from these cities in the coming decades unless we act to set them on low carbon trajectories today.

How effectively cities are planned and managed are critical to achieving greener and more resilient development since almost 70 percent of the world's population will call cities home by 2050.<sup>3</sup> Scaling up investments in low carbon urban infrastructure will be essential to achieve the goals of the Paris Agreement that aim to limit the global temperature

increase to well below 2 degrees Celsius, as well as strengthen climate change adaptation and resilience. In many parts of the world, much of the urban areas are still to be built, offering a unique opportunity to mainstream climate considerations, optimize compact urban form, and promote quality of life and clean technologies for low carbon, resilient, and inclusive urbanization.

An estimated USD 93 trillion of sustainable infrastructure needs to be built by 2030—more than 70 percent of which will be built in urban areas. 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.<sup>4</sup> New infrastructure could cost LMICs anywhere between two and eight percent of their 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>5</sup>

Cities have the potential to be key enablers for transformational climate mitigation and adaptation. Subnational governments can convene and concentrate multiple sectors, consumers, and actors, undertake multisectoral investments and therefore have the potential to think about public functions in a more synergistic way in their territories than do siloed national sectoral ministries.<sup>6</sup> In addition, city leaders are probably the most motivated political actors to take on climate change. They have local knowledge and ability to mobilize their communities, can influence and implement climate policies put in place by higher levels of government, execute city-specific policies and initiatives, and help coordinate collective climate action in their cities.<sup>7</sup>

National governments, municipalities, city councils, and public and private financial institutions are increasingly acknowledging the importance of cities for climate action and starting initiatives to address barriers to access climate finance. More than 6,000 cities—representing 20 percent of urban residents worldwide—are signatories of GCOM and have developed climate action plans. Nevertheless, city governments face substantial challenges to ensure climate-smart urban development. These include limited institutional capacity, insufficient technical expertise, and limited access to financing. Even if cities have drafted preliminary climate diagnostics or action plans, many do not have the resources or capacity to move forward to the implementation phase. Targeted support and capacity building are essential to secure access to financial resources and accelerate the transition to low carbon and resilient urban development.

### **Gap Fund mission and objectives**

The 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 degrees Celsius above pre-industrial levels. It aims to increase funding for early-stage project preparation, helping cities address climate change, along with capacity gaps at the municipal level.

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

- Develop city level climate change strategies and generate in-depth analytics to assess potential of plans, strategies, and investment programs to address climate change.
- Identify and prioritize low carbon and climate resilient investments.
- Define project concept and components of prefeasibility studies.
- Develop financing strategies and identify financing sources for climate-smart urban infrastructure investments.
- Build capacity for low carbon and climate resilient urban development.

#### FIGURE I-1 Scope of Support Provided by The Gap Fund



### **Gap Fund governance and implementation arrangements**

The Gap Fund provides support to cities through two implementing agencies: the World Bank and the EIB, which cooperates with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Both institutions bring a unique mix of long-standing expertise in sustainable development, climate finance projects, and urban development. Each implementing agency administers a MTDF with strong coordination mechanisms between the two under a "One Gap Fund" approach (figure I-2). This approach comprises governance, implementation, and partnerships.

- Governance: Donors provide strategic direction to the two MTDFs through their respective donor committees. They are held in parallel with cross participation from EIB and the World Bank as observers in each other's donors committee to ensure coordination between the two MTDFs. The committee meets annually, although meetings with donors are organized regularly to inform on the progress of the Gap Fund.
- Implementation: EIB and the World Bank coordinate implementation along with other key partners, including city networks, to ensure integrated outreach, selection, and support mechanisms under the "One Gap Fund" approach. This includes:
  - Joint outreach, communication, and knowledge sharing activities, which are organized in partnership with city networks and other key partners.
  - One Gap Fund website, which offers information on the Gap Fund, including information on how to submit an EOI to request funding for TA, knowledge resources, and information on TAs that are being implemented.
  - Established coordination mechanisms between EIB and the World Bank to screen and assess EOIs. Further processing by one of the two MDTFs is discussed and decided jointly during bimonthly meetings.
- Partnerships: The Partnership Forum serves as a platform for sharing experiences, expertise, and exchanging information between key actors in the city climate finance sector. It aims to inform and guide the overall strategy and direction of the Gap Fund.



# CITY CLIMATE FINANCE GAP FUND - WORLD BANK ANNUAL REPORT FOR FISCAL YEAR 2024

## **World Bank Gap Fund activities**

Activities of the World Bank Gap Fund are organized in three tracks.

- Track 1 Technical assistance for low carbon and climate resilient city development supports cities in the development or update of climate strategies, plans, and policies; the identification and prioritization of climate-smart investments; and early-stage preparation of climate-smart urban projects.
- Track 2 Partnerships, knowledge sharing, and standardization aim to strengthen technical capacity and partnerships for city climate action. The activities include development of flagship reports and technical notes, and organization of knowledge sharing events such as webinars, workshops, and the Partnership Forum.
- Track 3 Program management and trust fund administration facilitate annual work programming, monitoring and evaluation, coordination between stakeholders, reporting, and trust fund administration and governance in accordance with the World Bank's policies and procedures.

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Track 1 – Technical Assistance
 for Low Carbon and Climate
 Resilient Urban Development

The Gap Fund proactively facilitates demand from a broad range of cities to help formulate and analyze climate change strategy, identify and prioritize climate investments, and prepare projects at early stage.

This section provides a summary of the Track 1 activities that the World Bank Gap Fund carried out in FY24. It includes an analysis of the EOIs received and describes the approved and finalized TA.

### **Expressions of interest received**

The Gap Fund accepts EOIs on a rolling basis through the Gap Fund website<sup>1</sup> where applicants can access EOI forms and identify the city's existing climate change plans and studies on climate change, indicate the type of support requested, and assess the eligibility of the proposed activity. EIB and the World Bank then screen the EOIs submitted during bimonthly meetings under the guidance of eligibility criteria (figure II-1).



The Gap Fund received and screened 580 EOIs between its inception and the end of FY24. The number of EOIs received during FY24 saw a significant increase, totaling 214. This is nearly double the 128 EOIs received in FY23, indicating a substantial rise in interest and awareness about the Gap Fund. This also reflects a strategic shift in outreach, leveraging the partnership GCOM to help cities identify project ideas and prepare EOIs.

The regional distribution<sup>2</sup> of EOIs received changed between FY23 and FY24 with a decrease in the number of EOIs received from Middle East and North Africa (MENA) in FY24. Other regions, including East Asia Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), and South Asia (SAR), have experienced a relative increase in the number of EOIs received. EOIs from Sub-Saharan Africa (SSA) show no significant change in FY24 (see figure II-2a and b).



#### FIGURE II-2 Figure 1.2 Figure 1.2

The moderate increase in the number of EOIs across most regions reflects more targeted outreach at the regional level, and the impact of the partnership with GCOM, which has been actively engaging with cities across regions.

Of the 214 EOIs received and screened in FY24, 107 EOIs were assessed eligible for support. An analysis of these EOIs determined that the most frequent reasons EOIs were not eligible for support include:

- Eligibility of the applicant at 26 percent: EOIs submitted by an individual, civil society organization, or a private entity with no direct link with a city administration.
- Other reasons for ineligibility at 26 percent: Incomplete EOIs, multiple submissions on the same request, request for project implementation support, among others.
- Lack of a clear climate or urban focus at 16 percent: EOIs requesting support for project preparation without identifying a specific focus on climate change mitigation or adaptation or focusing on rural areas.
- Lack of specific request at 16 percent: EOIs that did not provide a clear and concise request for support or where the type of support requested was not specific.
- Geographical and sectoral scope at 16 percent: EOIs requesting support for small cities with a low population size or where the sector scope is too far removed for the Gap Fund such as in agriculture or energy production.

This analysis suggests similar reasons for ineligibility than in FY23, although the percentage value had changed. In FY23, the three most frequent reasons for ineligibility were: eligibility of the applicant at 47 percent, other reasons for eligibility at 22 percent, and lack of a clear climate or urban focus at 19 percent.

A more detailed assessment of EOIs suggests a regional change in the quantity and eligibility of the EOIs received in FY24 (figure II-3). Sub-Saharan Africa accounted for the largest share of EOIs submitted, which was 40 percent of the total EOIs received. In contrast, EOIs from MENA accounted for the smallest share with only four percent of the EOIs submitted. Among the EOIs considered eligible, those that originated in SSA and LAC had the largest share.

### FIGURE II-3 FOIs received by region and eligibility in: (a) FY23 and (b) FY24



EOIs received in FY24



Source: World Bank Gap Fund. 2024.

The Gap Fund will continue to strengthen its partnership with GCOM, as well as with other partners and city networks working closely with cities and providing hands-on support to help them identify challenges and project ideas. Further, it will continue to support the sessions and training events GCOM organizes to raise awareness about the Gap Fund and access support to advance low carbon and climate resilient project ideas toward investment. This continuous collaboration and coordination are expected to further improve the quality of the EOIs that will be submitted during FY25.

### **Technical assistance activities approved in FY24**

Since its inception at the end of 2021, the World Bank Gap Fund has approved 73 TA grants to support 204 cities in 53 countries transition to low carbon and resilient urban development. During FY24, the World Bank Gap Fund approved 31 TA grants totaling EUR 9.3 million—approximately USD 9.9 million—to help 86 cities in 23 countries across EAP, ECA, LAC, SAR and SSA transform their climate ambitions into finance-ready projects (map II-1).

MAP II-1 TA activities approved by the World Bank Gap Fund in FY24



Source: World Bank Gap Fund. 2024.

The following section provides a summary of TAs approved by the World Bank Gap Fund in FY24.

#### **Sub-Saharan Africa**

• Climate informed urban planning and housing designs in Angola: This grant supports integrating climate considerations into housing site selection, urban design guidelines,

and housing typologies for the national housing program Auto-Construcao Dirigida (ACD). It enhances implementation of ACD in three cities: Benguela, Huambo, and Lubango. Key TA activities include: (i) development of climate-smart urban design guidelines; (ii) recommendations to integrate climate-smart urban design guidelines into urban plans and municipal master plans; (iii) development of low carbon and climate resilient urban housing typologies; and (iv) development of climate informed spatial scenarios to select neighborhoods to implement ACD in selected cities.

- Roadmap for the implementation of the Mombasa Climate Action Plan in Kenya: This grant supports developing an implementation roadmap for the Mombasa climate action plan (CAP). It assesses institutional and financial capacities to implement the CAP, prioritizes climate-smart investments, and pre-feasibility studies for a selected investment. Moreover, the grant supports developing a guideline to prioritize, monitor, and design climate-smart investments and identify NBS opportunities. This grant is implemented in coordination with the EIB Gap Fund. Municipalities in Mombasa will be able to express interest for TA for pre-feasibility studies for priority investments identified through this grant.
- Accelerating climate-smart urban growth and development in Nigeria: This grant supports Ibadan, Kano, and Lagos in Nigeria strengthen their capacities for climate resilient planning and identifying and prioritizing urban investments. For each city, it develops a roadmap to accelerate the transition to climate-smart urban growth. This includes a readiness assessment of the enabling environment, development of a framework to align local government policies with the national resilience strategy, and recommendations to enhance climate strategies at state and local levels. Additionally, the grant will support developing a prioritization framework to select bankable, climate-smart capital investments based on climate benefits, technical soundness, and financial feasibility. Financing strategies will be formulated for priority investments identified through the framework.
- Mainstreaming nature-based solutions in neighborhood development plans in the Republic of Congo: This grant supports the development of climate—and NBS-informed neighborhood development plans for Brazzaville and Pointe-Noire. For each city, it supports: (i) identification and prioritization of NBS opportunities; (ii) implementation of a participatory approach to identify urban investment needs and integrate NBS into the investments identified; (iii) prioritization of investments and assessment of their climate and socioeconomic benefits; and (iv) prefeasibility studies, implementation guidelines and operation and maintenance strategies for priority investments.
- Climate action planning in Sierra Leone: This grant supports three cities—Bo, Kenema, and Makeni—in developing city level climate action plans. For each city, the development of the plans involve: (i) institutional and regulatory assessment; (ii) greenhouse gas (GHG) emissions inventory, climate risk assessment, and scenario planning; (iii) identification and prioritization of climate actions; (iv) assessment of financing options to implement the actions identified; and(v)monitoring and evaluation to track the implementation of the plans. Further, to inform preparing action plans, the TA supports baseline diagnostics of climate readiness and enabling environment for infrastructure investments, institutional setup, climate action financing, spatial planning, solid waste management, among other urban topics.

Integrated land use and transport planning and urban redevelopment in Tanzania: This
grant supports the city of Dodoma conceptualize a redevelopment project for the
city's central business district (CBD) and the provision of policy recommendations for
the Dodoma Transportation Master Plan. Through a multipronged approach, this TA
focuses on: (i) modeling of land use and transport development under different growth
and policy scenarios to inform the location and type of investments that redevelop the
CBD and provide recommendations for the master plan; (ii) scoping and developing
conceptual designs for public space and pedestrian-oriented features in the CBD,
including identification of NBS and non-motorized transport opportunities; and
(iii) assessing existing housing stock types and construction techniques to identify
opportunities for low carbon public housing upgrading and retrofitting.

