



# Assessing Jakarta's Climate Investments

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## ABOUT THE ALLIANCE

The Cities Climate Finance Leadership Alliance (the Alliance) is a coalition of leaders committed to deploying finance for city level climate action at scale by 2030. It is the multi-level and multi-stakeholder coalition aimed at closing the investment gap for urban subnational climate projects and infrastructure worldwide. Climate Policy Initiative (CPI) serves as Secretariat for the Alliance. Funding for the Alliance's activities is jointly made available through two German government ministries: The Federal Ministry for Economic Cooperation and Development (BMZ) and the Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU).

## FUNDERS



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# EXECUTIVE SUMMARY

As one of the metropolitan areas with the highest population density in the world, Jakarta has experienced many climate challenges. Jakarta is commonly known as the “world’s fastest sinking city” (World Economic Forum, 2018), as about half of the city is located beneath sea level, with some neighborhoods sinking as fast as nine inches per year. Some of the root causes of this sinking are (i) groundwater exploitation—Jakarta has low water levels for drinking and other everyday purposes so the citizens have to resort to pump water from aquifers that are deep underground, (ii) poor city planning—growth of urban population increases demand and reliance for ground water and (iii) climate change that caused accelerated sea level rise, increase of rainfall intensity, and continuation of extreme weather, which leads to increased flood risks. Meanwhile, Jakarta is committed to reduce Greenhouse Gas emissions by 30% in 2030 from current business as usual 35 MT CO<sub>2</sub>e, thus significant funding is required to achieve this target.

**Despite the existing climate risks and the ambitious 2030 GHG emission reduction target, only 8.6% of Jakarta’s municipal budget went to environment-related spending in 2017 and 2018, despite its strong fiscal capacity.**

Playing several roles as the national capital, a central place of control for the national economy, Jakarta can generate more revenue annually, as compared to other municipalities in Indonesia. Its climate-related commitments are also included in the regional action plan for the Sustainable Development Goals (SDGs), namely the 2017-2022 RPJMD. Furthermore, the fiscal space allows Jakarta to initiate the necessary climate related projects, with alignment and coordination at the national and sub-national level, to achieve climate targets. However, no previous research has tracked Jakarta's investment in climate finance.

**This case study is a first-of-its-kind attempt to track public and private urban climate investment flows in Jakarta.**

Climate finance tracking helps to identify key sources of funding for urban climate projects, providing stakeholders with better insights into the type of climate financing (in both adaptation and mitigation) and supports government agencies in formulating policy guidance. The key findings are:

1. **The total tracked urban climate finance commitments in Jakarta stood at USD 44.9 billion (or IDR 652.4 trillion) across 37 projects during the 2015-2019 period.** The majority of the tracked commitments were allocated to infrastructure projects. The Giant Sea Wall, a multi-year adaptation project that was later discontinued due to controversy, alone accounted for 83% of these commitments.
2. **Public finance dominated the landscape of urban climate finance in Jakarta in the 2015-2019 fiscal year period, with most of the large-scale climate infrastructure projects in the city are initiated and funded by the central government.** Government budgets for the capital expenditure of infrastructure projects, sourced both from the central and local governments, with central government dominating 57% of funding. Mitigation projects such as sustainable transportation, are mainly

funded using debt finance, with sum of USD 2.7 billion (or IDR 39.2 trillion), while adaptation projects are usually funded by equity finance. Given Jakarta's strong economic position, the city is actually able to access large public climate investments using catalytic financial instruments and approaches, such as investment risk-sharing agreements and Public-Private Partnerships (PPP), but has not fully tapped into its potential to do so.

3. **Jakarta has untapped potential to secure financing for climate projects. Private finance only accounted for 2% of total climate finance in Jakarta, which is USD 925 million (or IDR 13.4 billion), flowing to climate activities in Jakarta between 2015-19, with 89% using balance sheet debt.** A city with a lot of commercial projects, Jakarta is currently underutilizing the potential to attract private finance. Based on our tracking results (see Section 1.3), Jakarta has not accessed any loans from financial institutions in 2017 – 2018. While it is desirable to have minimum liabilities, it also shows that Jakarta has significant room to increase its ambition and leverage its strong fiscal capacity, both from its own budget and from central government support, to attract and mobilize private finance to invest to Jakarta's climate actions using innovative financing schemes.

Based on the findings, the key recommendations for Jakarta to accelerate the quantity and effectiveness of urban climate finance are: **(i) to have a more explicit and clear alignment of Jakarta's climate priorities with both the national government and Jakarta's satellite cities.** To date, Jakarta's climate priorities are not explicitly aligned with its surrounding cities' climate priorities. Jakarta has the position to spearhead this change to mobilize other public and private actors to collectively achieve wide impacts. Being the center of Indonesia's government and economic activity, Jakarta would gain from an integrated collective approach to tackle climate change involving related stakeholders, including the national and neighboring cities as project owners and policy makers, as well as the related sectors, i.e. infrastructure, transportation, and energy. An integrated collective approach is also important to **(ii) develop an improved climate policy framework integrating climate budget tagging and enhanced strategies to scale up catalytic financing for climate investments** to help mobilize climate finance by identifying the financing gap between commitments and realizations and to ensure systematic coordination and collaboration between Jakarta and its satellite cities. Such a climate policy strategy is urgently needed so that Jakarta is able **(iii) to scale up catalytic and innovative financing models and leveraging municipal budgets to mobilize private investment**, given that Jakarta is yet to fully leverage its strong fiscal capacity to attract private sector financiers. Mobilizing private finance is one of the key strategies in anticipation of the stripping of capital city status from Jakarta that may result in less financing to Jakarta from central government, in the future.

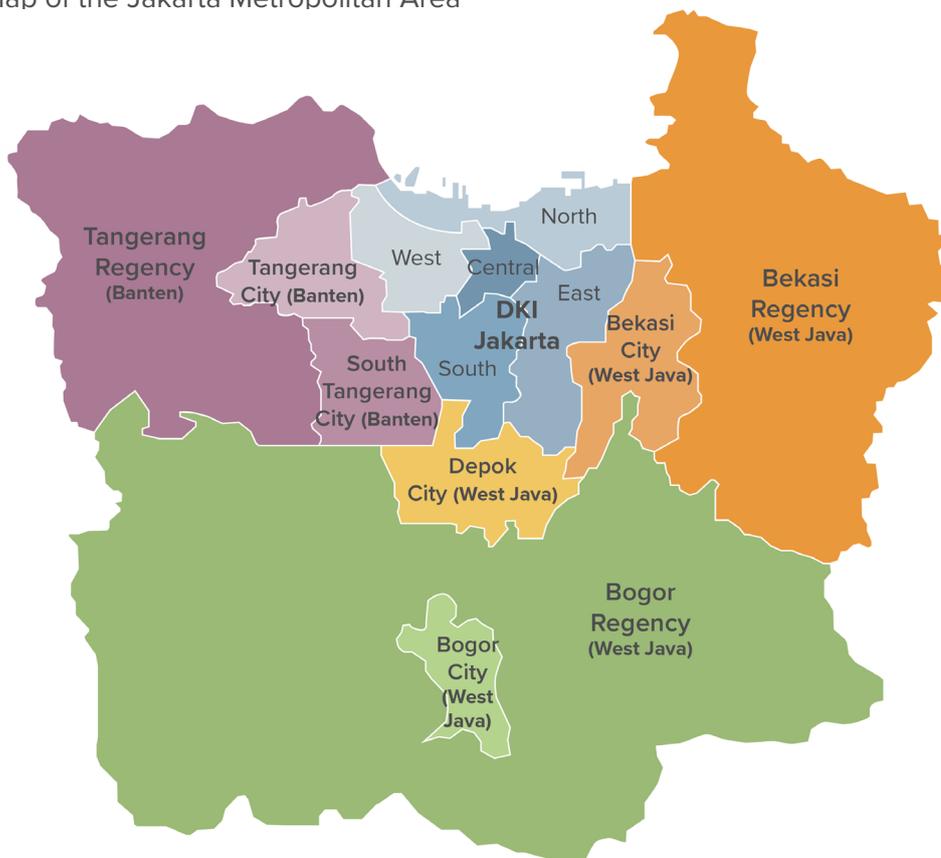
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# 1. JAKARTA – A CITY OF STRATEGIC, POLITICAL, AND ECONOMIC IMPORTANCE

As the capital of Indonesia and the largest city in Southeast Asia, Jakarta hosts the country’s central government and is its financial center. Jakarta alone provides the highest contribution to Indonesia’s national gross domestic product (GDP), at about 17% (Government of Jakarta, 2019; 2018). Furthermore, recent data shows that Jakarta’s economic growth in 2019 was 5.89% above the national economic growth of 5.02% (Indonesia Central Bureau of Statistics, 2020). Located in the western part of the island Java, the Jakarta Metropolitan Area (JMA) consists of Jakarta and four satellite cities—Bogor, Depok, Tangerang, and Bekasi—that have a combined population of 24.1 million people, with 10.5 million people living in Jakarta (Indonesia Central Bureau of Statistics, 2020).

