



# Enabling Framework Conditions Assessment for Subnational Climate Finance in Indonesia

May 2026



## ABOUT URBAN-ACT

The Integrated Urban Climate Action for Low-Carbon and Resilient Cities (Urban-Act) project supports a transformation towards low-carbon and resilient urban development in the Asia-Pacific region while also contributing to countries' Nationally Determined Contributions (NDCs) and the advancement of the Sustainable Development Goals (SDGs). The project is funded by The Federal Ministry for Economic Affairs and Climate Action (BMWK) under the International Climate Initiative (IKI). The project is implemented in five countries – China, India, Indonesia, the Philippines, and Thailand. The project is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), United Cities and Local Governments Asia-Pacific (UCLG-ASPAC), the Technical University Dortmund (TUD) and the University of Stuttgart. In Indonesia, the project is being implemented under the political leadership of the Ministry of National Development Planning (BAPPENAS).

## ABOUT THE UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) is the most inclusive intergovernmental platform in the Asia-Pacific region. The Commission promotes cooperation among its 53 member States and 9 associate members in pursuit of solutions to sustainable development challenges. ESCAP is one of the five regional commissions of the United Nations. The ESCAP secretariat supports inclusive, resilient, and sustainable development in the region by generating action-oriented knowledge and by providing technical assistance and capacity-building services in support of national development objectives, regional agreements, and the implementation of the 2030 Agenda for Sustainable Development.

## ABOUT THE CITIES CLIMATE FINANCE LEADERSHIP ALLIANCE

The Cities Climate Finance Leadership Alliance is a coalition of leaders committed to deploying finance for city-level climate action at scale by 2030. Trillions of dollars will be required to help cities build the low-emissions, resilient infrastructure necessary to combat and react to climate change. The Cities Climate Finance Leadership Alliance is the only multilevel and multi-stakeholder coalition aimed at closing the investment gap for urban subnational climate projects and infrastructure worldwide.

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## SUPPORTED BY

On behalf of:



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## PROJECT PARTNERS



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# Special message



Kementerian PPN/  
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In the next two decades, Indonesia envisions becoming a united, sovereign, advanced, and sustainable nation, as articulated in the Long-Term National Development Plan (RPJPN) 2025–2045. To realize the *sustainability* dimension of this vision, the reduction of greenhouse gas (GHG) intensity has been established as one of the key indicators. This commitment is operationalized through the country's *low-carbon* and *climate-resilient development strategy*.

Through this approach, Indonesia seeks to achieve economic growth while significantly reducing GHG emissions and improving environmental quality. Achieving these ambitions requires strong partnerships and innovative financing models that empower subnational governments as strategic actors of transformative change. As climate impacts intensify and urbanization accelerates, enabling subnational governments to respond swiftly and effectively will be crucial to achieving national climate goals. Strengthening the Enabling Framework Conditions (EFC) for climate finance at the subnational level is therefore not merely a technical exercise; it is fundamental to building Indonesia's collective resilience.

Climate finance is not only about mobilizing resources; it is also about creating systems that are transparent, inclusive, and accountable. Enhancing data quality, policy coherence, and cross-sector collaboration will be critical to bridging the gap between planning and implementation. This report contributes meaningfully to that agenda by providing a comprehensive mapping of Indonesia's current enabling conditions and offering recommendations to strengthen them in the years ahead.

On behalf of the Ministry of National Development Planning (Bappenas), I extend my sincere appreciation to the United Nations Economic and Social

Commission for Asia and the Pacific (ESCAP), the Cities Climate Finance Leadership Alliance (CCFLA), and all partners whose expertise and dedication have supported the preparation of this EFC Assessment. May this report serve as both a reference and a call to action to accelerate climate finance across all levels of government so that Indonesia's cities and regions emerge not only as engines of economic growth, but also as models of resilience and sustainability.