#### **East Asia and the Pacific**

- Identifying and prioritizing low carbon urban investments in China: This grant supports Shijiazhuang city identify and prioritize low carbon urban investments. It focuses on: (i) a baseline GHG emissions study for the building sector in Shijiazhuang core urban area, which will assess buildings of different uses—public, private, residential, and commercial—and their associated levels of emissions; (ii) the identification of low carbon investments across the energy, water, waste, and transport sectors and recommendations for their prioritization based on their potential for reducing GHG emissions using the International Finance Corporation's (IFC) APEX tool<sup>3</sup>; (iii) scenario modeling of the city's existing urban form and emission patterns against alternative scenarios with diverse urban patterns.
- Cadaster-based natural resources management system in China: This grant supports
  developing a cadaster-based natural resources management system and piloting in
  Xuzhou city. It focuses on: (i) a best-practice comparative study, situational analysis,
  and knowledge exchange for improving the cadastral system of land record coverage,
  and (ii) the design of a natural resources asset valuation and monitoring system to
  assess land resources, forests, grasslands, and water and wetlands. The system will
  provide base data for urban planning, which is key to transition from a resourceintensive to a green-growth model. In addition, the grant will support a city resilience
  and risk assessment based on the value data of the improved cadaster system.
- Operationalization of a climate action plan in Indonesia: This grant supports the capital city Jakarta analyze global best practices of climate action plan (CAP) operationalization, assess and prioritize climate urban investments, develop capacity for integrating CAP with spatial planning and budgeting, and increase technical knowledge on monitoring, reporting, and evaluation (MRV) of GHG emissions. The TA focuses on: (i) analysis of integrating CAPs with spatial planning, investment prioritization, budgeting, and performance indicators to measure impact of investments on climate change adaptation and mitigation; (ii) development and recommendations of a five-year climate action implementation plan, including a list of priority climate urban investments; (iii) a diagnostic on the existing capacity and needs of Jakarta to monitor and report climate action; and (iv) development of a roadmap for an MRV system, including its capacity building.
- Climate change action planning and prioritization of climate informed investments in Indonesia: This grant supports developing climate action plans and prioritizing

potential climate investments in Ambon, Balikpapan and Kupang.. For each city, the TA will focus on: (i) a baseline assessment of the prevaling climate situation—analyses of GHG emissions and climate risk, and assessment of policies and regulations; (ii) climate action planning, including establishing climate targets and assessing climate actions; (3) identification, cost-benefit analysis, and technical review of potential climate investments.

- Identifying urban investments for climate action in Malaysia: This grant supports an assessment of the viability of adopting low carbon interventions in eight cities— Iskandar, Johor Bahru, Kota Kinabalu, Muar, Petaling Jaya, Segamat, Shah Alam, and Seberang Perai—in Malaysia. For each city, it supports a market-size assessment for low carbon interventions and recommends short- to medium-term interventions, including a prototype concept note for potential investment projects. In addition, the grant will support a gap analysis and recommendations for planning, financing, and investments to manage flood risks in the selected cities.
- Roadmap for green housing construction standards in Ger areas in Mongolia: This grant supports developing measurement indicators, verification mechanisms, and an implementation roadmap for the BestGer rating system, a green building rating system for housing construction designed to be affordable and tailored to Mongolia's climate conditions. The grant will support the piloting and testing of the measurements indicators and verification process of the BestGer system in three housing units in Darkhan, Erdenet, and Ulaanbaatar. In addition, the grant will develop knowledge exchange and develop educational training and communication materials on the BestGer rating system.

#### **Europe and Central Asia**

- Climate-smart investments in solid waste management in Bosnia and Herzegovina: This grant supports 16 municipalities in Bosnia and Herzegovina in assessing gaps and opportunities to improve their solid waste management (SWM) service delivery and prioritizing climate-smart infrastructure investments for integrated SWM. It aims to improve the SWM sector and strengthen institutional capacity. It focuses on: (i) a climate-informed technical assessment of SWM investments previously identified by the selected municipalities; (ii) a financial viability and affordability assessment of investments and the identification of medium- to long-term funding gaps for investments identified; and (iii) identification and prioritization of climate-smart SWM investments.
- Climate-informed recovery public infrastructure investment plans in Ukraine: This grant supports five cities in Ukraine—Cherkasy, Kharkiv, Kyiv, Vinnitsia, and Zhytomyr—and prepare climate-informed recovery public infrastructure investment plans. Through a participatory approach, the TA focuses on: (i) a methodology for climate-informed infrastructure investment, which includes its identification, prioritization, selection, and planning for each selected city. The TA further supports developing factsheets for priority infrastructure investments that provide an overview of the investment and its anticipated benefits, economic analysis, estimated implementation costs, assessment of expected risks and their mitigation measures, climate change considerations, and sample render designs.

#### Latin America and the Caribbean

- Cost analysis for e-bus adoption in Brazil: This grant supports analyzing acquisition costs of e-buses in Sao Paulo and the potential economic benefits of expanding Brazil's domestic production of e-buses, particularly in reducing transition costs to electric fleets in Sao Paulo. The grant focuses on: (i) an assessment of the technical requirements for e-buses and their alignment with the city's demand and topography.; (ii) a comparative analysis of the technical requirements for e-buses in Sao Paulo with other cities in Latin America; (iii) recommendations to reduce the costs to enable the electric transition; (4) a comparative analysis of the costs of importing e-buses components versus producing them in Brazil; and (5) an analysis of the potential impacts on e-bus prices due to increased local production.
- Climate-smart housing strategy in Dominican Republic: This grant supports the Greater Santo Domingo area formulate a climate-smart housing strategy. The strategy will identify programmatic investments, regulations, financing instruments, and institutional arrangements to promote climate adaptation and mitigation in the housing sector. It will focus on: (i) a climate-smart urbanization and housing diagnosis;(ii) guiding principles for the design of housing interventions, including energy and water efficiency and climate resilience measures; (iii) strengthening institutional capacities to address climate change; (iv) a framework that monitors and evaluates implementation of the climate-smart housing strategy, and (v) programmatic investments for climate-smart urban housing. Additionally, it will support developing a program concept for climate-smart housing to help decision makers better plan, coordinate, and implement climate-smart housing interventions.
- Climate-smart social housing and urban infrastructure in Ecuador: This grant supports guidelines for the construction of climate-smart social housing and guidelines for the design of climate-smart urban infrastructure in different bioclimatic zones. It comprises: (i) an assessment of existing social housing design typologies that address climate change; (ii) knowledge exchange on international experiences that integrate climate elements into social housing programs; (iii) an analysis of institutional framework for climate resilience and NBS for urban upgrading in different bioclimatic zones; (iv) development of climate-smart design guidelines for selected investments; and (v) identification of NBS options and example of NBS design at prefeasibility level.
- Incorporating climate change into urban investments in El Salvador: This grant supports four cities—Ilobasco, La Libertad, Santa Ana and San Miguel—incorporate climate change into urban investments such as municipal markets, roads, and drainage. This is achieved through: (i) a review of prefeasibility studies to inform the proposed market designs, including a carbon footprint assessment for each stage of construction and use lifecycle and an analysis of the infrastructure's climate resilience; (ii) recommendations to incorporate low carbon design considerations and to reduce the lifecycle carbon footprint of the selected urban investments; (iii) recommendations to incorporate climate resilience design considerations in the investments and enhance climate resilience during their operation and maintenance.
- Conceptualization and design of an e-buses corridor in Paraguay: This grant supports the development of a concept for a green corridor project in Asuncion. It focuses on: (i) a review of urban mobility and land use planning plans, studies, and data; (ii) an

assessment of public transport demand and supply, with projected urban development patterns; (iii) a preliminary design for green corridor development; (iv) identification of potential nodes for urban regeneration along the selected corridor; (v) an operational plan for low emission buses; and (vi) a cost evaluation and revenue analysis of the operational plan.

 Policy reforms for city climate action in Peru: This grant supports reforms and policy actions on sustainable urban planning to advance more compact and resilient cities, increase end-use energy efficiency in appliances and buildings, and promote distributed energy generation. It focuses on: (i) review and drafting of regulatory instruments to design the incentive framework for low carbon, resilient, and sustainable urban renewal, and densification; (ii) development of a roadmap to design policy targets for greening affordable housing programs; and (iii) review and drafting of policy and regulatory documents for minimum energy performance standards for lighting and distributed energy generation among residential consumers.

#### South Asia

- Development of strategies to promote transport-oriented development in Mumbai, India: This grant supports identifying the types, locations, and financing strategies for priority climate resilient investment projects along key urban transit corridors that promote transport-oriented development (TOD) and compact urban development in Mumbai. It focuses on: (i) a comprehensive diagnostic of the urbanization pattern in the city; (ii) an analysis of the link between transit infrastructure investments and their impacts on land use densification and diversification and land value increase and capture; (iii) planning strategies for integrated TOD for two selected pilot transit station areas in both green field and brown field locations; and (iv) a climate-resilient TOD development strategy, including priority investment proposals.
- Advancing transit-oriented development in Haryana, India: This grant supports the Government of Haryana identify low carbon investment projects in selected metro station areas to guide TOD and green, resilient, and inclusive development (GRID) along the new mass transit corridors in the state. The TA first supports a geospatial analysis and mapping of existing and planned developments to identify and select metro station areas with highest TOD potential. Then, it identifies climate-smart investments in the selected station areas to promote TOD and GRID. These station areas will serve as pilots that address climate change. Additionally, the TA supports the development of a financing strategy to inform implementation of the investments identified.
- Hyderabad climate change action plan, India: This grant supports the development of Hyderabad's climate change action plan. The development of the plan involves:

   (i) an assessment of the city's climate risks;
   (ii) spatial analysis on land use and urban sprawl to understand changes as in built up areas and green cover;
   (iii) a GHG inventory to identify main sources of GHG emissions in the city; and (iv) identification and prioritization of climate-smart investments. The grant will also support a decarbonization action plan, a study on last-mile connectivity to assess the transportation sector and recommendations on low carbon connectivity, and a study on industrial processing for one or two priority sectors to review how they address climate change.

- Climate resilient and low carbon urban services in selected cities in Rajasthan, India: This grant supports three cities in Rajasthan—Kota, Jaipur, and Jodhpur—identify low carbon and resilient investment opportunities for SWM and mobility. The SWM component focuses on a baseline assessment, a review of existing SWM policies, an evaluation of institutional and financing gaps, and the identification of actions and investment options. The mobility grant focuses on a legal and policy review, an analysis of urban transit in the three cities, and the identification of investment opportunities that promote spatial planning, compact urban development, and improved connectivity in selected hubs and corridors. In addition, this TA supports capacity assessment and the provision of recommendations that strengthen institutional capacity to foster climate-informed urban service delivery.
- Scaling up low carbon and climate resilient low cost self-built housing in India: This grant supports the integration of climate resilience in low cost self-built housing. It focuses on an assessment of building standards and green certification practices in India and the establishment of definitions and metrics of low carbon and climate resilient low cost self-built housing. It provides support to identify constraints and opportunities for the adoption of climate measures in low cost self-built homes by householders, material suppliers, small contractors, and financiers. In addition, it recommends how to integrate climate resilience in self-built homes for low-income households in three major climatic zones in India, focusing on assessments that will be carried out in Chennai, Guwahati, Jodhpur Lucknow, Patna, and Surat.
- Scaling up low carbon investments in the Kolkata Metropolitan Area in India: This
  grant supports preparing a riverfront action plan for Kolkata, including low carbon
  investments options for improved urban services and riverfront development.
  It comprises a baseline assessment and mapping of land use patterns, mapping of
  infrastructure and assets, development of a visual scan to identify green/blue assets
  and prioritize locations for NBS, and identification of climate-smart investment
  options. In addition, it actions a climate-informed SWM action plan and a technical
  assessment on energy efficiency and investment options that improve public sector
  buildings in Kolkata.
- Nature-based solutions for flood risk management in Itahari in Nepal: This grant assesses
  flood risks, identifies and prioritizes NBS investments for flood risk management.
  The TA includes: (i) data analysis of Itahari's geological, hydrological, topographic, and
  rivers' hydraulic profiles; (ii) flood susceptibility mapping for multiple return periods;
  (iii) assessment of major causes of flooding and mitigation measures; (iv) identification
  of locations for NBS for flood protection and mitigation; (v) identification and
  prioritization of NBS for floodplain and stormwater drainage management; (vi) costing
  and prefeasibility studies for priority NBS investments. Additionally, the TA supports
  capacity building that integrates NBS in project design and promotes knowledge
  exchange on NBS for flood risk management.
- Green affordable housing standards and design in Pakistan: This grant supports the Government of Punjab formulate green affordable housing standards. This is achieved through: (i) a desk review of international good practices on green housing standards and regulations; (ii) an assessment of the local housing sector; (iii) recommendations on green affordable housing standards and certification criteria; (iv) assistance in

the formulation of regulatory documents to implement the green affordable housing standards and regulations. In addition, the TA helps identify design prototypes for green affordable housing design to be used as reference by housing agencies, developers, builders, among others, and the development of a technical guideline that integrates green infrastructure in affordable housing schemes supported by the government.