**Figure 1.** Map of the Jakarta Metropolitan Area

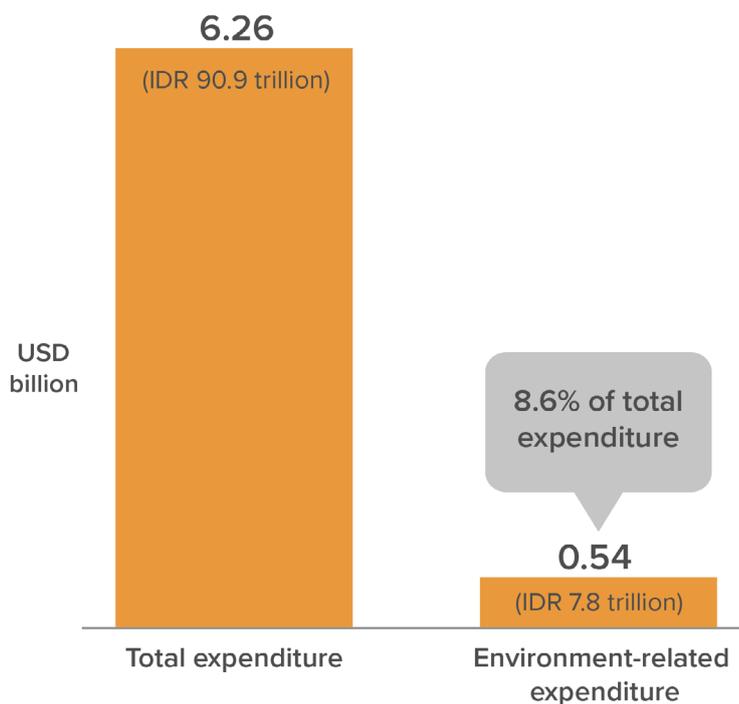


Stipulated in Governor Regulation No.131/2021 on Regional Action Plans, Jakarta is committed to reducing GHG emissions by 30% on a 2012 baseline, equivalent to 35 MT CO<sub>2</sub>e, by 2030. This commitment is stipulated in local regulation in the 2030 Jakarta

spatial plan and regional action plans for reducing greenhouse gas (GHG) emissions (The Government of Jakarta, 2019). According to Government of Jakarta reports on its progress in achieving the UN SDGs Jakarta has achieved GHG emission reductions of 9.34 MT in 2018 (or 26.6% of its 2030 target), a 2.8% increase in emission reduction achievement, if compared to 2016 (Government of Jakarta, 2019).

However, despite being the “world’s fastest sinking city” (World Economic Forum, 2018), environmental-related spending remains limited. Only 8.6% of the municipal budget went to environment-related spending in 2017 and 2018 (Figure 2). Jakarta continues to face many environmental challenges such as coastal erosion, seasonal flooding, inadequate water and wastewater infrastructure, and air pollution.

**Figure 2.** Annual Climate-Related Expenditure in Jakarta



Source: 2017 - 2018 Jakarta Annual Financial Report

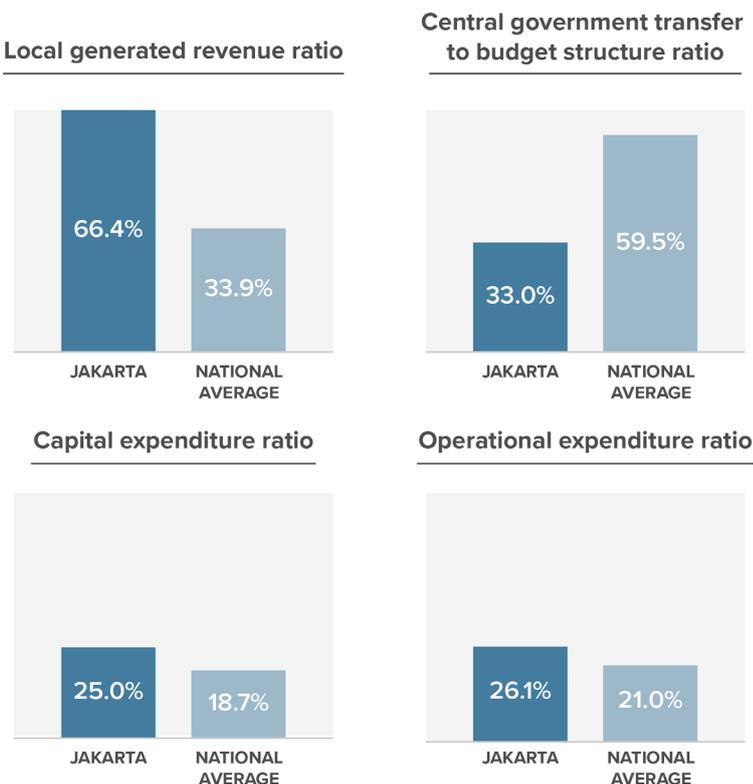
## 1.1 JAKARTA'S CLIMATE PRIORITIES' ALIGNMENT WITH THE CENTRAL AND OTHER SUBNATIONAL GOVERNMENTS

Jakarta plays several roles as the national capital: a central place of control for the national economy, an administrative center, and a significant industrial hub. In addition, its location as a port makes it an important center for trade, benefiting Jakarta to be able to generate more revenue annually than other cities in the country.

A typical municipal budget structure in Indonesia would include locally generated revenues, but also a large proportion of central government transfers. In the case of Jakarta, locally generated revenue is, on average, twice the size of other municipalities in Indonesia, giving them higher fiscal capacity for public finance. Based on the national

fiscal capacity index, Jakarta has highest fiscal capacity in Indonesia with a score of 6.2, while the country's overall index averages at 1.<sup>1</sup> Figure 3 indicates that Jakarta has an adequate fiscal capacity to fund its budget for both capital and operational expenditure and can withstand low central governmental transfers compared to other municipal governments in Indonesia.