**Nizhar Marizi**

Director of Environmental Affairs,  
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# Abbreviations

|                       |                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| AKSARA                | Indonesian Climate Resilience Planning and Monitoring Application<br>( <i>Aplikasi Perencanaan dan Pemantauan Pembangunan Rendah Karbon Indonesia</i> ) |
| Bappenas              | The Ministry of National Development Planning<br>( <i>Badan Perencanaan Pembangunan Nasional</i> )                                                      |
| BMKG                  | Meteorological, Climatological and Geophysical Agency<br>( <i>Badan Meteorologi, Klimatologi dan Geofisika</i> )                                        |
| BNPB                  | National Disaster Management Agency<br>( <i>Badan Nasional Penanggulangan Bencana</i> )                                                                 |
| BPDLH                 | Indonesia Environment Fund<br>( <i>Badan Pengelola Dana Lingkungan Hidup</i> )                                                                          |
| CBT                   | Climate Budget Tagging                                                                                                                                  |
| CCFLA                 | Cities Climate Finance Leadership Alliance                                                                                                              |
| CFFP                  | Climate Finance Focal Points                                                                                                                            |
| DBH                   | Revenue Sharing Fund ( <i>Dana Bagi Hasil</i> )                                                                                                         |
| DAK                   | Specific Allocation Fund<br>( <i>Dana Alokasi Khusus</i> )                                                                                              |
| DAU                   | General Allocation Fund<br>( <i>Dana Alokasi Umum</i> )                                                                                                 |
| DIF                   | Regional Incentive Fund<br>( <i>Dana Insentif Fiskal</i> )                                                                                              |
| EFCs                  | Enabling Framework Conditions                                                                                                                           |
| ESCAP                 | United Nations Economic and Social Commission for Asia and the Pacific                                                                                  |
| GHG                   | greenhouse gas                                                                                                                                          |
| Gt CO <sub>2</sub> eq | Giga tons of carbon dioxide equivalent                                                                                                                  |
| HKPD                  | Relationship between National and Subnational Finance<br>( <i>Hubungan Keuangan Pusat dan Daerah</i> )                                                  |
| IDR                   | Indonesian Rupiah                                                                                                                                       |
| IFC                   | International Finance Corporation                                                                                                                       |
| ICCTF                 | Indonesia Climate Change Trust Fund                                                                                                                     |
| IGTs                  | intergovernmental transfers                                                                                                                             |
| IPPU                  | Industrial Processes and Product Use                                                                                                                    |
| KLHS                  | Strategic Environmental Assessment<br>( <i>Kajian Lingkungan Hidup Strategis</i> )                                                                      |
| MEMR                  | Ministry of Energy and Mineral Resources                                                                                                                |
| MoEF                  | Ministry of Environment and Forestry                                                                                                                    |
| MoF                   | Ministry of Finance                                                                                                                                     |

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|                       |                                                                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| MoHA                  | Ministry of Home Affairs                                                                                                                            |
| MPWH                  | Ministry of Public Works and Housing                                                                                                                |
| Mt CO <sub>2</sub> eq | Million tons of carbon dioxide equivalent                                                                                                           |
| Musrembang            | Development Planning Forum<br>( <i>Musyawarah Perencanaan Pembangunan</i> )                                                                         |
| NDCs                  | Nationally Determined Contributions                                                                                                                 |
| NGO                   | non-governmental organization                                                                                                                       |
| OECD                  | The Organization for Economic Co-operation and Development                                                                                          |
| OJK                   | Finance Service Authority<br>( <i>Otoritas Jasa Keuangan</i> )                                                                                      |
| PPP                   | public-private partnerships                                                                                                                         |
| Proklim               | Climate Village Program<br>( <i>Program Kampung Iklim</i> )                                                                                         |
| PT PII                | PT Penjamin Infrastruktur Indonesia                                                                                                                 |
| PT SMI                | PT Sarana Multi Infrastruktur                                                                                                                       |
| RPJMN/D               | National/Subnational Medium-Term Development Plan<br>( <i>Rencana Pembangunan Jangka Menengah Nasional/Daerah</i> )                                 |
| RPJPN/D               | National/Subnational Long-Term Development Plan<br>( <i>Rencana Pembangunan Jangka Panjang Nasional/Daerah</i> )                                    |
| SIDIK                 | Vulnerability Index Data Information System<br>( <i>Sistem Informasi Data Indeks Kerentanan</i> )                                                   |
| SIGNSMART             | Indonesian GHG Data Management System<br>( <i>Sistem Inventarisasi Gas Rumah Kaca Nasional-Sederhana, Mudah, Akkurat, Ringkas, dan Transparan</i> ) |
| SRN                   | National Registry System<br>( <i>Sistem Registri Nasional</i> )                                                                                     |
| t CO <sub>2</sub> eq  | Tons of carbon dioxide equivalent                                                                                                                   |
| UNDP                  | United Nations Development Programme                                                                                                                |