 Flood risk mitigation and low carbon solid waste management in Greater Colombo Area in Sri Lanka: This grant supports flood mitigation in Colombo through a vulnerability and damage assessment for flood risk in selected basins, the identification and prioritization of gray and green infrastructure for storm water management, technical design concepts that address flood hotspots, and an investment plan that implements priority interventions. Moreover, the grant will help identify low carbon SWM priority investments, recommend climate-smart strategies and technologies for the sector, and conduct a pre-feasibility study for a large-scale waste to biogas plant.

Figure II-4 provides the regional breakdown of TA grants approved in FY24 and since the Gap Fund's inception in September 2021.

A third of the approved TA amounts in FY24 went to SAR where nine grants are supporting 17 cities in four countries. EAP and SSA together accounted for nearly half of the approved TA amounts. In EAP, 13 grants are supporting 22 cities in four countries while in SSA 13 other grants are supporting 13 cities in six countries. LAC and ECA accounted for 14 percent and nine percent of the amounts approved, respectively. In LAC, six grants are supporting 11 cities in six countries while in ECA, three grants are supporting 23 cities in three countries. No grants were approved in MENA in FY24.

# FIGURE II-4 Regional breakdown of approved grant amounts in: (a) FY24 and (b) since inception



## **Technical assistance activities completed in FY24**

In FY24, the World Bank Gap Fund completed 17 TA grants. These grants supported 74 cities across 17 countries. They supported the development of 33 city-formulated low carbon and climate resilient strategies, plans, and policies. Of these documents, 19 are adopted or are being implemented at the city level. Moreover, the completed TAs led to the identification of 16 climate-smart urban projects with a total value of USD 926.2 million. Of these projects, 11, valued at USD 447.7 million, have been taken up for further preparation by the World Bank, other multilateral banks, trust funds, or local governments.

An overview of the grants completed:

- Identification of investments in NBS for climate resilience in Central African Republic
- Operationalization of climate change action plans in Mombasa and Nairobi in Kenya
- Developing a green building market in Dakar and Saint Louis in Senegal
- Integrating climate resilient infrastructure into urban development in cities in Tanzania
- Identification and preparation of climate-smart investments for Cambodian cities
- Climate-resilient solid waste management strategies for cities in Indonesia
- Energy efficient housing and densification strategies for three cities in Indonesia
- Planning for low carbon and climate resilient cities in Indonesia
- Low-carbon investment planning for multiple cities in Thailand
- Identification and planning of low-carbon and climate resilient investments in Vietnam
- Low-carbon solid waste management action plan for Gyumri, Armenia
- Supporting Dushanbe's transition to a low-carbon solid waste management system, Tajikistan
- Strengthening the framework to foster e-mobility adoption in Buenos Aires, Argentina
- Improving the city-level framework for low-carbon urban development in Amman, Jordan
- Gaza City urban heat island mitigation strategy
- Low-carbon municipal service delivery of solid waste management for two cities in India
- Platform for real-time monitoring GHG emissions in cities in Egypt, Turkey, and South Africa



#### MAP II-2 TA activities completed by the World Bank Gap Fund in FY24

The section below provides a summary of the activities carried out and the results achieved under each completed TA.

#### **Sub-Saharan Africa**

 Identification of investments in NBS for climate resilience in Central African Republic: Limited urban planning and uncontrolled urban growth have increased the vulnerability of cities in the Central African Republic (CAR) to climate change, one of the most vulnerable countries in the region. National and local governments struggle to implement investments to increase resilience to climate shocks due to lack of capacity and insufficient analytics necessary for implementation. These include investments in NBS that demonstrate high potential to address local socioeconomic needs while reducing vulnerability to climate shocks. To integrate NBS in urban planning, the cities of Bangui and Berberati sought Gap Fund support to identify and prioritize local development and NBS opportunities and to develop NBS-informed neighborhood development plans.

For each city, the Gap Fund supported NBS-informed neighborhood development plans, which included: (i) data collection and mapping of local vegetation, flood levels,

vulnerable or internally displaced populations and local topography to identify potential locations for NBS investments; (ii) participatory planning activities to develop NBS-informed neighborhood development plans; (iii) identification of NBS investments; (iv) cost-benefit analysis of NBS investments identified; and (v) prioritization of NBS investments. Further, the TA supported early-stage design and implementation guidelines for priority NBS investments.

The neighborhood development plans identified investments totaling USD 60 million, including USD 41 million in Bangui and USD 19 million investments in Berberati. Selected investments, estimated at USD 18.1 million, are being financed by the World Bank's CAR Inclusive and Resilient Cities Project. Additional funding from the Global Environmental Facility is also expected to be mobilized to finance for investments valued at USD 2.6 million in Bangui and USD 1.7 million in Berberati.

Two hundred and seventy-five representatives from civil society and city-level government officials across 33 workshops helped identify investments and develop neighborhood development plans. This participatory approach increased awareness about climate risks and NBS, ensuring ownership of the plans.

 Operationalization of climate change action plans in Mombasa and Nairobi in Kenya: Nairobi and Mombasa have scaled up their efforts to address climate change by establishing climate change units and developing city climate action plans. Both cities sought Gap Fund support to help operationalize their city-level climate change strategies and plans, as well as localize national climate change frameworks—including laws, policies, and plans—at the city level.

The Gap Fund TA assessed each city's climate-smart readiness and enabling environments—infrastructure, administration, finance, planning, land management, solid waste, legal and policy environment—and helped develop and update of GHG inventories to inform risk assessments.

In Nairobi, the TA facilitated drafting the city's climate change bill and climate change policy, both of which are pending approval. Moreover, the TA helped prioritize and cost urban investments identified in Nairobi's CAP, estimated at USD 1 billion.

In Mombasa, the TA contributed to develop the city's CAP, which was adopted in September 2023 and launched in November 2023. Mombasa aims to align its CAP priority actions with the County Integrated Development Plan, which establishes the strategic long- and medium- term priorities for the city government. A follow-up TA has been approved to implement the CAP roadmap.

In addition, the Gap Fund TA supported capacity building activities focused on GHG emissions inventory development, data collection and validation, and climate action planning. These activities benefited 50 participants from relevant institutions and sectors. Participants were selected by county officials based on their existing engagement and contribution to the future preparation and planning of Mombasa and Nairobi's GHG inventories. They provided data from various sectors, including energy, transport, waste, and forestry.

• Developing a green building market in Dakar and Saint Louis in Senegal: Rapid population growth and unplanned urban development have worsened climate and environmental

challenges in Senegalese cities. Dakar and Saint Louis sought support from the Gap Fund to integrate climate change considerations into their urban planning process, and mainstream low carbon and climate resilient measures into housing construction, with a focus on green buildings.

The Gap Fund support focused on assessing the feasibility of a green building label in the housing sector. This included examining the constraints and opportunities to develop and implement a green building label. Findings from the assessment are informing the Government of Senegal's green building policy plan.

The TA facilitated the EDGE<sup>4</sup> certification of seven housing operations, which target different social categories including social housing and high building. This included 352 apartments in Saint Louis, 501 apartments in Diamniadio, and 40 apartments in Dakar. Moreover, the TA fostered capacity building on green building certifications to address climate and environmental challenges. It facilitated five training sessions on EDGE certification, with 89 participants in total. Following the trainings, three EDGE experts were certified.

As a result of the TA, several housing developers in Senegal have expressed interest in obtaining EDGE certification. IFC is in discussions with the Senegal Housing Bank to develop green housing products, which may use EDGE for eligibility.

• Integrating climate resilient infrastructure into urban development in cities in Tanzania: Tanzanian cities are increasingly vulnerable to disasters and climate-rated hazards with many urban areas experiencing widespread flooding in the past decades. These cities have limited capacity to integrate climate considerations into capital investment planning. To address this limitation, the Gap Fund supported 13 Tanzanian cities—Arusha, Dar es Salaam, Dodoma, Geita, Ilemela, Kahama, Kigoma, Mbeya, Morogoro, Mwanza, Songea, Sumbawanga, and Tabora—to develop design guidelines and recommend climate considerations in the urban planning processes.

The TA focused on developing: (i) climate-smart urban planning guidelines; (ii) guidelines for effective urban development control; (iii) updates to existing directives to local governments that incorporate climate hazard assessments and foster local climate action planning; and (iv) guidelines on low carbon urban design, landscaping, and infrastructure options for the Msimbazi Park in Dar es Salaam.

Recommendations from urban planning and development control guidelines are informing the Kahama Master Plan and 18 master plans for smaller towns. The guidelines have also led to the establishment of a formal protocol to protect ecologically sensitive and risk-prone lands from unregulated development. Additionally, the TA's recommendations to update existing directives to local governments have resulted in the institutionalization of a mechanism to mainstream cities' climate commitments into tangible and financeable climate-smart interventions.

In addition, the guidelines on low carbon urban design are informing the design of the Msimbazi Park and its flood control zone, valued at USD 37 million, as well as the investments valued at USD 6.3 million under the World Bank's Cities Transforming Infrastructure and Competitiveness (TACTIC) Project.

#### **East Asia and the Pacific**

Identification and preparation of climate-smart investments in Cambodia: Cambodian cities face significant challenges to integrate existing and future climate and disaster risks into their urban investment strategies and implementclimate-smart investment programs. The Gap Fund provided TA to seven cities to address these challenges—Battambang, Kampot, Kep, Krong Khemarak Phumin, Siem Reap, Sihanoukville, and Poipet—to enhance their capacities for climate action planning and facilitate climate-informed investment decisions.

The TA focused on: (i) climate change strategies for each of the selected cities; (ii) analytical modeling to identify and prioritize climate-informed investment; (iii) low carbon investment portfolios and action plans, including analysis of financial needs and potential financing sources; and (iii) prefeasibility studies for priority investments to assess costs and risks.

The climate analytics and recommendations from the climate change strategies are informing the nascent National Urban Strategy. In addition, the TA identified low carbon and climate resilient investments valued at USD 127.4 million, which the government is exploring for financing opportunities.

Climate-resilient solid waste management strategies in Indonesia: Waste generation
and inefficient SWM service delivery in Indonesian cities are significant contributors
to the country's GHG emissions. These challenges are associated with inadequate
infrastructure, planning, and financing. The Gap Fund supported five cities in Indonesia
to address these issues—Kendari, Malang, Palembang, Pontianak, and Toba—update
their SWM master plans to integrate climate considerations. In addition, the TA
supported a national-level SWM policy reform roadmap to enhance the effectiveness
of SWM and promote climate-smart SWM solutions in cities across Indonesia.

The TA focused on a comprehensive review of the SWM service delivery strategies in the five cities. The TA evaluated existing SWM service delivery systems; assessed and recommended improvements to the institutional set-up for SWM service delivery; identified and prioritized climate-smart SWM investments; and develop sector-specific metrics to track the achievement of the SWM master plans. These assessments are also expected to guide local governments prepare their statutory SWM master plans.

The review of the SWM service delivery strategies resulted identifying low carbon investments valued at USD 130 million. These investments are informing the Government of Indonesia's investment pipeline. In addition, selected SWM investments, estimated at USD 58 million, have been taken up for further preparation and financing under the World Bank's Local Service Delivery Improvement Project.

In addition, the TA facilitated a SWM policy reform map. The TA assessed policies, strategies, and plans at the national level, and recommended improvements to the legal framework for SWM in cities. The SWM policy reform map is informing the development of the national-level SWM reform strategy.

 Energy efficient housing and densification strategies in Indonesia: The cities of Lubuklinggau, Musi Rawas, and Palembang are increasingly vulnerable to more frequent and extreme heatwaves and flooding owing to climate change. In addition,

affordable housing is in shortage. The three cities sought Gap Fund support to develop guidelines and tools for green and energy-efficient housing that can be integrated into the construction and retrofit of low-income housing.

The Gap Fund supported design guidelines for green and energy efficient housing, with recommendations on design, location, energy and water efficiency, and the use of local materials in the construction of affordable housing. The TA engaged communities to share their existing methodologies for housing construction ensuring that the guidelines were practical and tailored to local needs.

In addition, the Gap Fund facilitated a location suitability tool to map and assess potential new sites for housing construction and identify where existing housing could be retrofitted. The tool considers climate aspects including climate risks, distance from key urban services, among other variables. It also supported a housing calculator to assess different housing options within a given location while considering socioeconomic and environmental aspects. Four capacity-building sessions were carried out for 80 government stakeholders to ensure the effective use of these tools. The sessions aimed to equip stakeholders with the skills necessary to use the tools and inform urban planning, construction, and decisions.

The location suitability tool and housing calculator are informing the Indonesia Green and Affordable Housing Program (IGAHP), which is expected to be financed by the Asian Infrastructure Investment Bank and the Asian Development Bank. In addition, government officials are using these tools in other cities to identify locations for housing to be financed under IGAHP. The design guidelines are being used in a pilot to test the housing that will be financed under IGAHP.

 Planning for low carbon and climate resilient cities in Indonesia: Rapid urbanization, poor urban planning practices, and inadequate infrastructure limit the capacity of Indonesian cities to transition to low carbon and climate-resilient urban development. Bandung, Banjarmasin, Cirebon, Denpasar, Palembang, and Padalarang, and sought Gap Fund support for analytics, modeling tools, and investment opportunity assessments to help them integrate low carbon and climate resilient approaches into urban planning to address climate change.

Through this TA, the Gap Fund facilitated spatial analytics, including urban form diagnostics and land use scenario modeling. These tools were designed to explore multiple growth scenarios and assess the efficiency of priority spatial plans and planned investments at the city level.