**Figure 3.** Jakarta's Government Budget Profile Compared to National Averages



Source: Ministry of Finance of Indonesia, 2017

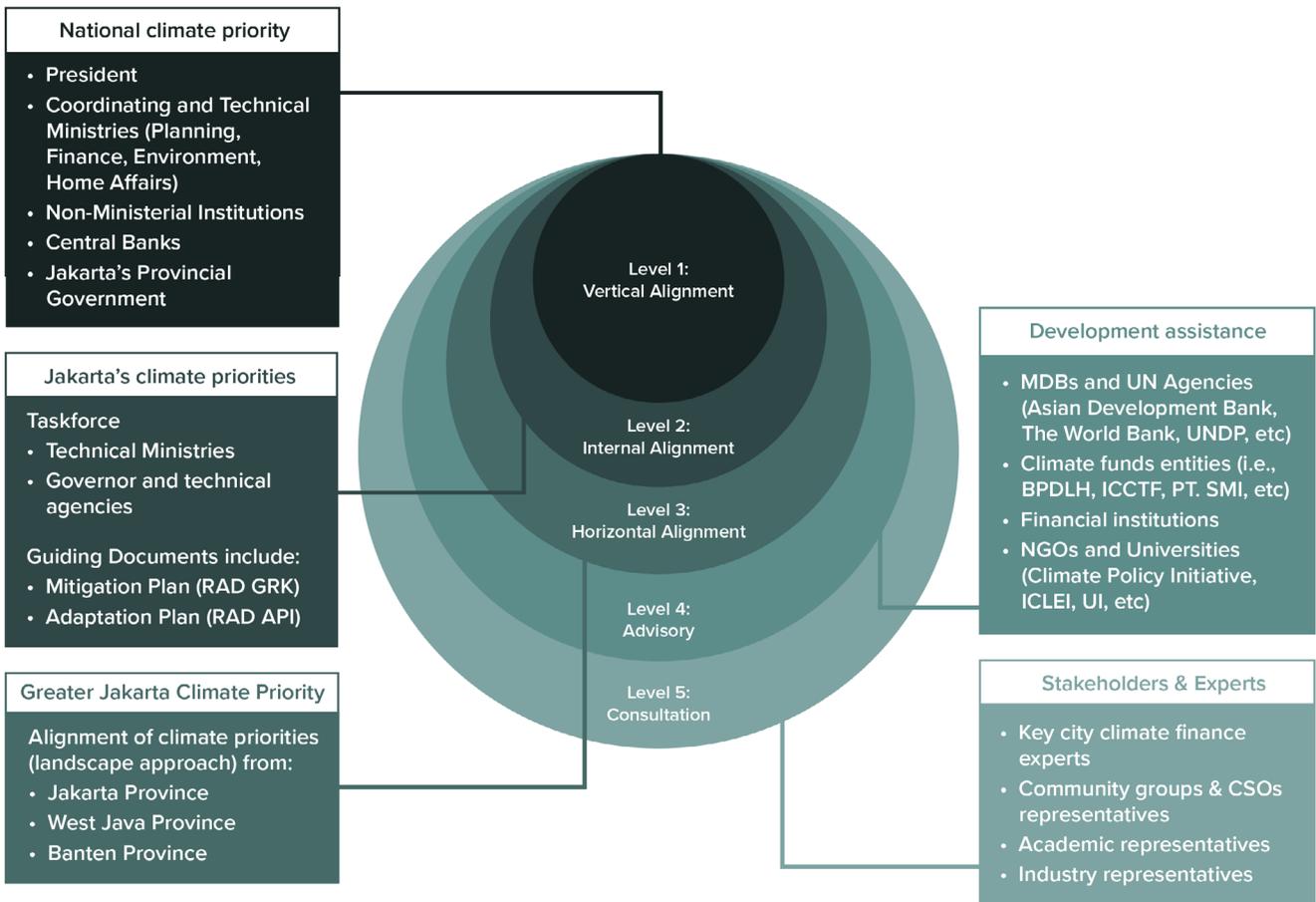
As a capital city, many of Jakarta's climate projects are initiated and financed by Indonesia's central government. This sometimes creates tension when not well coordinated with local Jakarta authorities and the surrounding cities that make up the Greater Jakarta Area, indicating the need for better alignment on climate policy and programs.<sup>2</sup>

Figure 4 lays out five relevant constituents for climate action in Jakarta. There is a need to enhance alignment and coordination between the constituents to ensure common priorities are set and action is coordinated and effective.

<sup>1</sup> Based on the Ministry of Finance Regulation PMK 120/PMK.07/2020 on Fiscal Capacity Index, where a province/municipality's fiscal capacity is considered very high when it is above 1.92

<sup>2</sup> These are part of The Greater Jakarta Metropolitan Area and consist of five cities (Jabodetabek – Jakarta Bogor Depok Tangerang Bekasi) and three regencies (DKI Jakarta, Banten, and West Java).

**Figure 4.** Alignment of Jakarta's Climate Priorities



Source: CPI research and interview with Jakarta Municipal Office

A suboptimal level of overall coordination is pervasive in Indonesia, including the budgeting. For example, adaptation projects and urban transportation are Jakarta's main priorities due to the coastal crisis and urbanization problems. Rapid urbanization in Jakarta was generated by an influx of migrants from other parts of the nation, particularly from poor regions. However, as becomes the national concern, these projects are mostly funded by the central government.

The actions of Jakarta's satellite cities also affect Jakarta's vulnerability to climate change, and vice versa. For example, the main riverways run through West Java, Banten, and Jakarta, and a key to avoiding increased flooding is to ensure harmonized river management from upstream to downstream. As another example, the volume of waste, coupled with poor waste management, has brought the metropolitan area to a landfill over-capacity problem and contributed waste-sector emissions. Jakarta does not have a landfill within its area due to space shortage. To address this, Jakarta has its landfill located in Bekasi, West Java. But although climate problems occur in ways that require

aligned responses from the capital as well as its satellite cities, these satellite cities often do not share the same priority programs (Figure 5).

**Figure 5.** Prioritization of programs in government planning documents (RPJMD)<sup>3</sup>

			Jakarta	Bogor	Depok	Tangerang	Bekasi
Urban Mitigation	Low-carbon urban development	Public transit	✓	✓	✓	✓	✓
		Renewable energy	✓	✓	✓	✓	✓
		Waste technology	✓	✗	✗	✗	✓
Urban Adaptation	Systemic-resilience actions	Increasing awareness	✓	✓	✓	✓	✓
		Incorporating climate risks	✗	✗	✗	✗	✗
		Optimizing response	✓	✓	✓	✓	✓
		Enhancing finance	✓	✗	✗	✗	✗
	Hazard-specific actions	Extreme heat	✗	✗	✗	✗	✗
		Inland flooding	✓	✓	✓	✓	✓
		Coastal flooding and storm surges	✓	✓	✗	✓	✗
		Drought	✗	✓	✓	✓	✓
		Wildfires	✗	✗	✗	✗	✗

Source: Comparative analysis of the city’s provincial mid-term development plan (Rencana Pembangunan Jangka Menengah Daerah—RPJMD), Urban adaptation indicators cited from McKinsey and C40 (2021)

To meet their climate goals, policy must be aligned across administrative borders within Indonesia. While the central government has a prominent role in driving this alignment, Jakarta can potentially take a more proactive role in creating formal policy alignment with its satellite cities to mobilize more urban climate finance.

<sup>3</sup> Based on comparative analysis of the city’s provincial mid-term development plan (Rencana Pembangunan Jangka Menengah Daerah—RPJMD). Urban adaptation indicators cited from McKinsey and C40 (2021) <https://www.mckinsey.com/~/media/mckinsey/business%20functions/sustainability/our%20insights/how%20cities%20can%20adapt%20to%20climate%20change/focused-adaptation-a-strategic-approach-to-climate-adaptation-in-cities-vf.pdf?shouldIndex=false>

## 2. JAKARTA'S URBAN CLIMATE FINANCE

### 2.1 METHODOLOGY, DATA SOURCES AND DATA GAPS

This case study is a first-of-its-kind attempt to track public and private urban climate investment flows in Jakarta. Climate finance tracking helps to identify key sources of funding for urban climate projects, providing stakeholders with better insights into the type of climate financing (in both adaptation and mitigation) and supports government agencies in formulating policy guidance.

**Methodology** and data sources: For this research, we have tracked both national and local databases<sup>4</sup> from 2015 to 2019 to identify climate-related projects in the Greater Jakarta Metropolitan Area. The databases used to capture public sector finance include central government and state budgets, and annual financial statements from the provincial government of Jakarta. Subject to data availability, we also map out the contribution of private sector climate finance in Jakarta, sourced from various actors including commercial financial institutions, institutional investors, project developers, corporate actors, philanthropic foundations, and households. The data sources include, but are not limited to, [CPI's Indonesia Private Climate Finance Tracking work](#), sustainability reports, companies' annual reports and prospectuses, surveys conducted specifically for the purpose of this study, statistics report from authorities, Bloomberg New Energy Finance (BNEF), and news and press releases.