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# Glossary of terms

**Climate  
finance**

CCFLA's definition of climate finance is based on the definitions developed by the Climate Policy Initiative (CPI) for mitigation and adaptation projects in the Global Landscape of Climate Finance. This working definition of climate finance is aligned with the recommended operational definition of the UNFCCC Standing Committee on Finance, which states that climate finance aims at reducing emissions and enhancing sinks of GHGs and aims at reducing the vulnerability of and maintaining and increasing the resilience of human and ecological systems to adverse climate change impacts (Buchner and others, 2023).

**Enabling  
environment**

An enabling environment consists of conditions for achieving an objective where risks are minimized and well-managed and where the rights, roles and assets of all stakeholders are established. The enabling environment for climate-smart cities includes the framework conditions that facilitate and support the adoption of low-carbon, climate-resilient urban development, investment and service delivery. Developing an enabling environment requires consistent and complementary policies, legal frameworks, governance structures, implementation capacity, and financing and investment structures, including various forms of municipal finance such as own source revenues, intergovernmental fiscal transfers, borrowing and public-private partnerships. It also requires having sound urban plans and capital investment plans that are predictable and comfortable for potential financiers in place (Negreiros and others, 2021).

**Enabling  
framework  
conditions  
(EFCs)**

An EFC is a component of a broader enabling environment, in this case, for subnational climate finance. Together, EFCs constitute an enabling environment for achieving minimized and well-managed risks, and where the rights, roles and assets of all stakeholders are established. Previous CCFLA work has focused on EFCs for climate-smart cities, which facilitate low-carbon, climate-resilient urban development. EFCs can be policies, legal frameworks, governance structures, implementation capacity, and financing and investment structures, among others (Negreiros and others, 2021).

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# Glossary of terms

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Municipal corporation</b>  | The municipal corporation is the legal term for a local governing body, including (but not limited to) cities, counties, townships, charter townships, villages and boroughs. The term can also be used to describe municipally-owned corporations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Subnational government</b> | The terms 'subnational' and 'subnational government' refer to the multiple levels of government that operate below the national level. Common terms for subnational governments include states, provinces, territories, regions, counties, municipalities and cities. In Indonesia, this term may refer to provinces, cities, or regencies.                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Urban areas</b>            | The term 'urban' refers to functional urban areas (FUAs), which consist of a densely inhabited city and a less densely populated commuting zone whose labour market is highly integrated with the city (Dijkstra, Poelman and Veneri, 2019). The term 'urban' also includes cities with physical boundaries that are officially locally defined by the city government in question, which, depending on the context, may consist of less urbanized areas, such as peri-urban commuting zones (Negreiros and others, 2021). The statistics agency of Indonesia segregates urban/rural areas at the village level, thus the share of the population living in cities does not represent the share of the population living in urban areas. |

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# Executive Summary

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**Indonesia is vulnerable to disasters and climate change.** Over 20,000 disasters occurred in Indonesia between 2020 and 2024. The majority of these were water-related disasters that can be linked to climate change, including floods, landslides, extreme weather events, droughts and peat fires. These incidents have led to significant fatalities, losses and damages, posing a serious threat to the country's Sustainable Development Goals.

**Almost 60 per cent of the population of Indonesia lives in urban areas and this proportion is expected rise as cities offer better opportunities.** Disasters and climate change disproportionality impact the most vulnerable. In urban settings, individuals living in poor living conditions, blue-collar workers, people with disabilities, the elderly, women and children are among the groups whose vulnerability increases when disasters strike.

**Although low in per capita greenhouse gas (GHG) emissions, Indonesia is among the Asia-Pacific countries with the highest cumulative GHG emissions.** Home to more than 270 million people, the country emitted 1.2 Gt CO<sub>2</sub>eq GHG in 2022 (without land use, land-use change and forestry), accounting for 2.3 per cent of global emissions (Crippa and others, 2023). According to the Ministry of Environment and Forestry (2024) *GHG Emissions Inventory Report*, the two primary sectors contributing significantly to GHG emissions from 2000-2022 are energy, and forest and other land use (FOLU).