The spatial analytics have been central considerations in the forthcoming National Development Planning Strategy (Rencana Pembangunan Jangka Menengah Nasional - RPJMN 2025-29). They have provided urban analyses and recommendations that prioritize investments to foster climate-smart urban development.

The TA also identified locations for urban transformation opportunities and facilitated the development of an integrated area-based transformation methodology to identify priority climate-smart urban transformation investments. The methodology was tested in Bandung, Cirebon, and Padalarang and identified three investments in TOD, affordable rental housing, and a university campus area valued at USD 144 million. The TA supported each investment's schematic design, implementation strategy and financial feasibility assessment to help governments prioritize, plan, and implement the investments.

Moreover, the TA included workshops and trainings, increasing the capacity of 75 officials on spatial analytics and urban growth scenarios and 50 officials on the integrated area-based transformation methodology.

 Low carbon investment planning in Thailand: Thai cities are experiencing a rapid increase in GHG emissions. Moreover, they face significant limitations in analytics and technical capacity to identify effective mitigation actions in key sectors such as transport, energy, waste, and wastewater. The Gap Fund supported 13 cities in Thailand to address these challenges—Bangkok, Burirum, Chiang Mai, Chonburi, Khon Kaen, Nakhon Ratchasima, Nakhon Si Thammarat, Pattaya, Phuket, Sisaket, Songkhla, Ubon Ratchathani, and Udon Thani—to mainstream climate change into city investment planning and to implement low carbon interventions.

The TA focused on identifying, prioritizing, and costing climate-smart investment opportunities for Bangkok. Using IFC's APEX tool, the analysis identified an investment pipeline valued at USD 24.2 billion across the built environment, transportation, and waste and water sectors. This pipeline has been integrated into the updated low carbon city strategy for Bangkok, which was launched by the Mayor in July 2023.

The TA supported market sizing of low carbon interventions for the other cities including energy efficiency measures, rooftop solar installations, upgrades to LED streetlights, and the adoption of e-motorbikes. The assessment included financial projections of the returns these investments would generate and recommended how to implement these investments in the short- to-medium term. Additionally, the TA provided recommendations on developing a low carbon market and designing a carbon finance mechanism to implement low carbon interventions in cities.

 Identification and planning of low carbon and climate resilient investments in Vietnam: Vietnam's rapidly expanding cities face challenges in identifying, prioritizing, and implementing climate-smart strategies and green investment plans. To address these issues, the Gap Fund provided TA to Vinh City and Ho Chi Minh City to help them develop climate-smart action plans and investments.

The TA focused on Green City Action Plans for each city that identified, prioritized, and estimated costs of climate investments using IFC's APEX tool. This analysis resulted in the costing of climate investments valued at USD 489 million for Vinh City and USD 18 billion for Ho Chi Minh City.

The TA sought to enhance the effectiveness of Ho Chi Minh City's existing low carbon emissions strategies. These included both structural and technical suggestions to improve the city's approach to reduce GHG emissions. Further, the TA guided the development and implementation of a low carbon city project to support the city reduce its GHG emissions through low carbon interventions and access the voluntary carbon market. The project, under preparation, includes potential financing commitments of USD 170 million from the World Bank, a USD 50 million grant from the Government of the Netherlands, and USD 30 million from the Government of Vietnam.

The TA facilitated the creation of a low carbon dashboard to showcase financial models for different urban GHG emission reduction interventions in Ho Chi Minh City. These interventions include energy efficiency measures, rooftop solar installations, LED streetlights, and e-vehicle upgrades. It also helped assess the fundamentals, status, and prevailing trends in the global voluntary carbon market, and an analysis to evaluate the potential for a voluntary carbon market in Ho Chi Minh City. These assessments informed the National Assembly Resolution 98 to originate and sell carbon credits in the international voluntary market.

#### **Europe and Central Asia**

Low carbon solid waste management action plan for Gyumri in Armenia: Armenian cities face significant gaps in SWM infrastructure and service coverage. These challenges include inadequate waste collection services, limited landfill monitoring, and insufficient mechanisms to control waste dumping. The Gap Fund supported Gyumri and Yerevan address these issues toward adopting an integrated approach to SWM. This included a comprehensive assessment of the sector and identification of investments.

The TA initially supported an assessment of the national sectoral context for SWM in Armenia. Following this, city-level analyses were carried out for Gyumri and Yerevan. The national assessment is informing the revision of the national Law on Waste—which is under preparation—and in drafting the new Law on Extended Producer Responsibility. Additionally, the TA helped prepare a climate-smart action plan for improving SWM in Gyumri.

The city-level analyses identified SWM investments valued at USD 4.66 million in Gyumri and USD 31.8 million in Yerevan. The Ministry of Territorial Administration and Infrastructure is developing a plan for waste zones and regions. Consequently, identifying these investments is informing the ministry's updates to the National Municipal Waste Management Strategy. The identified Gyumri investments are being incorporated into a regional SWM project being prepared by the European Bank for Reconstruction and Development. Meanwhile, Yerevan has requested World Bank financing for its solid waste investments.

 Dushanbe's transition to a low-carbon solid waste management system in Tajikistan: Dushanbe city has achieved a high solid waste collection rate and a clean urban environment. However, the city's waste generation rate is increasing, posing a longterm challenge with rising population and income. Lack of source-separated solid waste collection, inadequate landfill gas management and open burning practices are significantly contributing to the city's GHG emissions. Dushanbe sought Gap Fund support to identify smart solutions for solid waste collection and improvements in landfill infrastructure and operation.

The Gap Fund TA included a rapid waste assessment to examine Dushanbe's SWM system. It examined its legislative and institutional context, the sector's value chain and its financial sustainability. The assessment recommended upgrades to the solid collection system and identified investment options to improve the city's landfill, including gas capturing systems. Moreover, the TA provided technical input to terms of

reference for feasibility studies on Dushanbe's waste management system and landfill improvements.

The rapid waste assessment identified investments in solid waste collection, including source separation pilots valued at USD 17 million; landfill improvements, including landfill gas capturing and material recycling facility valued at USD 17 million; and institutional strengthening actions to enhance capacity and overall resilience valued at USD 5 million. These investments are expected to be financed by the World Bank's Dushanbe Sustainable Urban Development Project.

#### Latin America and the Caribbean

 Strengthening the framework to foster e-mobility adoption in Buenos Aires in Argentina: Electrifying the transport sector can significantly contribute to climate change mitigation and help cities achieve their climate goals. In 2017, Buenos Aires developed its Clean Mobility Plan, emphasizing the key role of e-vehicles in decarbonization, particularly for public transport and last-mile logistics. Buenos Aires sought support to assist in developing strategies and analysis for the regulation, infrastructure deployment, and local production of e-vehicles that advanced its efforts in transport decarbonization,

The TA focused on policy recommendations that strengthened the regulatory framework to adopt e-mobility and developed the e-vehicle market. It further created scenarios and analyses of targets that accelerate the uptake of e-mobility.

Moreover, the TA supported an e-mobility roadmap. The roadmap comprises comparative case studies and analysis of charging infrastructure deployment, installation guidelines, and assessment of technical requirements. It also provides recommendations on urban design aspects, considering public space and financing. The roadmap identified sources of public and private financing to install e-vehicles chargers, estimated at USD 96 million by 2030 and USD 3.7 billion by 2050. It identified electricity grid investments costs ranging between USD1.6 and 6.4 million annually.

The e-mobility roadmap and policy recommendations on e-vehicle deployment will help inform the new Government of Buenos Aires develop its e-mobility program.

#### **Middle East and North Africa**

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• Improving the city-level framework for low-carbon urban development in Amman in Jordan: Rapid urbanization and population growth—along with increasing temperatures and changing rainfall patterns—are exacerbating urban challenges in Amman, including the urban heat island effect, water stress, among other issues. The city sought support from the Gap Fund to identify climate actions through analytics that would enhance its capacities on climate-informed urban development.

The TA facilitated spatial scenarios, including several urban growth projections, and conducted a legal assessment to identify gaps in planning laws and instruments. It provided recommendations to strengthen the Greater Amman Municipality's (GAM) capacity for low carbon and climate resilient urban development. Further, the TA guided how to enhance GAM's financial sustainability, as well as supported a financing
framework for climate investments. The valuation of low carbon and climate resilient investment opportunities is estimated at USD 2.5 billion.

The analytics and assessments carried out with support of the Gap Fund are informing recommendations for legal reforms or sustainable financial mechanisms in urban planning. In addition, they are informing the World Bank's Smart and Inclusive Urban Mobility Project valued at USD 130 million.

Gaza City urban heat island mitigation strategy in Palestine: Urban areas—where buildings, roads, and other infrastructure are highly concentrated and green areas are limited—suffer from higher temperatures relative to the peripheral areas. This urban heat island effect causes heat-related illnesses and other negative impacts on public health. It also contributes to higher fuel consumption as temperatures increase. To mitigate the effects of this phenomenon, Gaza City sought Gap Fund support to identify key contributors to the urban heat island effect and develop a strategy that mitigates heat islands.

The grant was intended to support: (i) development of an urban heat map, using satellite data on land surface temperatures and wind speed simulation mapping; (ii) assessment of the social impacts of heat islands; (iii) identification and cost estimate of interventions in the short-, medium-, and long-term; (iv) tools, methods, and policy proposals for heat island mitigation; and (vi) capacity development, including trainings and knowledge exchange programs of municipal authorities to implement the recommendations outlined in the strategy, as well as to incorporate them into urban planning practices.

Due to the extraordinary circumstances arising from the ongoing conflict situation, the TA had to be cancelled. However, during the implementation of the grant from March to November 2023, the following activities were successfully carried out: (i) application of a remote sensing analysis tool to identify urban forestry areas; (ii) urban scale climate modeling to assess existing and projected heat stress under medium and high global GHG emissions scenarios; and (iii) data collection on historical weather variables, population density, and tree canopy coverage. Additionally, a technical advisory group, comprising several governmental agencies and multilateral partners, was established to provide an effective steering mechanism for the technical work.

#### South Asia

 Low-carbon municipal service delivery of solid waste management in India: Mangalore and Kolar experience significant deficiencies across their SWM value chain, with Mangalore treating and processing approximately 45 percent of waste through formal and informal channels, and Kolar treating and processing around 10 to 15 percent through informal channels. The remaining waste is dumped without appropriate disposal, leading to severe environmental degradation and increased GHG emissions. Thus, improving the performance of the SWM sector is key for improving livability, sustainability, and addressing climate-related issues, including GHG emissions' reduction.

The Gap Fund provided TA to both cities to support these goals and to identify key barriers in technical, institutional, and financial aspects of effective SWM service

delivery. The aim was to develop low carbon SWM strategies and action plans, and to draw lessons that would inform the conceptualization of a SWM project.

The TA supported each city with: (i) diagnostics on the state of the sector and future needs of SWM services; (ii) identification and prioritization of SWM investments, including prefeasibility analysis for priority investments, preliminary costing of investments identified, recommendations for institutional reforms, and measures to enhance local capacities; and (iii) development of a low carbon SWM strategy and action plan.

The SWM strategies and action plans identified key infrastructure investments for Mangalore and Kolar. For Mangalore, it identified investments in setting up infrastructure for dry waste collection centers, processing, and solar panels valued at USD 5 million. For Kolar, the focus is on waste collection and transportation, and processing, with investments totaling USD 1.8 million. Karnataka State Funds and Swachh Bharat Mission funds are already financing investment valued at USD 3 million. These include the establishment of dry waste collection centers, the acquisition of a cleaner waste transportation fleet, and the construction of waste processing facilities.

In addition to the SWM strategies and action plans, the Gap Fund supported capacity building of city officials on climate-smart SWM. The training sessions focused on the following key areas: collection and transportation of waste using cleaner fuels, low carbon technologies for waste processing including bio-methanation, and extended producer responsibility and its financial benefits for cities.

The TA mobilized key city stakeholders and enabled dialogue between civil society and city governments around challenges and opportunities in the waste sector. This is the first time that a study on SWM sector strategy and action plan for cities using a climate lens has been done in India, and civil society and city governments have held structured discussions on waste management.

#### Multiple regions

 Platform for real-time monitoring GHG emissions in Egypt, Turkey, and South Africa: City-level GHG emissions data are crucial to identify, plan, and monitor urban climate change mitigation actions. However, producing and maintaining up-to-date citylevel emissions inventories through local bottom-up data collection is challenging. Advances in modeling offer the potential to provide high-frequency emissions data in near real-time, significantly enhancing urban climate action planning.

Three countries requested support from the Gap Fund to develop a methodology for estimating GHG emissions across key urban sectors, including energy use in buildings, industry, and transport, at a high spatial resolution. Further, it included the development of an interactive online interface to display GHG emissions in real-time, enhancing accessibility.

The methodology was piloted in three cities in Egypt—Alexandria, Cairo, and Luxor; four cities in Turkey—Adana, Antalya, Konya, and Manisa; and four cities in South Africa—Ekurhuleni, eThekwini, Johannesburg, and Tshwane. Real-time GHG emissions

data for these selected cities are available through an online platform. These data can help city-level officials monitor GHG emissions, identify high-emission activities, and assess the impact of regulations, enabling more effective planning and implementation of climate actions.