Due to the lack of consistent disbursement data, this brief largely focuses on financial commitments. Disbursed climate finance is mentioned in specific cases where data are available. Committed finance includes investment costs, financial costs, and components of activities directly and indirectly contributing to mitigation and adaptation efforts. In case of overlap across different databases, data from the most reliable and comprehensive data sources were selected to avoid double counting. Figure 6 is a visual representation of Jakarta's urban climate finance commitments.

**Data limitations:** The quality of tracked data impacts CPI's ability to capture more granular information from various databases. Tracking Jakarta's climate finance has been challenging due to several reasons:

- While the aggregated amount of the climate-related portion of a project may be identified, the budget and other financial reports often do not provide much detail on the project activities. For instance, it is difficult to distinguish between climate expenditure leading to creation of assets and infrastructure, and recurrent

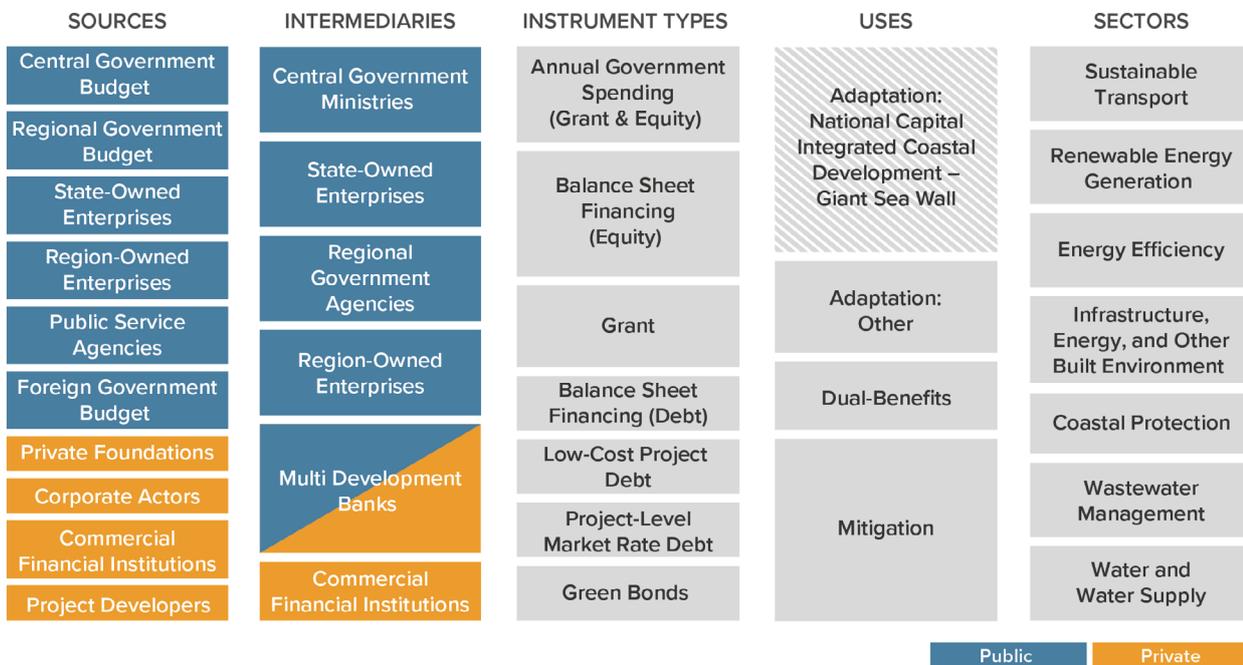
<sup>4</sup> The databases include: CPI Indonesia Climate Private Tracking data, Indonesian Central Government State Budget, Annual Financial Statement from the Provincial Government of Jakarta, BAPPENAS/ Ministry of National Development Planning of the Republic of Indonesia.

expenditures, for example finance to ensure the delivery of the overall project including salaries, allowances, interest payments, etc.

- There is limited publicly available data for private urban climate finance due to data confidentiality, and therefore we rely on keyword searches and news articles to capture the information.
- Reconciling and aggregating data from different sources creates additional challenges. It requires differentiating between the implementing entity, executing or disbursement agency, and the final recipient and beneficiary.

Due to these limitations, the resulting numbers present a conservative estimate of urban climate finance in Jakarta.

**Figure 6.** Climate finance landscape in Jakarta



**BOX 1: Jakarta's goal to build a smart and sustainable city**

There are several initiatives that have been implemented by the provincial government of Jakarta to realize its vision of becoming a smart and sustainable city, such as the development of an electric vehicle ecosystem, installation of solar rooftop in government buildings, and the green buildings. These initiatives are mainly driven by the government of Jakarta as a market enabler to catalyze participation by the private sector. Below is a brief description of these initiatives:

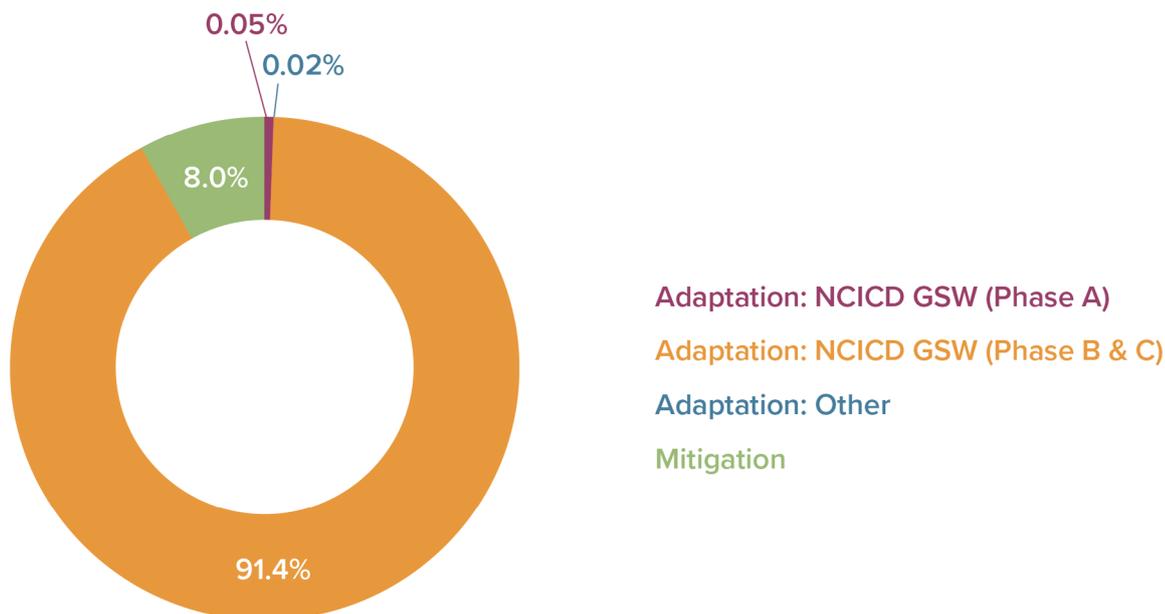
- The government issued a Governor's instruction No. 66/2019 on air quality control, to install solar rooftops on government buildings in 2019, aiming to reach a 100% installation target on all government building in Jakarta in 2022. This project is funded through local budgets, using standard procedures for government procurement of goods and services. As of 2020, the government has installed solar rooftops in 234 public schools in four sub-regions across Jakarta.
- In an effort to develop an electric vehicle ecosystem, Jakarta has plans to transition its BRT\* buses from diesel and CNG (compressed natural gas) into electric buses. This includes a procurement of 100 electric buses by the TransJakarta corporation in 2021, including its supporting charging infrastructure. Meanwhile, several private sector and State-Owned Enterprise (SOE) investments in public electric vehicle chargers are already in place. The charging infrastructure development is aligned with the Ministry of Transport's directive to replace current government cars with electric cars.
- The adoption of green buildings in Jakarta is increasing, however this initiative is mainly driven by the private sector, with the government of Jakarta as the market enabler, through a government regulation issuance regarding green building design. The aim of the government is to reduce emissions in urban areas by 30% from business as usual, including from commercial buildings. As of 2020, the Green Building Council Indonesia (GBCI) had certified emissions reductions of 13.789 TCO<sub>2</sub>e through adopting green buildings in Jakarta.