**The Government of Indonesia has estimated that the financing needed to meet its original National Determined Contributions (NDCs) will be approximately US\$ 285 billion between 2018 and 2030.** This amount was considered conservative and needs to be updated in light of the enhanced NDCs. In 2022, the country enhanced its NDC target to 31.89 per cent with domestic sources and 43.20 per cent with international support (Government of Indonesia, 2022).

**Creating the right enabling conditions at the national level can increase subnational funds for climate action.** Enabling framework conditions (EFCs) are essential for scaling subnational climate finance by strengthening local institutional capacity, mitigating investment risks and promoting stakeholder engagement. Urban-Act and the Cities Climate Finance Leadership Alliance (CCFLA) have assessed the national EFCs for Indonesia for subnational climate finance in light of these challenges.

**This work is part of the Urban-Act project,** which aims to strengthen EFCs for collaborative climate action and the capacities of cities to engage in climate dialogue and action in five Urban-Act countries (China, India, Indonesia, the Philippines and Thailand). It aims to support national government officials and other stakeholders to identify potential national EFC gaps and opportunities, and to mobilize subnational climate finance in Indonesia.

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The assessment focuses on four categories:

1. **Climate policy:** Assess how the national government supports climate policy and planning processes for subnational governments within the country.
2. **Budget and finance:** Assess the country's national and subnational financial architecture to provide an explicit, clear and stable assignment of expenditures and responsibilities and to put in place incentives for subnational fiscal autonomy.
3. **Climate data:** Assess how the national government can support subnational governments to better access to good quality climate data and use that in their climate policy and planning.
4. **Vertical and horizontal coordination:** Assess how the national government can work in cooperation with subnational governments to develop stronger climate policy and planning coordination both horizontally and vertically.

**Urban climate finance encompasses all financial resources directed towards cities and urban areas to enhance their capacity for climate change adaptation and mitigation.** In Indonesia, there is no distinction between urban and non-urban climate action or finance. Therefore, this assessment often considers subnational climate action or finance as the primary context for discussion with more attention to urban-related issues.

#### **The findings of the assessment are elaborated below:**

- As climate change is a cross-sectoral issue, climate-related activities at the subnational level can be funded by regular funding mechanisms, sources from national and subnational budgets, international sources, private and public funds, and even from the communities. From 2018 to 2021, line ministries participating in climate budget tagging (CBT) allocated around 4.3 per cent of their budget, or around \$6.3 billion annually to fund the country's climate action. International finance has also been mobilized to support Indonesia in achieving its climate targets. From 2018 to 2022, an average of \$2.6 billion annually was mobilized from various sources to fund climate-related activities, in the form of debts, grants, equity and other financial instruments.
  - Indonesia has also established several off-budget financing platforms for climate-related action, such as the Indonesia Environment Fund (BPDLH), SDGs Indonesia One (SIO) and the Indonesia Climate Change Trust Fund (ICCTF). The financiers manage funds from different sources including the private sector, multilateral development banks, foreign countries and philanthropies. Several international climate finance platforms also operate in Indonesia through national focal points, such as the Green Climate Fund (GCF), Adaptation Fund (AF), and Global Environmental Fund (GEF). These financiers have distributed funds throughout
-

Indonesia in the FOLU, disaster, energy, marine and coastal, industrial processes and product use (IPPU), agriculture, water, health and waste sectors.