#### Notes

- 1. Gap Fund Website: https://www.citygapfund.org/
- 2. This report uses the regional definitions outlined in the following link: https://datahelpdesk. worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups
- 3. Advanced Practices for Environmental Excellence in Cities (APEX) is a software that helps identify and prepare climate-smart investments in four key areas: energy water, waste, and public transport. APEX harnesses data insights from advanced green practices around the world and cities' climate change action plans to create tailored solutions for cities.
- 4. EDGE: Excellence in Design for Greater Efficiencies (EDGE) is a green building certification system focused on making new residential and commercial buildings more resource efficient. It enables developers and buildings to identify the most cost-effective strategies to reduce energy use, water use, and embodied carbon in materials.

# Track 2 – Partnerships, Knowledge Generation, and Sharing

Track 2 activities support the generation and sharing of knowledge on low carbon and climate resilient urban development, and the strengthening of partnerships between cities, national governments, and city networks. They aim to address the following challenges:

- Knowledge and methodology gaps that exist in assessing urban GHG emissions and climate-smart urban development, as well as in channeling climate finance to cities.
- Coordination across the local and national government to achieve a whole-ofgovernment and whole-of-economy approach, where cities are recognized as a key actor in climate action.
- Standardization and harmonization of approaches for climate-smart urban development across cities, national governments, civil society, and the private sector.

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The following subsections highlight the progress World Bank Gap Fund made in FY24 on partnerships and knowledge generation and sharing.

### **Knowledge generation and sharing**

The World Bank Gap Fund coordinated on a regular basis with World Bank regional teams that support TA implementation, and Gap Fund partners, including CCFLA, C40, GCOM, and ICLEI to identify knowledge needs and gaps in cities. Such coordination resulted in knowledge products and the organization of knowledge sharing events that were both relevant and tailored to the specific needs of cities. The World Bank Gap Fund actively participated in global and regional conferences, including New York Climate Week, UrbanShift Adaptation Finance Academy, United Nations Framework Convention for Climate Change COP28, among others. Through these engagements, the Gap Fund contributed to discussions on low carbon and resilient urban development. In addition, it organized various webinars and in-person meetings on climate-smart urban development topics to enhance the technical knowledge of city-level government officials.

### **Knowledge generation**

During FY24, the World Bank Gap Fund produced two technical notes on low carbon urban development and climate change mitigation in cities.

- "Embodied Carbon Emissions": The note serves as a primer on the topic of embodied emissions, which are the emissions tied to construction materials like cement and steel. It evaluates prevailing industry practices and explores a variety of strategies to reduce the embodied emissions linked to construction activities. Additionally, it offers an overview of the tools designed to estimate the environmental impact of different construction standards and policies.
- "Carbon monitor cities 2.0: tracking urban emissions in near real-time": The note describes the methodology implemented by the Gap Fund TA "Platform for real-time monitoring GHG emissions" to monitor real-time GHG emissions across key sectors, without the need for local data collection. It includes lessons learned from the piloting of the methodology in three countries—Egypt, Turkey, and South Africa. Additionally, the note emphasizes the importance of monitoring GHG emissions for climate-smart urban development.

### **Knowledge sharing**

The World Bank Gap Fund organized or co-organized the following webinars and in-person events in FY24.

#### Webinars

• Green Housing Retrofits for the Urban Poor in September 2023. This virtual event explored how to integrate climate-smart considerations into low-income housing retrofitting. It focused on the case study of the Gap Fund supported TA "Building energy

efficient housing strategies in Palembang, Musi Rawas, and Lubuklinggau (Indonesia)", which developed case studies on green housing retrofitting, prepared green and energy-efficient guidelines to retrofit and expand housing and developed sustainable housing planning tools to guide better urban development. The event included a panel discussion on indicators and costs of green housing retrofitting.

- Smart City Solutions for Climate Change Mitigation in September 2023. This virtual event, that the Gap Fund and the Global Smart City Partnership Program co-organized, discussed how smart city solutions can help mitigate climate change in cities and explored the solutions available to reduce GHG emissions in contexts with limited data and technical capacity. Additionally, the event presented a subset of solutions for climate change mitigation in the buildings, transport, and SWM sectors based on the technical note "Smart City Solutions for Climate Change Mitigation".
- Maximizing Climate Adaptation and Mitigation Impacts in Urban and Disaster Risk Management Projects: The Kingston Waterfront Case in November 2023. This virtual event presented approaches for low carbon and energy efficient urban design and construction and green building certification. It focused on the approaches implemented in the Gap Fund supported TA "Integrating low carbon infrastructure and NBS in Kingston waterfront improvement project (Jamaica)".
- Helping Cities Tackle Solid Waste in Climate Smart Way in March 2024. This virtual event
  presented the study "SWM and GHG emissions across the value chain in Mangalore and
  Kolar, Karnataka". This study was carried out with support of the Gap Fund through
  the TA "Low-carbon municipal service delivery of SWM". It included key analytics and
  diagnostics covering operational, financial, institutional, and citizen engagement
  aspects in both cities. These assessments contributed to the preparation of strategies
  and action plans for low carbon SWM, that aim to improve municipal SWM service and
  address climate change mitigation.
- Digital Urban Planning Tools for Climate-Smart Development in May 2024. This virtual training series, co-organized with the World Bank's City Planning Labs, presented three digital urban planning tools: Urban Performance, Suitability, and CollabData. These tools aim to enhance the capacity of municipal governments to produce, share, and utilize geospatial data for evidence-led urban planning. The training sessions were designed for urban practitioners to increase their understanding to use these tools effectively, interpret various scenarios, and determine appropriate policy applications.
- Global data set on building energy code effectiveness and compliance in June 2024. This
  virtual event presented the World Bank's new global dataset on building energy efficiency
  codes and standards, highlighting key findings and using the dataset to inform policies
  and investments to improve building energy efficiency. Moreover, it discussed the challenges and opportunities that policy makers face in improving the regulatory landscape
  and enforcement of building energy efficiency codes and regulations. The event emphasized the need to strengthen building energy codes to enhance energy efficiency.

#### In-person events

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• Technical Deep Dive on Cities and Climate Change in Tokyo and Kyoto, March 2024. This event was co-organized by the Gap Fund in collaboration with the World Bank Tokyo

Development Learning Center, the Sustainable City Infrastructure and Services Global Solutions Group (GSG), the Global Facility for Disaster Reduction and Recovery (GFDRR), the Disaster Risk Management and Resilience GSG, and the Climate-Smart Cities Communities of Practice. It aimed to strengthen knowledge on urban climate change adaptation and mitigation, and enhance capacity on key topics including TOD, NBS, SWM, energy efficiency in buildings, and flood management. It focused on cross-sectoral actions, integrating social inclusion and participation, and highlighted how investments can address several climate goals simultaneously.

During this five-day technical deep dive, participants—including city officials—visited Tokyo and Kyoto to observe real examples of TOD and flood risk management practices that incorporate green infrastructure.

Assessing the success and relevance of virtual and in-person events that the World Bank Gap Fund organized is critical for ensuring their effective implementation. The success of these events is demonstrated through active participant engagement, including the number of questions and the level of participation in discussions. Additionally, the effectiveness of the events is measured through post-event surveys sent to the participants, who provide feedback on their experiences and overall impact of the events. This approach helps continuously improve the quality and relevance of future events.

### **Outreach and communications**

The World Bank Gap Fund continued coordinating with the EIB Gap Fund, along with partners and donors, to identify and capitalize on opportunities that raise awareness about the Gap Fund and climate-smart urban development. The World Bank Gap Fund participated in a series of outreach events to raise awareness among its potential beneficiaries about the resources and support available to them.

- Coordination with partners: The World Bank Gap Fund continued working with the members of the Partner Communications Working Group—which include CCFLA, C40, BMWK, EIB, BMZ, GIZ, GCOM, ICLEI, and LUX—to identify opportunities that increase the Gap Fund's outreach and raise awareness on climate-smart urban development.
- Collaboration with World Bank programs: The World Bank Gap Fund collaborated with key World Bank Global Programs to increase its outreach and advance its mission. These programs include the City Resilience Program (CRP), City Planning Labs, Global Smart Cities Program (GSCP), and the NBS Global Program. With CRP, it explored the development of tools for urban resilience and the co-organization of technical workshops on cities and flood management. With GSCP, it co-organized webinars on innovative technologies to foster climate-smart cities. With the City Planning Labs, it explored the use of tools to enhance spatial planning and co-organized events on the practical application and benefits these tools. With the NBS Global Program, it collaborated through operational support, knowledge, and tools, to integrate NBS, as relevant, in the TA provided by the Gap Fund. These collaborations have increased the outreach of the Gap Fund, offering an additional platform to engage with cities.

Additionally, it facilitates the sharing of knowledge, tools, and recommendations to help cities incorporate climate-smart considerations into urban planning and development.

- *Outreach events:* The World Bank Gap Fund, in partnership with EIB, co-organized and participated in the following virtual and in-person outreach and communications events.
  - "UrbanShift Adaptation Finance Academy for Brazilian Cities" in August 2023.
  - "High level round table dialogue on subnational finance" in September 2023.
  - "How to implement climate action in cities?" in October 2023.
  - "Urban Transitions Mission Centre/Transformative Actions Program Virtual Marketplace" in November 2023.
  - "Breaking the silos: how the Gap Fund fosters cooperation along the project preparation cycle?" in December 2023.

### **Partnerships**

The World Bank Gap Fund continued to collaborate with partners during FY24 to share knowledge on city climate finance, enhance the capacities of city governments to access Gap Fund support, and exchange knowledge to inform the strategic direction of Gap Fund.

Key collaboration activities include the implementation of the partnership with GCOM through a recipient-executed grant, the organization of the Partnership Forum, and participation in different working groups and events. An overview of these partnerships follows.

### Partnership with the Global Covenant of Mayors

The World Bank Gap Fund is implementing and supervising a recipient-executed grant to GCOM to: (i) raise awareness among cities about the Gap Fund; (ii) support them in the identification of programs and projects; and (iii) organize capacity building activities on the type of support available and process for preparing and submitting an application.

With support of the grant, GCOM has set up a team of global and regional focal points to support project identification and preparation of EOIs. An in-person partnership workshop organized in February 2024 (box II-1) reinforced GCOM's capacities to continue providing support to cities, refine and streamline collaboration mechanisms, and identify key events, milestones, and knowledge products.

In FY24, the GCOM team delivered 55 awareness-raising events in EAP, ECA, LAC, and SAR. They reached 3,057 participants from 89 countries, significantly increasing global awareness about the Gap Fund, its application process, and eligibility criteria. Additionally, 45 technical workshops were carried out in EAP, ECA, LAC, MNA, and SAR. They engaged 1,474 participants from 44 countries, providing hands-on training to city representatives to prepare EOIs.

The GCOM team supports cities in identifying project ideas and in the preparation and submission of EOIs. With the support from GCOM, cities across regions submitted 41 EOIs. The support provided by GCOM aims to ensure that EOIs meet eligibility criteria, increasing their likelihood of receiving TA.

Additionally, the GCOM team worked on different communication materials to increase the visibility of the Gap Fund including a new brochure presenting the partnership and relevant information about the Gap Fund application process. The brochure is available in Arabic, English, French, Portuguese, Russian, Spanish, and Turkish.

The GCOM team is in discussions with communication agencies to develop a comprehensive communications strategy and elevate the partnership's profile, targeting the right audience for awareness raising and knowledge sharing in local languages and using approaches relevant to the local contexts.

### Box II-I 📄 GCOM – Gap Fund Partnership Workshop

Teams from GCOM and the Gap Fund gathered in Brussels late February 2024 for a 3-day planning and strategy workshop. The objectives of the workshop were to: (i) set strategic direction and refine global and regional engagement strategies; (ii) reinforce the team's capacities to continue providing practical support to cities; (iii) refine and streamline collaboration mechanisms; and (iv) identify key events, milestones, and knowledge products.

The workshop reviewed the implementation progress of the Gap Fund Partnership with GCOM and discussed regional needs and how to best support cities in accessing the Gap Fund. It also emphasized the relevance of fostering strong collaboration between GCOM and partners including ICLEI, CCFLA, and C40.

The workshop strengthened the partnership between the Gap Fund and GCOM team, identifying the following priorities for 2024: (i) continue raising awareness about the Gap Fund among cities; (ii) improve the quality of project ideas; (3) leverage partnerships to extend the Gap Fund's reach; and (4) engage with national governments and key subnational financiers for finance-ready proposals.

#### **Partnership Forum**

The Partnership Forum provides a platform to share lessons learned on the TA implemented, and experiences on climate-smart urban development and city climate finance. It offers the opportunity to exchange information and ideas that guide the overall strategy of the Gap Fund. For the first time since the Gap Fund's inception, the Partnership Forum was organized in-person in Casablanca, Morocco in November 2023. Gap Fund partners participated including BMZ, LUX, WB, EIB, GIZ, GCOM, ICLEI, CCFLA, C40 and the Cities Finance Facility.

During the event, representatives from the Municipalities of Chefchaouen, Fez, and Zenata provided an overview of the TA received—or to be provided from the Gap Fund—and discussed challenges and lessons learned on TA implementation. The Deputy Mayor from Casablanca presented the city's planned projects involving climate and environmental investment, although Casablanca was not an active recipient of support from the Gap Fund.