\* Bus rapid transit (BRT), also called a busway or transitway, is a bus-based public transport system designed to have better capacity and reliability than a conventional bus system, as it includes roadways that are dedicated to buses, and gives priority to buses at intersections, alongside design features to reduce delays caused by passengers boarding or leaving buses, or paying fares

## 2.2 KEY FINDINGS

The total tracked urban climate finance commitments in Jakarta stood at USD 44.9 billion (or IDR 652.4 trillion) across 37 projects during the 2015-2019 period (Figure 7). The majority of the tracked commitments were allocated to infrastructure projects. The Giant Sea Wall, a multi-year adaptation project, alone accounted for 83% (USD 41.2 billion or IDR 598.6 trillion) of these commitments. However, due to the controversy around this mega-project and its suspension it is unclear whether it will be carried through to completion. Therefore, the Giant Sea Wall (in particular Phase B and C) is identified in this study as an anomaly (see Box 2).

**Figure 7.** Total climate finance In Jakarta. 2015-19

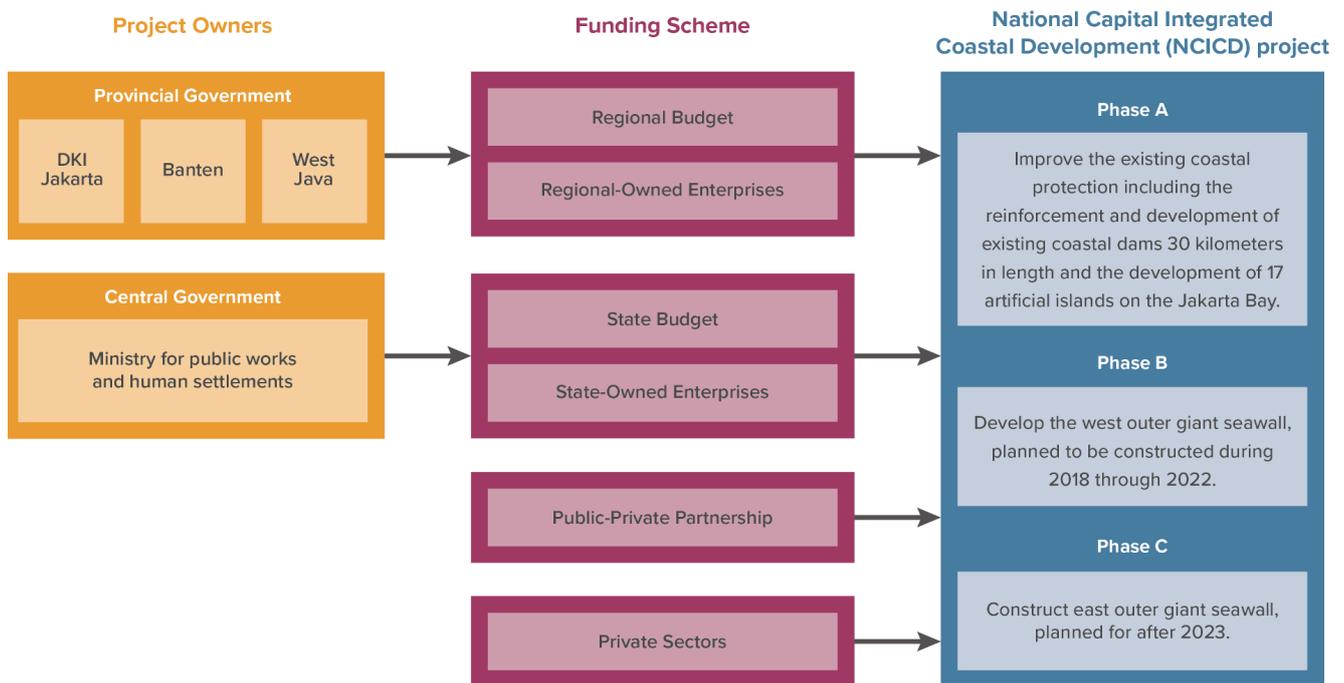


**BOX 2: Jakarta’s Climate Adaptation Finance: Distorted by The Giant Sea Wall**

Jakarta is highly vulnerable to flooding, thus the coastal has been peppered with dams. These dams form the Giant Sea Wall of Jakarta project. Jakarta’s Giant Sea Wall project, costing USD 41.2 billion (or IDR 598.6 trillion), is part of the National Capital Integrated Coastal Development (NCICD) project, which was initially expected to be complete by 2025. This mega adaptation project is divided into three phases, detailed in Figure 8, and is owned by central and provincial governments and funded through the state and regional budget, state and regional-owned enterprises, public-private partnerships (PPP), as well as the private sector.

However, the project has been marked by controversy due to the lack of adequate environmental and social safeguards. Some argue that the project does not address the root cause or serve to mitigate the causes of the ongoing flood threat, such as the over-pumping of groundwater aquifers due to a lack of clean water access, the degradation of river riparian functions, and rising sea levels. Due to mounting criticism, the project was stalled in 2017. This project was then re-evaluated and suspended by the Governor of Jakarta due these issues (Kompas, 2019). However, parts of construction were already conducted and will continue to be completed, as part of Phase A of the Giant Sea Wall project relating to raising the existing coastal dam to prevent coastal flooding. Of the total USD 41.2 billion (or IDR 598.6 trillion) committed to the project, only USD 38 million or IDR 552.1 billion (0.1%) has been disbursed by the Central Government (National Climate Budget Tagging Data, 2019) and USD 10,000 (or IDR 145.3 million) has been disbursed by Jakarta Government (Jakarta Financial Statement, 2018). These have gone into developing 8.5 km out of the 30 km of sea wall planned for Phase A.

The Giant Sea Wall is an example of misalignment between the central and city governments, with both parties having a degree of influence over whether strategic infrastructure projects are implemented, sometimes leading to tension. As of the writing of this report, the Ministry of Public Works and Housing is still going forward with a feasibility study on Phase B of the project (CNBC Indonesia, 2021).

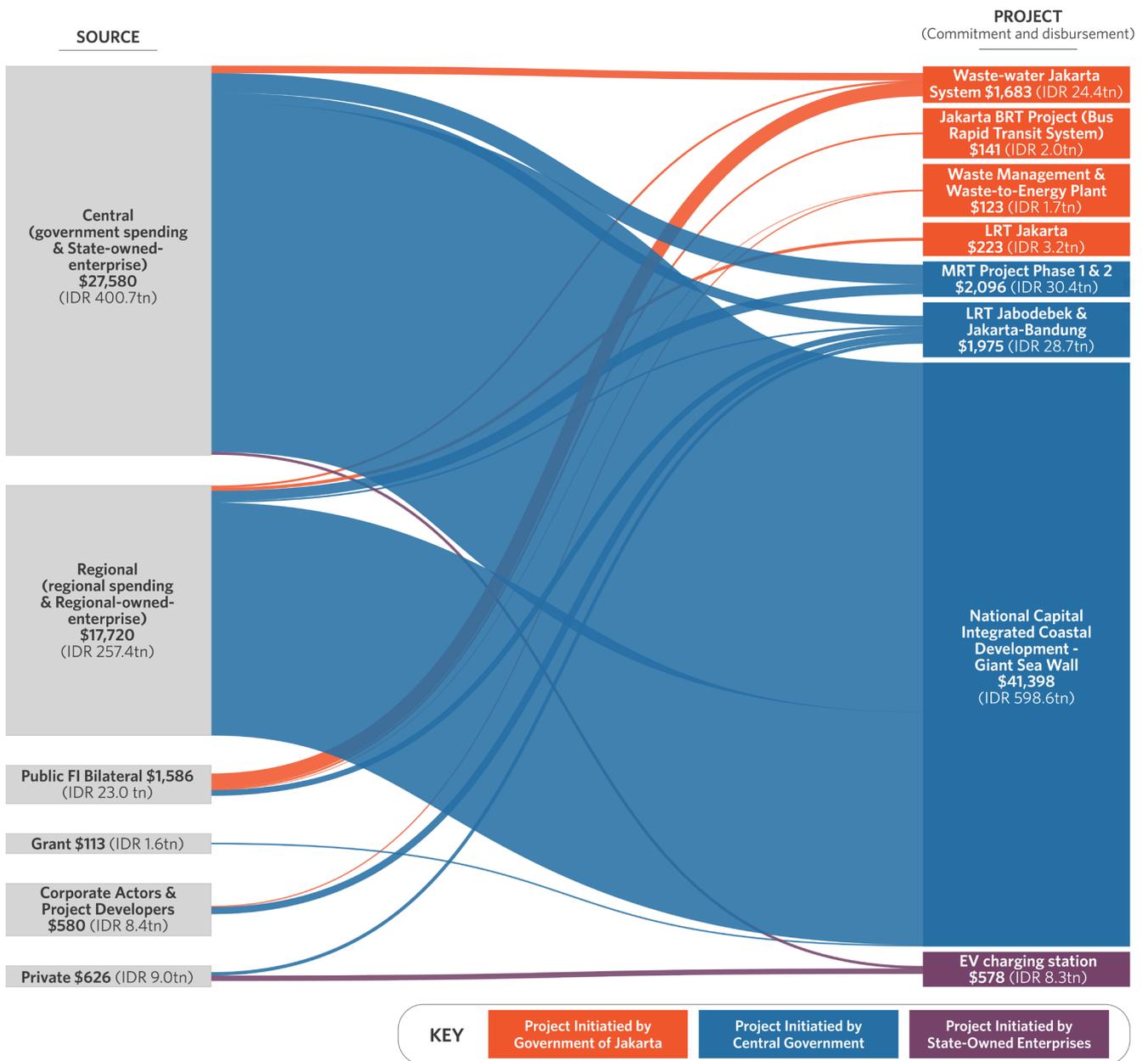
**Figure 8.** The National Capital Integrated Coastal Development Project

Source: The Committee for Acceleration of Priority Infrastructure Delivery (KPPPI)

Jakarta has untapped potential to secure financing for climate projects. Jakarta tends to be the target of national priority interest projects as they support Indonesia's Nationally Determined Contribution (NDC) (Government of Jakarta, 2019). Consequently, most of the large-scale climate infrastructure projects in the city are initiated by the central government and are funded mainly by the central government or state-owned enterprises (Figure 9). For example, Jakarta received a direct loan from the central government for equity injection to fund the Mass-Rapid Transit (MRT) project. The total financing need was split 51% from Jakarta's budget and 49% from the central government budget, which was disbursed through the Jakarta budget. In 2018, the loan channeling and grant totaled USD 251.8 million (or IDR 3.6 billion), including the equity portion to the Jakarta MRT operator.

Based on the results of our tracking (see Section 1.3), Jakarta had no interest-bearing liabilities in 2017-2018. This means that it has not accessed any loans from financial institutions, whether development finance institutions such as local and international DFIs, nor multilateral development banks. While it is desirable to have no liabilities, it also shows that Jakarta has significant room to increase its ambition and leverage its strong fiscal capacity, both from its own budget and from central government support, to attract other financiers to invest in climate actions.

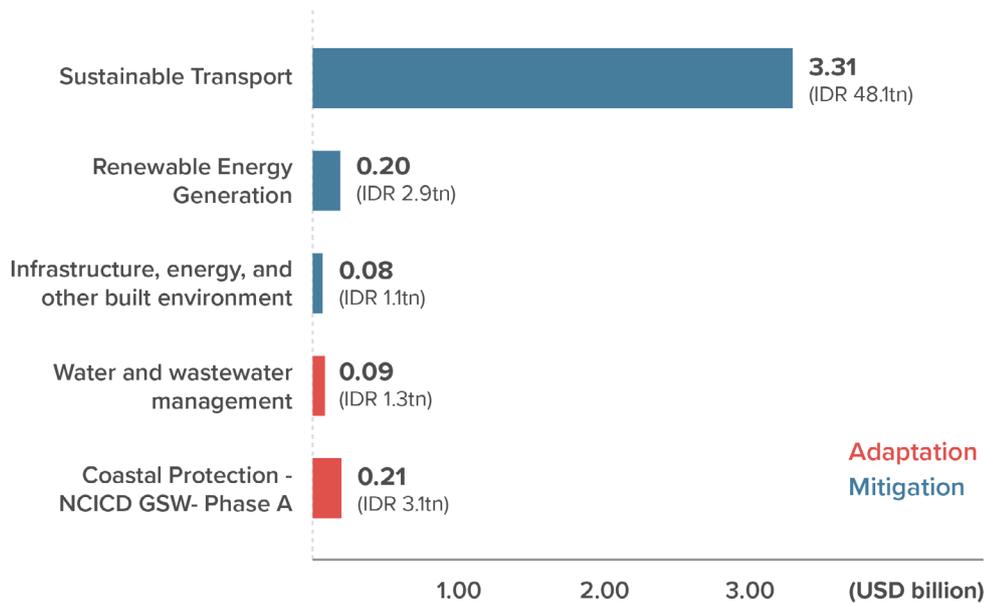
**Figure 9.** Who Drives Climate Infrastructure Projects in Jakarta? (USD million)



Source: CPI research and interview with Jakarta Municipal Office

## SECTORS

Climate finance commitments in Jakarta are dominated by a few large projects, and mainly target sustainable transport. If we take the Giant Sea Wall project (Phase B and C) out of the equation, a number of sustainable transport projects dominate Jakarta’s climate finance landscape. These include railway transport, such as the Jakarta Light Rail Transit (LRT) and the Mass-Rapid Transit (MRT) projects (see Box 3). Jakarta also invested in other public transport modes, particularly on the TransJakarta bus network, using public investment sourced from the central and provincial government budget.

**Figure 10.** Climate Finance in Jakarta by Sector, 2015-2019 (USD billion)

## SOURCES

### PUBLIC FINANCE

Public finance dominated the landscape of urban climate finance in Jakarta in the 2015-2019 fiscal year period. Government budgets for the capital expenditure of infrastructure projects, sourced both from the central and local governments, contributed the highest amount of tracked urban climate finance, with a sum of USD 41.2 billion or IDR 598.6 trillion (Figure 9). Bilateral development financial institutions contributed around USD 1.4 billion (or IDR 20.3 trillion), mainly to Jakarta's Mass Rapid Transit Project.

Most of the finance for infrastructure projects comes from central government at around 57% of total finance, which goes into the three of the largest infrastructure projects

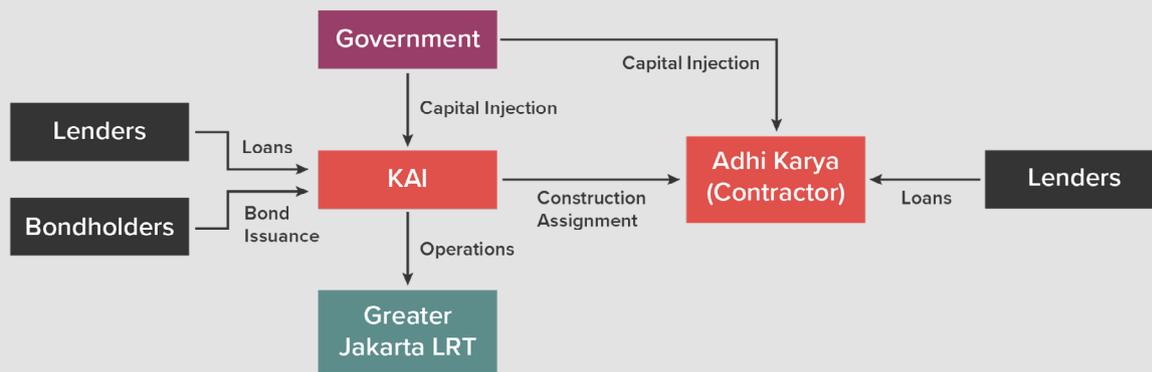
#### BOX 3: Light Rail Transit (LRT) network in greater Jakarta

The central government spearheaded the LRT project as its effort to step up the development of Jakarta's public infrastructure to integrate its surrounding suburban areas, particularly the public transport.