### Working groups and events

During FY24, the Gap Fund also participated in different working groups and events convened by partners. This included workshops to conceptualize city-level climate action accelerators and periodic events on the Leadership for Urban Climate Investment and the Project Preparation Facility Connector to identify TA requirements for matchmaking and improve potential matchmaking opportunities.

#### Notes

 The World Bank Gap Fund identified embodied emissions as an important yet often overlooked topic. These emissions constitute a significant and increasing portion of urban emissions, especially in rapidly urbanizing countries. Some Gap Fund beneficiaries, such as the Kingston Waterfront Project in Jamaica, have begun to address embodied emissions. This technical note aims to encourage other Gap Fund-supported investments to incorporate considerations of low-carbon materials.

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CHAPTER

# Monitoring Results

Table IV-1 presents the progress from Gap Fund inception in September 2021 to end of FY24 on the World Bank Gap Fund results framework.

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## Table IV-1 Results framework inception to end of FY24

#### Track 1 – Support on climate strategy formulation, climate analytics, and capacity development

A. Cities supported by the World Bank Gap Fund					
Indicator	Status – End of FY24	7-year t	arget		
A. Number of cities supported by the World Bank Gap Fund	204 190		)		
B. Upstream support – Formulation and implementation of strat	egies, plans and policies	3			
Indicator	Status – End of FY24	7-year t	arget		
B.1 Number of new or strengthened city-formulated low-carbon/ climate-resilient strategies, plans and policies	46	85	;		
B.2 Number of low carbon/climate resilient strategies, plans and policies that have been adopted/implemented	30 50		)		
C. Downstream support – Project / investment identification and preparation					
Indicator	Status – End of FY24 7-year targe		7-year target		
	Number of projects identified	Estimated value (USD million)			
C.1 Number and estimated project costs of high impact, low carbon, climate resilient urban projects that have been identified and supported	22	1,563.38	85		
C.2 Number and estimated project costs of high impact, low carbon, climate resilient urban projects that have been taken up for further preparation support or financing	17	926.3	50		
D. Capacity building					
Indicator	Status – End of FY23	7-year t	arget		
D. Number of city officials whose capacity has been substantially increased	1606	170	0		

#### Track 2 – Partnerships, knowledge, information sharing, and standardization

E. Knowledge generation		
Indicator	Status – End of FY24	7-year target
E.1 Number of technical knowledge products produced to fill identified knowledge gaps on low carbon, resilient urban development	14	18
E.2 Number of views or downloads of urban climate knowledge material shared by the World Bank Gap Fund	37,051	7300
F. Knowledge sharing		
Indicator	Status – End of FY24	7-year target
F.1 Number of knowledge-sharing events organized in person	4	14
F.2 Number of knowledge-sharing events organized virtually	24	28
F.3 Number of cities participating in in-person knowledge exchange events	35	84

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# Table IV-1 Results framework inception to end of FY24 (continued)

Track 2 – Partnerships, knowledge, information sharing, and standardization						
F.4 Number of city officials, partners, and other stakeholders participating in virtual knowledge exchange events	813	168				
G. Partnerships						
Indicator	Status – End of FY24	7-year target				
G.1 Number of partnership forums organized	5	7				
G.2 Number of Gap Fund outreach activities organized	39	16				
G.3 Number of city applications completed and submitted through the portal and jointly screened by the EIB and WB Secretariats	580	900				



CHAPTER

# Financial Update

This section provides an update of the financial status of the World Bank Gap Fund as of the end of FY24. It includes financial contributions made by donors and disbursements made to the three different tracks of activities.

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### Table V-1 Norld Bank Gap Fund disbursements – inception to end of June 2024 (EUR million)

Track Activities	Overall Budget	Amounts Approved	Amounts disbursed
Track 1 – Technical support for low carbon climate resilient development	45.25	20.7	10.7
Track 2 – Partnerships, sharing knowledge, and standardization	8.9	4.6	1.9
Track 3 – Program management and trust fund administration	2.85	2.8	1.2
TOTAL	57	28.1	13.8

*Note*: The approved amounts reflect the new grants approved, additional allocation to existing grants to address the impact of fluctuation in exchange rates and other cost escalations, as well as reflows from closed grants.

### Table V-2 Dap Fund financial status – inception to end of June 2024 (EUR million)

	Cumulative Total
Contributions pledged Unpaid contributions	57 10
Contributions received	47
Investment income	0.8
TOTAL RECEIPTS	0.8
Less: Amounts Approved	28.1
AMOUNTS AVAILABLE TO END OF JUNE 2024	19.7

*Note*: The approved amounts reflect the new grants approved, additional allocation to existing grants to address the impact of fluctuation in exchange rates and other cost escalations, as well as reflows from closed grants.

CHAPTER

# Next Steps

During FY25, the World Bank Gap Fund aims to significantly increase the number of activities to promote low carbon and climate resilient urban development.

Considering the additional contributions made by the Governments of Germany and Luxembourg, the World Bank Gap Fund will scale up its efforts to increase its number of TAs to support low carbon and climate resilient urban development, with a target of 30–35 grants to be approved in FY24. It will continue to monitor progress of the ongoing TAs and compile lessons learned of the TA grants that will be completed in FY25.

The World Bank Gap Fund will continue working with partners and donors to increase the outreach of the Gap Fund and exchange ideas to continue advancing its mission. This will include: (i) collaborating with the members of the Partner Communications Working Group to identify events to promote the Gap Fund; (ii) participating and presenting the Gap Fund at events organized by partners, such as the 12th session of the World Urban Forum and the 16th Conference of the Parties of the United Nations Convention on Biological Diversity; and (iii) organizing the Partnership Forum to share expertise and

information between partners on urban climate finance and lessons learned from the TA provided.

It will continue strengthening the partnership with GCOM through monthly meetings to guide accessing Gap Fund support, and to organize annual workshops to identify new city needs and provide strategic guidance. It will collaborate with GCOM to organize outreach events, including sessions at Innovate4Cities in Montreal, Canada, in September 2024 and the World Urban Forum 12 in Cairo, Egypt, in November 2024. It will work jointly with GCOM to identify TAs and develop a case study library to showcase the impact of the Gap Fund.

The World Bank Gap Fund will continue its efforts to enhance the capabilities of cities on climate-smart urban development. This will be achieved through the implementation of the joint capacity development workplan developed with the EIB Gap Fund. It will also continue to integrate capacity development components in the TA provided and organizing knowledge exchange events. A technical workshop on integrated flood risk management in African cities will be co-organized by the Gap Fund in Cape Town, South Africa in September 2024. It is expected to have the participation of 20 cities, including those supported by Gap Fund TA.

During FY25, the World Bank Gap Fund will also explore the development of new analytical tools based on the needs and demands identified through the TA provided. These include tools that could potentially help cities: (i) estimate the cost of energy efficiency and resilience retrofits in buildings; (ii) estimate their GHG inventories, and (iii) identify and evaluate priority policy and technology interventions that have significant emissions reduction potential. Additionally, it will support two World Bank flagship reports, one on closing the city climate finance gap in LMICs, which is due to be launched at the end of 2024, and another on SWM with an anticipated launch in the first quarter of 2025.

The World Bank Gap Fund will continue to advance the strong collaboration and coordination with the EIB, donors, and partners to identify opportunities to advance its mission and exchange ideas that inform its direction. This will include the continued coordination with partners on outreach and communication, informal meetings with donors and partners, and the organization of the Partnership Forum planned in Albania in January 2025.



Approval FY	Activity Name	Country	City/cities	Status	Type of support provided
FY21	ldentification and prioritization of investments in nature- based solutions in Kinshasa	Democratic Republic of Congo	Kinshasa	Completed	Upstream and downstream
FY21	Assessment investments for climate-smart urban development in Addis Ababa	Ethiopia	Addis Ababa	Completed	Upstream
FY21	Low carbon and resilience municipal service delivery in Ahmedabad city	India	Ahmedabad	Completed	Upstream and downstream
FY21	Climate-smart urban growth planning for Prishtina	Kosovo	Prishtina	Completed	Upstream and downstream
FY21	Climate Action Plans for San Cristobal de las Casas and Tulum and urban upgrading design guidelines	Mexico	San Cristobal de las Casas and Tulum	Completed	Upstream
FY21	Developing a green building market in Dakar	Senegal	Dakar	Completed	Upstream
FY22	Supporting cities to develop climate action planning in Morocco	Morocco	Region of Fez-Meknes and the City of Fez	Ongoing	Upstream
FY22	Identification of climate- smart interventions around the new cable car infrastructure in San Miguelito	Panama	San Miguelito	Completed	Downstream
FY22	Planning for low carbon and climate resilient cities in Indonesia	Indonesia	Banjarmasin, Denpasar, and Semarang	Completed	Upstream and downstream
FY22	Low carbon municipal service delivery of solid waste management	India	Kolar and Mangalore	Completed	Upstream and downstream

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Approval FY	Activity Name	Country	City/cities	Status	Type of support provided
FY22	Energy efficient and resilient housing and densification strategies for key cities in Maldives	Maldives	Addu City, Fuvahmulah City, Gulhi Falhu (managed by Hulhumalé), Hulhumalé, Malé City, and Thilafushi	Ongoing	Upstream
FY22	Climate-smart capital investments in Tanzanian Cities	Tanzania	Arusha, Dar es Salaam, Dodoma, Geita, Ilemela, Kahama, Kigoma, Mbeya, Morogoro, Mwanza, Songea, Sumbawanga, and Tabora	Completed	Upstream and downstream
FY22	Operationalization of climate change actions plans in Nairobi and Mombasa	Kenya	Mombasa and Nairobi	Completed	Upstream
FY22	Development of energy efficient and resilient Ger housing strategies in Mongolia	Mongolia	Darkhan and Erdenet	Ongoing	Upstream
FY22	ldentification and prioritization of NBS to address climate change in Bamako	Mali	Bamako	Ongoing	Upstream and downstream
FY22	Mainstreaming of NBS in neighborhood upgrade investments in Kigali	Rwanda	Kigali	Ongoing	Downstream
FY22	Strengthening the framework to foster e-mobility adoption in Argentina	Argentina	Buenos Aires	Completed	Upstream and downstream
FY22	Strengthening planning and identifying actions to address climate change in Cambodia	Cambodia	Phonm Penh	Completed	Upstream
FY22	Integrating climate-smart considerations in urban development in Bogota	Colombia	Bogota	Completed	Upstream and downstream
FY22	Energy efficient housing and densification strategies in Indonesia	Indonesia	Lubuklinggau, Musi Rawas, and Palembang	Completed	Upstream
FY22	Identification of climate- smart city investments for Quezon City	Philippines	Quezon City	Completed	Upstream

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Approval FY	Activity Name	Country	City/cities	Status	Type of support provided
FY22	Low carbon and resilient urban recovery strategy in Poltava	Ukraine	Poltava	Completed	Upstream
FY22	Climate-resilient and low- carbon reconstruction in Aden	Yemen	Aden	Completed	Upstream
FY22	Development of a platform for real-time monitoring of cities GHG emissions	Egypt, South Africa, Turkey	Alexandria, Cairo, Luxor (Egypt); Adana, Antalya, Konya, Manisa, (Turkey); Ekurhuleni, eThekwini Johannesburg, and Tshwane (South Africa)	Completed	Downstream
FY23	Identification and planning of low carbon and climate resilient investments in Vietnam	Vietnam	Ho Chi Minh and Vinh City	Completed	Upstream and downstream
FY23	Porto Alegre Climate Action Plan	Brazil	Porto Alegre	Ongoing	Upstream
FY23	Planning for low carbon and resilient urban development	Bangladesh	Basail, Milandah, and Rajshahi	Ongoing	Upstream and downstream
FY23	ldentification of actions and strengthening the city level framework for low carbon urban development in Amman	Jordan	Amman	Completed	Upstream
FY23	Identification of investments in nature- based solutions for climate resilience in Central African Republic	Central African Republic	Bambari and Berberati	Completed	Upstream and downstream
FY23	Identification and preparation of climate- smart investments for Cambodian cities	Cambodia	Battambang, Kampot, Kep, Poipet, Siem Reap, and Sihanoukville	Completed	Upstream and downstream
FY23	Integration of low carbon infrastructure and nature-based solutions in Kingston waterfront improvement project	Jamaica	Kingston	Ongoing	Upstream and downstream
FY23	Supporting the development of bicycle infrastructure in Bolivia	Bolivia	El Alto	Ongoing	Upstream and downstream