This project shows a positive example of a coordinated approach between the central government and the government of Jakarta. Despite the fact that the project is initiated by the central government, the provincial government of Jakarta is also actively involved in developing supporting infrastructure for multimode transport transit areas. The LRT project is projected to align with other modes of mass transport in selected stations such as BRT, MRT and the commuter line.

LRT project expands rail-based transportation system into the greater Jakarta, establishing a sustainable mass transportation system which will have to accommodate the daily commuting needs of the citizens of the greater Jakarta area into the central business districts. This project is initiated by the central government through a Public Private Partnership (PPP) scheme and government assignment to SOEs to maximize the leveraging of government investment. Below is the detailed scheme of the financing for the greater Jakarta LRT project.

**Figure 11.** LRT Greater Jakarta Financing Scheme



Source: <https://www.jakarta-propertindo.com/id/lrt-jakarta/>, <https://regional.kontan.co.id/news/menhub-memaparkan-pembangunan-lrt-jabodetabek-gunakan-skema-kpbu-1>

Based on this scheme, the government assignment involves two SOEs, KAI as the project operator and Adhi Karya as the contractor. Both SOEs receive a capital injection of USD 523 million (or IDR 7.6 Trillion) from the government to strengthen their capital structure and to leverage debt financing to fund the project. The government also issued a decree that guarantees all loans and bond issuance by KAI and Adhi Karya, to provide assurance to the banking sector and investors regarding the sustainability of the project.

featured in this report (Box 2, 3, and 4). This is reflective of how the three infrastructure projects are viewed as a strategic national priority, but it is also reflective of how the central government views Jakarta’s development as a priority given its status as the capital of Indonesia.

Under this circumstance, the financing schemes for national priority projects would use sovereign loan schemes between central government and the lenders. The loan is then channelled through Jakarta’s budget for capital injection to the project operators. Therefore, under this scheme, the liabilities for repayment will be covered by the central government. Indeed, our tracking on the financial statements of Jakarta in 2017-2018 has shown no interest-bearing liabilities for Jakarta’s budget.

In August 2019, the central government began plans to move the capital city to East Kalimantan by 2024, citing efforts to alleviate the over-concentration of economic activities and the ecological burden in Jakarta. While discussions have been suspended due to COVID-19, stripping the capital city status from Jakarta in the future may result in less financing to Jakarta from the central government. This suggests that Jakarta will need to have strategies in place to become more financially independent and to anticipate a future in which it no longer has capital city privileges. There is a clear need to mobilize private sector finance. To supplement public data, we tracked available information on private sector finance from actors like commercial banks and private project developers to identify the financing they provide for Jakarta urban climate projects.

## PRIVATE FINANCE

We tracked USD 925 million (or IDR 13.4 billion) of private finance flowing to climate activities in Jakarta between 2015-19, with 89% using balance sheet debt. This amounts

to only 2% of Jakarta's total climate finance in the same period. Best practices suggest that ideally, private sector finance should cover 50-70% of total finance needs, especially in a city with a lot of commercial projects like Jakarta. However, Jakarta is underutilizing the potential to attract private finance.

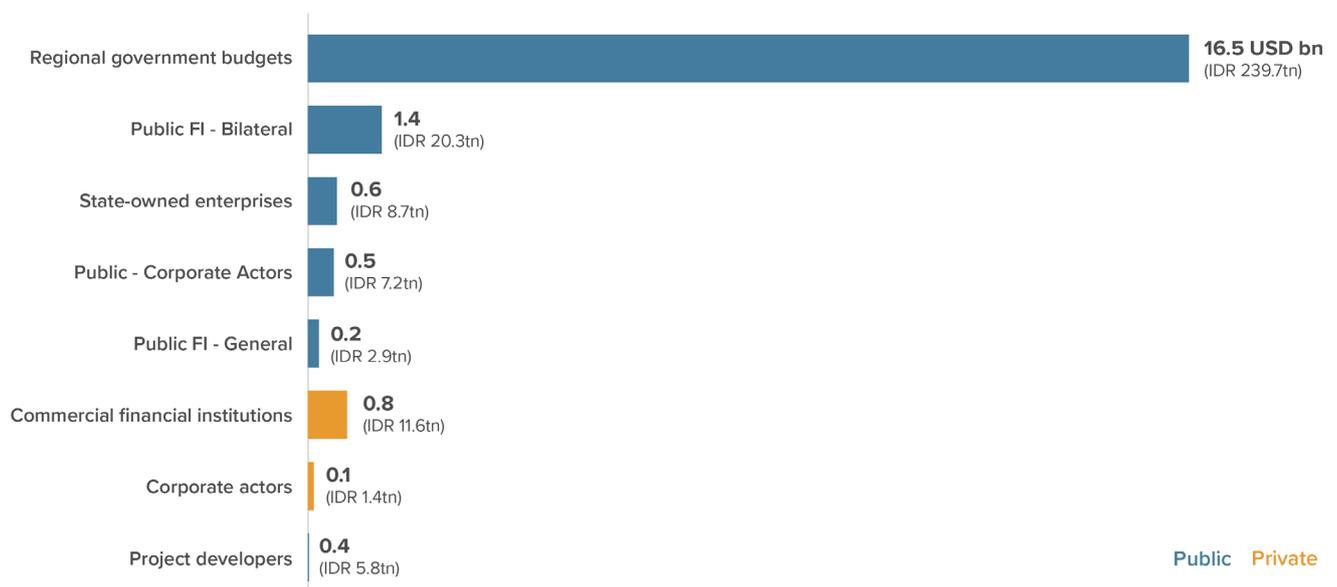
As mentioned in the previous section, large scale national priority projects are covered using sovereign loan schemes borne by central government, leaving Jakarta's budget with no interest-bearing liabilities. Furthermore, Jakarta has the highest real income compared to other provincial governments in Java. For instance, in its audited budget for 2019, Jakarta's real income is IDR 45 trillion, higher than its peer local governments of West Java (IDR 21 Trillion), Central Java (IDR 14 Trillion), and East Java (IDR 19 trillion).

Given its fiscal space and fiscal capacity, Jakarta has the potential to unlock more private capital into green projects using innovative financing schemes. Jakarta's budget structure can be optimized to leverage private investment through targeted interventions aimed at increasing the viability of a climate project. We have identified several financing schemes that are underutilized and are well within Jakarta's capacity to explore. These include issuing municipal green bonds (CPI, 2021) such as for transportation, renewable energy or adaptation projects, capital injection to local owned enterprises such as for waste management projects, and regional infrastructure loans from PT SMI for medium and small-scale projects such as energy efficiency projects.

Among private actors, commercial finance institutions financed the highest amount of private climate finance in Jakarta with USD 752 million (or IDR 10.9 trillion). Most of the tracked flows from commercial financial institutions was for debt instruments, usually at the market-rate interest for project-level debt.

Public finance is normally disbursed through annual government spending for both capital and operational expenditure purposes. Meanwhile, private finance covers only capital expenditures for infrastructure projects. The operational expenditures are covered by user fees and government spending, mostly covering recurring payments such as sea wall maintenance, train facilities, air pollution control, and other environmental protection activities.