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Approval FY	Activity Name	Country	City/cities	Status	Type of support provided
FY23	Chennai's solid waste management plan	India	Chennai	Ongoing	Upstream and downstream
FY23	Palestine urban heat island mitigation strategy	Palestine	Gaza	Completed	Ν/Α
FY23	Scaling up low carbon and resilient investments in Uganda	Uganda	Arua, Apac, Busia, Entebbe, Fort Portal, Gulu, Hoima, Jinja, Kabale, Kampala, Kamuli, Kasese, Kitgum, Lira, Lugazi, Mbale, Mbarara, Masaka, Moroto, Mubende, Ntunga, Soroti, and Tororo	Ongoing	Upstream
FY23	Integration of nature- based solutions in Abidjan's drainage masterplan	Cote d'Ivoire	Abidjan	Ongoing	Upstream and downstream
FY23	Development of a city level framework to promote low carbon transport and identification of investments in solid waste management in Tanzania	Tanzania	Dar Es Salaam	Ongoing	Upstream and downstream
FY23	ldentifying climate-smart investments for urban development	Turkey	Antalya, Balikesir, Konya, Malatya, Osmaniye	Ongoing	Upstream
FY23	City level climate-smart solid waste management plans in Meghalaya	India	Meghalaya	Ongoing	Upstream and downstream
FY23	Low carbon investment planning for cities in Thailand	Thailand	Bangkok, Burirum, Chiang Mai, Chonburi, Khon Kaen, , Nakhon Ratchasima, Nakhon Si Thammarat, Pattaya, Phuket, Sisaket, Songkhla, Ubon Ratchathani, and Udon Thani	Completed	Upstream
FY23	Support for Dushanbe's transition to a low carbon solid waste management system	Tajikistan	Dushanbe	Completed	Downstream
FY23	Greater Beirut Green Urban Recovery and Development Strategy	Lebanon	Beirut	Ongoing	Upstream and downstream

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Approval FY	Activity Name	Country	City/cities	Status	Type of support provided
FY24	Developing climate- resilient solid waste management strategies for selected cities in Indonesia	Indonesia	Kendari, Malang, Palembang, Pontianak, and Toba	Completed	Upstream and downstream
FY24	Promoting climate- smart integrated urban development with mass transit and affordable housing in India	India	Haryana	Ongoing	Upstream and downstream
FY24	Identification of actions to integrate climate change in urban development and promote low-carbon mobility	India	Hyderabad	Ongoing	Upstream and downstream
FY24	Developing climate change action plans for three cities in Sierra Leone	Sierra Leone	Bo, Kenema, and Makeni,	Ongoing	Upstream
FY24	ldentification and prioritization of urban investments in nature- based solutions in Nepal	Nepal	Itahari	Ongoing	Upstream and downstream
FY24	Development of a low carbon solid waste management action plan for Gyumri	Armenia	Gyumri, Yerevan	Completed	Upstream and downstream
FY24	Integrating climate change in urban market development in El Salvador	El Salvador	Santa Ana, San Miguel, Ilobasco, La Libertad	Ongoing	Downstream
FY24	Low-carbon urban development in Shijiazhuang	China	Shijiazhuang	Ongoing	Upstream and downstream
FY24	Low-carbon and resilient urbanization in Dodoma	Tanzania	Dodoma	Ongoing	Upstream and downstream
FY24	Climate-smart Recovery Investment Planning in Ukraine	Ukraine	Cherkas, Kharkiv, Kyiv, Vinnitsia, and Zhytomyr	Ongoing	Upstream and downstream
FY24	Promoting green affordable housing standards and green housing provision in Punjab	Pakistan	Attock Lahore, and Sialkot	Ongoing	Upstream and downstream

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Approval FY	Activity Name	Country	City/cities	Status	Type of support provided
FY24	Climate informed solid waste management investments	Bosnia and Herzegovina	Banovici, Bosanska Krupa, Gorazde, Gracanica, Gradacac, Kalesija, Konjic, Lukavac, Mostar, Neum, Sarajevo canton, Zivinice, Republika Srpska (Laktasi), Republika Srpska (Teslic), Republika Srpska (Ugljevik), Republika Srpska (Zvornik)	Ongoing	Downstream
FY24	Climate informed urban planning and housing designs in Angola	Angola	Huambo, Lubango, Benguela	Ongoing	Upstream and downstream
FY24	Enabling the Operationalization of the DKI Jakarta Climate Action Plan	Indonesia	Jakarta	Ongoing	Upstream and downstream
FY24	Supporting reforms for city climate action in Peru	Peru	Lima	Ongoing	Upstream
FY24	Implementation roadmap of green and energy efficient housing construction standards for Ger Areas in Mongolia	Mongolia	Erdenet, Darkhan, and Ulaanbatar	Ongoing	Upstream
FY24	Enhancing climate preparedness of Indonesian cities for a balanced territorial development	Indonesia	Ambon, Balikpapan, and Kupang,	Ongoing	Upstream and downstream
FY24	Cost analysis for electric bus adoption	Brazil	Sao Paulo	Ongoing	Upstream and downstream
FY24	Climate-smart urban services in Rajasthan	India	Jaipur, Jodhpur, Kota	Ongoing	Upstream and downstream
FY24	Implementation of Nigerian Sub-National Government Development Strategies on Climate- Smart and Resilient Urban Development	Nigeria	Ibadan, Kano, Lagos and	Ongoing	Upstream and downstream

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Approval FY	Activity Name	Country	City/cities	Status	Type of support provided
FY24	Nature-based solutions and low carbon development to strengthen urban resilience in the Republic of Congo	Republic of Congo	Brazzaville, Pointe Noire	Ongoing	Downstream
FY24	Promoting climate resilient urban environments in Ecuador	Ecuador	Cuenca, Loja, and Quito	Ongoing	Upstream and downstream
FY24	Cadaster-based Natural Resources Management System for China's Cities	China	Xuzhou	Ongoing	Upstream and downstream
FY24	Greater Santo Domingo Climate-Resilient Housing Strategy	Dominican Republic	Santo Domingo	Ongoing	Upstream
FY24	Promoting Green and Resilient Transit Oriented Development in Mumbai	India	Mumbai	Ongoing	Upstream and downstream
FY24	Scaling up Low Carbon Investments in the Kolkata Metropolitan Area	India	Kolkata	Ongoing	Upstream and downstream
FY24	Kenya Resilient and Low Carbon Urban Areas	Kenya	Mombasa	Ongoing	Upstream
FY24	Building Climate Resilient and Low-carbon Homes in India: One Room at a Time	India	Chennai, Guwahati, Jodhpur, Lucknow, Patna, and Surat	Ongoing	Upstream
FY24	Malaysia Low Carbon Cities	Malaysia	Iskandar Malaysia, Johor Bahru, Kota Kinabalu, Muar, Petaling Jaya, Shah Alam, Seberang Perai, and Segamat	Ongoing	Upstream and downstream
FY24	Flood risk mitigation and low carbon SWM in Greater Colombo Area	Sri Lanka	Colombo	Ongoing	Upstream and downstream
FY24	Advancing sustainable urban mobility	Paraguay	Asuncion	Ongoing	Downstream



## Table B.1 Delta List of TA activities completed by the World Bank Gap Fund to end of FY24

<b>Completion FY</b>	Activity Name	Country	City/ies	Summary - Outcome
FY22	Climate-smart urban growth planning for Prishtina	Kosovo	Prishtina	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation
FY22	Assessment investments for climate-smart urban development in Addis Ababa	Ethiopia	Addis Ababa	Upstream: Strategy prepared and adopted Downstream: N/A
FY23	Climate Action Plans for San Cristobal de las Casas and Tulum and urban upgrading design guidelines	Mexico	San Cristobal de las Casas and Tulum	Upstream: Strategy prepared and adopted Downstream: N/A
FY23	Identification of climate- smart interventions around the new cable car infrastructure in San Miguelito	Panama	San Miguelito	Upstream: N/A Downstream: Investments identified and taken up for further preparation
FY23	ldentification and prioritization of investments in nature- based solutions in Kinshasa	Democratic Republic of Congo	Kinshasa	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation
FY23	Climate resilient and low carbon reconstruction in Aden	Yemen	Aden	Upstream: Strategy prepared and adopted Downstream: N/A
FY23	Low carbon and resilience municipal service delivery in Ahmedabad city	India	Ahmedabad	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation
FY23	Low carbon and resilient urban recovery strategy in Poltava	Ukraine	Poltava	Upstream: Strategy prepared and adopted Downstream: N/A
FY23	Integrating climate-smart considerations in urban development in Bogota	Colombia	Bogota	Upstream: Strategy prepared and adopted Downstream: Investments identified and taken up for further preparation

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# Table B.1 >> List of TA activities completed by the World Bank Gap Fund to end of FY24 (continued)

<b>Completion FY</b>	Activity Name	Country	City/ies	Summary - Outcome
FY23	Identification of climate- smart city investments for Quezon City	Philippines	Quezon City	Upstream: Strategy prepared and adopted Downstream: Investments identified and taken up for further preparation
FY23	Strengthening planning and identifying actions to address climate-change in Cambodia	Cambodia	Phonm Penh	Upstream: Strategy prepared Downstream: N/A
FY24	Energy efficient housing and densification strategies in Indonesia	Indonesia	Lubuklinggau, Musi Rawas, and Palembang	Upstream: Strategy prepared and adopted Downstream: N/A
FY24	Planning for low carbon and climate resilient cities in Indonesia	Indonesia	Bandung Raya, Banjarmasin, Cirebon, Denpasar, Padalarang, and Palembang,	Upstream: Strategy prepared and adopted Downstream: Investments identified
FY24	Towards a green housing program	Senegal	Dakar and Saint Louis	Upstream: Strategy prepared and adopted Downstream: N/A
FY24	Developing a platform for real-time monitoring of cities GHG emissions	Egypt, Turkey, and South Africa	Adana, Antalya, Manisa, Konya, and (Turkey); Cairo, Alexandria, and Luxor (Egypt); Johannesburg, Tshwane, Ekurhuleni, and eThekwini (South Africa)	Upstream: N/A Downstream: N/A
FY24	Palestine urban heat island mitigation strategy	Palestine	Gaza	Upstream: N/A Downstream: N/A
FY24	Strengthening the framework to foster e-mobility adoption in Argentina	Argentina	Buenos Aires	Upstream: Strategy prepared Downstream: Investments identified
FY24	Operationalization of climate change actions plans in selected cities in Kenya	Kenya	Nairobi; Mombasa	Upstream: Strategy prepared and adopted Downstream: N/A

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<b>Completion FY</b>	Activity Name	Country	City/ies	Summary - Outcome
FY24	Climate-smart capital investments in Tanzanian Cities	Tanzania	Arusha, Dar es Salaam, Dodoma, Geita, Ilemela, Kigoma, Kahama, Mbeya, Morogoro, Mwanza, Songea, Sumbawanga, and Tabora,	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation
FY24	Climate-smart solid waste investments In Tajikistan	Tajikistan	Dushanbe	Upstream: N/A Downstream Investments identified and taken up for further preparation
FY24	Identification and preparation of climate- smart investments for Cambodian cities	Cambodia	Battambang, Kampot, Kep, Krong Khemarak Phumin, Poipet, Siem Reap, and Sihanoukville	Upstream: Strategy prepared and adopted Downstream: Investments identified
FY24	Low carbon municipal service delivery of solid waste management for two cities in India	India	Mangalore, Kolar	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation
FY24	Development of a low- carbon solid waste management action plan for Gyumri	Armenia	Gyumri, Yerevan	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation
FY24	Identification and planning of low carbon and climate resilient investments in Vietnam	Vietnam	Vinh City; Ho Chi Minh City	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation
FY24	Low-carbon investment planning for cities in Thailand	Thailand	Bangkok, Burirum, Chiang Mai, Chonburi, Khon Kaen, Nakhon Ratchasima, Nakhon Si Thammarat, Pattaya, Phuket, Songkhla, Sisaket, Ubon Ratchathani, and Udon Thani	Upstream: Strategy prepared and adopted Downstream: N/A
FY24	Developing climate- resilient solid waste management for Indonesia's circular economy	Indonesia	Kendari, Malang, Palembang, Pontianak, and Toba	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation

# Table B.1 >> List of TA activities completed by the World Bank Gap Fund to end of FY24 (continued)

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# Table B.1 >> List of TA activities completed by the World Bank Gap Fund to end of FY24 (continued)

Completion FY	Activity Name	Country	City/ies	Summary - Outcome
FY24	Identification of investments in NBS for climate resilience in Central African Republic	Central African Republic	Bangui and Berberati	Upstream: Strategy prepared and adopted Downstream Investments identified and taken up for further preparation
FY24	Identifying actions and strengthening the city-level framework for low-carbon urban development in Amman	Jordan	Amman	Upstream: Strategy prepared and adopted Downstream: N/A



# Table C.1 Dist of World Bank Gap Fund upstream results by the end of FY24

New or s climate	trengthened city e resilient strate	/ formulated low carbon/ gies, plans and policies	Low carbon/climate resilient strategies, plans a policies that have been adopted / implemente		
Grant	Number of new or strengthened strategy/ plans/policies	Description of the documents supported	Strategy/ plans/policies that have been adopted / implemented	Description of the outcome achieved	
Kosovo; Prishtina	1	Report on low carbon and climate resilient development opportunities for Prishtina	1	Municipal development plan being redrafted based on recommendations from Report	
Ethiopia; Addis Ababa	2	(i) Integrated action plan; (ii) Climate-smart investment prioritization framework	1	Integrated action plan has been adopted	
Mexico; Tulum and San Cristobal de las Casas	3	(i) Municipal climate change action for Tulum; (ii) Municipal climate action plan for San Cristobal de las Casas; (iii) Urban upgrading design guidelines	3	(i) Urban upgrading design guidelines implemented by the National Urban Upgrading Program; (ii) Municipal climate change action plan for San Cristobal de las Casas has been approved; (iii) CCAP for Tulum is informing the development of the city's urban development program for the Coba-Tulum region; Municipal climate action plan pending adoption	
DRC; Kinshasa	1	NBS Strategy	1	NBS Strategy informing the city's investment program	
Yemen; Aden	1	Climate resilient and low carbon reconstruction pathway	1	SWM investments prioritized for Additional Financing under YIEUSUP-II WB loan based on Climate-resilient and low-carbon reconstruction pathway	
India; Ahmedabad	1	Climate-resilient and low carbon urban growth strategy	1	Climate-resilient and Low carbon urban growth strategy is informing the update of the city's development plan for 2031	
Ukraine; Poltava	1	Recommendations to reduce GHG emissions in the following sectors: energy, transportation, waste management, and climate-smart water use and management	1	Recommendations to reduce GHG emissions in different sectors incorporated into the comprehensive recovery program formulation and associated planning instruments for 2023	