**Figure 12.** Climate finance in Jakarta by source of finance, 2015-19 (USD billion)

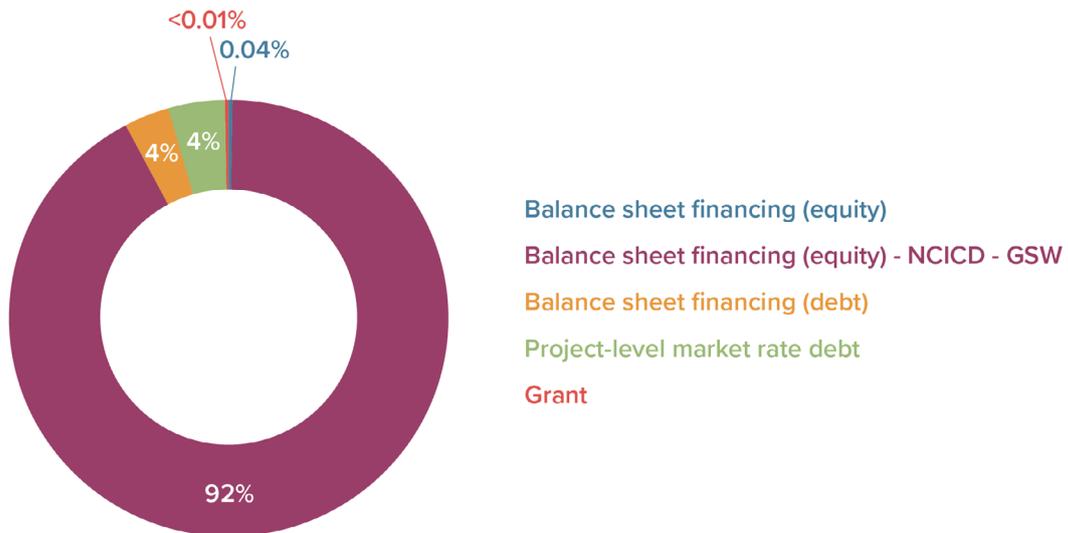


## INSTRUMENTS

Equity finance accounted for 92% of the total tracked amount. The majority is for the Giant Sea Wall commitment, and the rest mainly reflects the annual top up capital to the region-owned enterprises to catalyze infrastructure development. For instance, a top up capital of USD 523 million (or IDR 7.6 trillion) went to Jakarta Mass Rapid Transit company (Box 3). More generally, data shows that given Jakarta’s strong economic position, the city is able to access large public climate investments using catalytic financial instruments and approaches, such as:

- Investment risk-sharing agreements with the Indonesian central government for projects such as the Mass Rapid Transit (MRT).
- Public-Private Partnerships (PPP), implemented for waste-to-energy and waste-water projects.
- Financial leverage, for example in the use of the debt to finance urban climate projects through its locally owned enterprise for the light rail transit (LRT) projects.

**Figure 13.** Climate finance in Jakarta by instrument, 2015-19



**Box 4: Project Profile – Jakarta Sewerage Waste-Water Management System (JSS)**

Due to the lack of granular data on disbursements, this analysis only reports on financial commitments, but managed to track USD 3.5 billion (or IDR 50.8 trillion) in disbursements during the 2015-19 period. Out of this, the Jakarta Sewerage System project alone accounted for USD 1.7 billion (or IDR 24.7 trillion). As the capital city, DKI Jakarta has developed as a center of government, business, and industry. Since the development has not been accompanied by the improvement of disposal systems for the management of generated waste, water and sanitation conditions in Jakarta have increasingly worsened.

Currently, proper waste-water management systems only cover 4% of the entire serviceable area, with a Biological Oxygen Demand (BOD) pollution rate of 84 mg/l, which is above WHO's acceptable pollution rate of 20mg/l. These conditions make Jakarta the second lowest performing capital city in Southeast Asia in terms of sanitation. The construction of Zones 1 and 6, under the project, will increase the area coverage of waste-water service in the Province of Jakarta by 20%.

The project owner for JSS is the Provincial Government of Jakarta, with several financing schemes for different zones. State budget and overseas lending will finance zones 1 and 6, while zones 2, 4, 5, 8, 9, and 10 will likely be funded through PPP schemes. The financing scheme for the remaining zones are still open for any financing vehicle.

Since the development of waste-water treatment plants is crucial to support the National Capital Integrated Coastal Development (NCICD), this project has become a priority to Jakarta's government. The project is anticipated to affect more than 10 million of Jakarta's residents and is of crucial importance to achieve 75% coverage of wastewater service area in 2022.

### 3. CONCLUSION AND RECOMMENDATIONS

As one of the most densely populated metropolitan areas in the world, Jakarta faces many climate challenges. The city has experienced flooding and other climate tragedies that have had dire economic and social consequences. In comparison with other municipalities in Indonesia, Jakarta has the biggest fiscal capacity to channel funds for climate efforts, yet climate related expenditures remain low compared to other types of expenditure. Based on our research and interviews, there are several key recommendations for Jakarta to accelerate the quantity and effectiveness of urban climate finance:

1. **A more explicit and clear alignment of Jakarta's climate priorities with both the national government and Jakarta's satellite cities.** To date, Jakarta's climate priorities are not explicitly aligned with its surrounding cities' climate priorities. Jakarta has the position to spearhead this change to mobilize other public and private actors to collectively achieve wide impacts. The landscape approach between Jakarta, its satellite cities, and the central government should focus on a) ensuring that respective policies and policies are not developed in silos, instead a formal coordination mechanism should exist to reach across sectors, actors, and levels of governments; b) identifying synergies in projects and programs, and implement joint initiatives to achieve common goals; and c) set up requisite institutional arrangements and information sharing mechanisms to ensure a greater collaboration between Jakarta, its satellite cities, and its neighboring municipalities. Being the center of Indonesia's government and economic activity, Jakarta would gain from an integrated collective approach to tackle climate change involving related stakeholders, including the national and neighboring cities as project owners and policy makers, as well as the related sectors, i.e., infrastructure, transportation, and energy. While sustainable transport projects connecting Jakarta and its neighboring municipalities have picked up in pace, however the efforts need to be extended to other sectors.
2. **Jakarta should develop an improved climate policy framework integrating climate budget tagging and enhanced strategies to scale up catalytic financing for climate investments. Improved policy framework would require enhancement in data availability through tracking urban climate finance.** Jakarta would benefit substantially from a regular undertaking of urban climate finance tracking that specifically investigates the financial disbursement of its committed projects. There are considerable limitations in data availability, and through better data availability and visibility policymakers would be able to produce more efficient policies and plans, as well as to allocate budgets more clearly according to the identified priorities. Currently, government data provides total commitment rather than disbursement, and further examination is necessary to identify how much and when such finance has been disbursed at the project level. Furthermore, implementing

Jakarta-level Climate Budget Tagging (CBT) and expanding the monitoring and evaluation of climate investment impacts from Jakarta to its satellite cities could be supported through a specific assistance arrangement. All such climate change frameworks can a) help mobilize climate finance by identifying financing gap between commitments and realizations; and b) ensure systematic coordination and collaboration between Jakarta and its satellite cities.

- 3. Scaling up catalytic and innovative financing models and leveraging municipal budgets to mobilize private investment.** Jakarta is yet to fully leverage its strong fiscal capacity both from its own budget and from central government support to attract private sector financiers. Even it had no interest-bearing liabilities in 2017-2018. Further, it should continue scaling up the public-private partnership schemes through improvement of the project identification and readiness process. Furthermore, in leveraging its current strong fiscal capacity, this could help to anticipate a stripping of capital city status from Jakarta that may impact in less financing to Jakarta from central government. Thus, mobilizing private finance is one of the key strategies in place, to anticipate a future in which Jakarta is no longer the capital city. Some available financing options could be explored further to attract private finance, such as guarantees<sup>5</sup> and green municipal bonds<sup>6</sup>.

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