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# Table C.1 Dist of World Bank Gap Fund upstream results by the end of FY24 (continued)

New or s climate	trengthened city e resilient strate	y formulated low carbon/ gies, plans and policies	Low carbon/climate resilient strategies, plans a policies that have been adopted / implementer		
Grant	Number of new or strengthened strategy/ plans/policies	Description of the documents supported	Strategy/ plans/policies that have been adopted / implemented	Description of the outcome achieved	
Colombia; Bogota	1	Recommendations and institutional roadmap for Bogota's vital neighborhoods program	3	(i) Recommendations and institutional roadmap for Bogota's vital neighborhoods program are informing the POT (Plan de Ordenamiento Territorial) and (ii) the sustainable and safety mobility plan. Additionally, recommendations led to (iii) intersectoral agreements between the Secretary of Mobility and other government stakeholders to ensure the implementation of the program	
Philippines; Quezon City	1	Diagnostic on Green Investments	1	Green investment diagnostic is helping the city to identify financing options to further develop investment proposals	
Cambodia; Phnom Penh	1	Updated Phnom Penh green city strategic plan	N/A	Ν/Α	
Indonesia; Lubuklinggau, Musi Rawas, and Palembang	1	Inputs to the design of the national program "Indonesia Green and Affordable Housing Platform – IGAHP" including: (i) 100 cases of green retrofit, self-construction, and densification study; (ii) Green and energy efficient design guidelines; (iii) Location suitability tool	1	Recommendations from 100 cases of green retrofit, self-construction, and densification study and location suitability tool are informing the development of the national program "Indonesia Green and Affordable Housing Platform – IGAHP"; green and energy efficient design guidelines to be piloted under the IGAHP program	
Indonesia; Palembang, Banjarmasin, Denpasar, Bandung Raya, Padalarang, and Cirebon	1	Catalyzing economic recovery and building livable cities without slums through urban transformations	1	The document "Metropolitan Analytics and Catalyzing Economic Recovery and Building Livable Cities Without Slums through Urban Transformations" provided input for the development of the new Rencana Pembangunan Jangka Menengah Nasional (RPJMN) 2025–2029.	
Senegal; Dakar and Saint Louis	1	Green building label market assessment report	1	The findings from the green building label market assessment report have been used by the government to develop a green building policy plan	
Argentina; Buenos Aires	1	Electric mobility roadmap	N/A	Ν/Α	

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# Table C.1 >> List of World Bank Gap Fund upstream results by the end of FY24 (continued)

New or strengthened city formulated low carbon/ climate resilient strategies, plans and policies			Low carbon/climate resilient strategies, plans and policies that have been adopted / implemented		
Grant	Number of new or strengthened strategy/ plans/policies	Description of the documents supported	Strategy/ plans/policies that have been adopted / implemented	Description of the outcome achieved	
Kenya; Nairobi; Mombasa	3	(i) Nairobi climate change policy; (ii) Nairobi climate change Bill; (iii) Mombasa climate change action plan	1	Mombasa climate change action plan has been approved by the country government	
Tanzania; multiple cities	3	(i) Urban planning guideline, (ii) Development control guidelines (iii) Msimbazi low carbon options analysis reports	2	(i) urban planning guidelines and development control guidelines are informing the preparation of the Kahama master plan. The guidelines will also inform the development of 18 master plans to be developed for tier 3 cities (ii) Urban planning guidelines informing the construction of the Msimbazi park and flood control zone	
Cambodia; multiple cities	8	Seven climate Strategies for seven cities and one report on Low carbon investment portfolios and plans	1	Strategies, investment portfolios and analytics supported by the TA are informing the development of the National Urban Strategy	
India; Mangalore and Kolar	4	(i) Kolar SWM action plan; (ii) Mangalore SWM action plan; (iii) Kolar SWM climate action; (iv) Mangalore SWM climate action plan	2	(i) Kolar SWM action plan; (ii) Mangalore SWM action plan are informing the cities' investment pipeline	
Armenia; Gyumri; Yerevan	2	(i) Climate-smart solid waste action plan for Gyumri; (ii) Assessment of the national sectoral context for SWM in Armenia	2	(i) Climate-smart solid waste action plan for Gyumri is informing the National Municipal Waste Management Strategy; (ii) Assessment of the national sectoral context for SWM in Armenia informing the revisions to the Law on Waste that is under preparation, as well as the draft of a new law on Extended Producer Responsibility	
Vietnam; Vinh City and Ho Chi Minh City	2	Inputs from the TA including (i) sizing of the enabling market environment and APEX analysis for the two selected cities (ii) Report with the provision of recommendations to implement the low carbon city project for Ho Chi Minh City	2	Inputs of the TA informed the (1) National Assembly Resolution 98 which has been approved and that allows HCMC to originate and sell credits into international voluntary carbon markets (ii) Recommendations to implement the low carbon city project for HCMC have been adopted and the project is being prepared with financing from the World Bank, Netherlands, and the Government of Vietnam	
Thailand; multiple cities	1	Green investment pipeline for Bangkok	1	Green investment pipeline integrated into low carbon city strategy	

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# Table C.1 Dist of World Bank Gap Fund upstream results by the end of FY24 (continued)

New or strengthened city formulated low carbon/ climate resilient strategies, plans and policies			Low carbon/climate resilient strategies, plans and policies that have been adopted / implemented		
Grant	Number of new or strengthened strategy/ plans/policies	Description of the documents supported	Strategy/ plans/policies that have been adopted / implemented	Description of the outcome achieved	
Indonesia; multiple cities	2	(i) City assessment report; (ii) SWM policy reform roadmap	1	City assessment report for selected cities are informing the Government's investment pipeline	
Central African Republic; Bangui and Berberati	2	(i) Neighborhood development plan for Bangui; (ii) Neighborhood development for Berberati	2	(ii) Neighborhood development plans for selected cities are investment programs and WB's PROVIR project	
Jordan; Amman	2	(i) Future Amman positioned at a juncture: Threestrategies toward climate-smart spatial transformation; (ii) Unlocking transformative development in Amman: A way forward for planning reform	2	(i) Future Amman positioned at a juncture: three strategies toward climate-smart spatial transformation informing the design of World Bank's Smart and Inclusive Urban Mobility Project; (2) Unlocking transformative development in Amman: A way forward for planning reform informed recommendations for legal reforms in urban planning law	

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### Table C.2 List of World Bank Gap Fund downstream results by the end of FY24

Low carbon / climate resilient urban projects that have been identified or supported

Low-carbon, climate resilient urban projects that have been taken up for further preparation support or financing

Grant	Number of projects identified	Description	Estimated cost (USD million)	Number of projects taken up for further preparation / financing	Description	Estimated cost (USD million)
Kosovo; Prishtina	1	Neighborhood- level investments identified	35	1	Neighborhood-level investments identified through the grant have been taken up for further preparation and conceptual designs have been developed with support from a CSF grant	25
DRC; Kinshasa	1	Identification of local and city-wide NBS investments	153	1	Selected NBS investments taken up for further preparation and financing under World Bank's Kin Elenda Project	4
Panama; San Miguelito	1	Pilot urban infrastructure investments identified to improve street and pedestrian systems, sustainable urban drainage systems, and nature-based solutions	67	1	GFDRR grant mobilized to carry out additional technical studies on the investments identified through the Gap Fund Grant	67
India; Ahmedabad	1	Identification of four investments on wastewater treatment	360	1	Investments identified are being financed through a World Bank Ioan. Feasibility studies are being prepared by AMC for 4 investments for wastewater treatment	360
Colombia; Bogota	1	Identification of "Alameda Vital" project and actions to address climate change in the San Carlos neighborhood	7.6	N/A	N/A	N/A
Philippines; Quezon City	1	Identification of investments to implement the city's e-buses network	15	1	Technical studies on a private- public partnership to implement the e-buses network are being carried out with support of the World Bank	15

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# Table C.2 Dist of World Bank Gap Fund downstream results by the end of FY24 (continued)

Low carbon / climate resilient urban projects that have been identified or supported			rojects rted	Low-carbon, clim taken up for f	nate resilient urban projects that h urther preparation support or fina	ave been ncing
Grant	Number of projects identified	Description	Estimated cost (USD million)	Number of projects taken up for further preparation / financing	Description	Estimated cost (USD million)
Indonesia; multiple cities	3	An integrated affordable rental housing project in Bandung (USD 38 million), TOD development project in Padalarang (USD 68 million), and ITB campus area development project in Cirebon (USD 38 million)	144	N/A	Ν/Α	N/A
Argentina; Buenos Aires	1	Investment needs for charging infrastructure by 2030	96	1	Technical studies on a private- public partnership to implement the e-buses network are being carried out with support of the World Bank	15
Tanzania; multiple cities	2	(i) Design of the Msimbazi park and flood control zone (USD 37 million) (ii) Design of selected investments for urban development control (including tools for performing data-informed development control functions, data assembly and system upgrade, among others) to be taken up further preparation and support under World Bank's TACTIC project (USD 6.3 million)	43.3	2	(i) Guidelines on low carbon urban design are informing the design of the Msimbazi park and flood control and control zone (USD 37 million) and (ii) selected investments for urban development control to be taken up for further preparation by the World Bank's TACTIC project (USD 6.3 million)	43.3

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## Table C.2 Dist of World Bank Gap Fund downstream results by the end of FY24 (continued)

Low carbon / climate resilient urban projects that have been identified or supported				Low-carbon, climate resilient urban projects that have been taken up for further preparation support or financing		
Grant	Number of projects identified	Description	Estimated cost (USD million)	Number of projects taken up for further preparation / financing	Description	Estimated cost (USD million)
Tajikistan; Dushanbe	1	Investments in solid waste collection including source separation pilots (US\$17 million), landfill improvements including landfill gas capturing and material recycling facility (US\$17 million)	34	1	Investments in solid waste collection including source separation pilots (US\$17 million), landfill improvements including landfill gas capturing and material recycling facility (US\$17 million) expected to be financed by World Bank's Dushanbe Sustainable Urban Development Project	34
Cambodia; multiple cities	1	Five prefeasibility studies were completed for key urban projects, identifying potential investments	127.4	N/A	N/A	N/A
India; Mangalore and Kolar	2	(i) Mangalore: investments to set up the infrastructure for dry waste collection centers, processing, and solar panels (USD 5 million)(ii) Kolar: investments for waste collection, transportation, and processing (1.8 million)	6.8	2	Karnataka State Funds and Swachh Bharat Mission funds are financing selected SWM investments identified valued at USD 3 million in both cities	3
Armenia; Gyumri and Yerevan	2	(i) Upgrades to the waste collection system and establishment of sanitary fill in Gyumri valued at USD 4.6 million; (ii) Investments identified in Yerevan valued at USD 31.8 million	36.4	2	(i) Upgrades to the waste collection system and establishment of sanitary fill in Gyumri valued at USD 4.6 million to be financed by EBRD (ii) Investments identified in Yerevan valued at USD 31.8 million to be financed by the World Bank	36.4

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## Table C.2 List of World Bank Gap Fund downstream results by the end of FY24 (continued)

Low carbon / climate resilient urban projects that have been identified or supported				Low-carbon, climate resilient urban projects that have been taken up for further preparation support or financing		
Grant	Number of projects identified	Description	Estimated cost (USD million)	Number of projects taken up for further preparation / financing	Description	Estimated cost (USD million)
Vietnam	1	Recommendations to develop and implement and low carbon city project in Ho Chi Minh City to reduce GHG emissions through low carbon interventions	250	1	Low carbon city project currently under preparation with potential financing commitments of the World Bank WB (USD 170 million), Netherlands (USD 50 million), and the Government of Vietnam (USD 30 million)	250
Indonesia; multiple cities (Kendari; Malang, Palembang, Pontianak, Toba)	1	SWM investments identified valued at USD 130.3 million	130.3	1	Selected SWM investments identified taken up for further financing by the World Bank's Local Service Delivery Improvement Project	58.6
Central African Republic; Bangui and Berberati	2	(i) Urban infrastructure investments identified in Bangui (valued at USD 41 million); and (ii) Berberati (valued at USD 19 million)	60	2	Selected investments (valued at USD 4.1 million in Berberati and USD 14 million in Bangui) expected to be taken up for further financing under World Bank 's Inclusive and Resilient Cities and selected investments (valued at USD 1.7 million for Berberati and USD 2.6 million for Bangui) expected to be further prepared through a Global Environmental Facility grant	22.4
Total		22	1563.38		16	918.7

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