- With respect to climate policy, the commitment of Indonesia to combating climate change is becoming more ambitious as reflected in the stronger targets set in the overarching national development plans. Synchronization of subnational target indicators with national indicators has become imperative. Climate policy is mainly implemented with a sectoral approach and most of the legally-binding policy instruments do not explicitly mention climate benefits although contribute to combating climate change. Climate-related or any development targets are not segregated between urban and non-urban areas. However, Indonesia recognizes development challenges relevant to urbanization. Monitoring and reporting mechanisms are available but there is no enforcement mechanism at any level of the government in the case of deviation from the targets.
  - Infrastructure financing at the subnational level mainly sources from the national budget through line ministries' budgets or intergovernmental transfers. Despite fiscal decentralization, revenue generation from the subnational government is lacking. Private finance, debts and other innovative finance accounts for a small portion of subnational revenue sources or for financing climate-related activities. Municipal bonds have been regulated, but subnational governments have not yet been able to successfully issue any.
  - Although there is no dedicated intergovernmental transfer mechanism for climate action, most of the public finance instruments can be used for activities that contribute toward combatting climate change. However, there is no enforcement and incentive mechanisms for climate-related activities are lacking. Incentivizing conditions to mobilize private capital to achieve national climate targets are also limited to renewable energy. International finance has been mobilized to implement subnational climate action in the form of debts, grants, equity and guarantees through national government budgets, non-government institutions operating in the countries, or national focal points.
  - The national government conducts the annual GHG emissions inventory as a monitoring and reporting mechanism and supports evidence-based planning. Several digital platforms have also been established to support the subnational governments in climate data reporting and analysis, although the participation levels vary across platforms. It is beyond the scope of this assessment to assess the effectiveness of the platforms for evidence-based planning, monitoring and evaluation.
  - Horizontal and vertical coordination follows the current hierarchy of the relationship between national and subnational governments. Cross-jurisdiction collaboration is mainly initiated by the national government as part of national strategic priorities. Public participation is mandatory in regulation-making and development planning including those relevant to efforts in combating climate change. Indonesia also
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participates in many projects across multiple countries that allow peer learning among the beneficiaries in the countries.

**Based on the findings, the following recommendations are suggested to improve the EFC:**

1. Translate relevant policy instruments into practical guidelines and capacity-building activities. This may include climate data and analysis for planning, monitoring, and evaluation; programmatic theory or results framework; financing mechanisms and sources; fund management; and relevant good practices nationally and internationally.
  2. Expand incentives for climate-related activities that benefit urban areas.
  3. Leverage blended finance and explore specific sectors and geographical locations where private finance can be more attractive.
  4. Explore digital platforms to allow synchronization between institutional GHG emissions reduction targets, climate impacts (positive or negative) from certain programmes/activities and budget needs.
  5. Encourage cross-jurisdictional collaboration in realizing low-carbon and climate-resilient cities.
  6. Strengthen urban discussion in national climate strategies.
-

# 1. Introduction

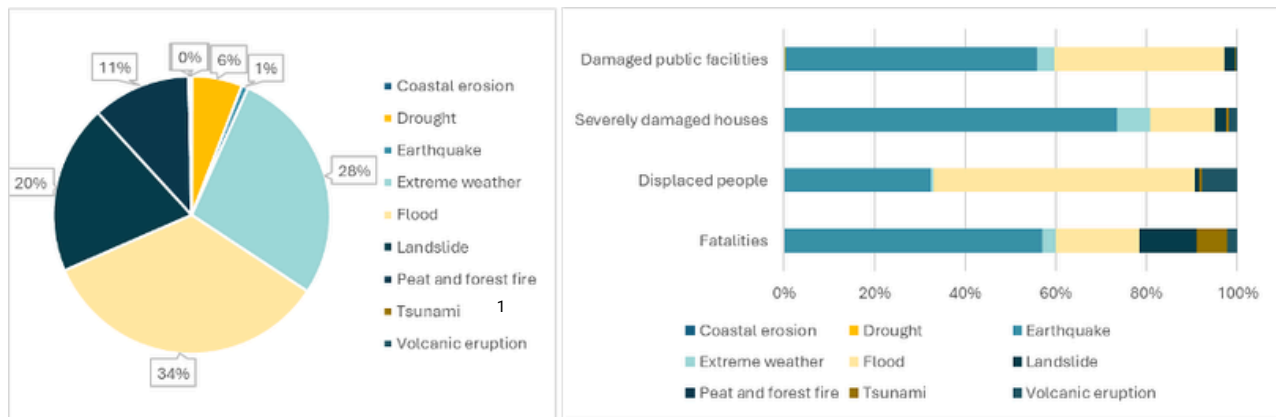
## 1.1 Background

**As the largest archipelagic country in the Pacific Ring of Fire, Indonesia is vulnerable to disasters and climate change.** According to the Indonesia Disaster Database (DIBI) (2024), over 20,000 disasters occurred in Indonesia between 2020 and 2024. The majority of these were water-related disasters, including floods, landslides, extreme weather events, droughts and peat fires. These incidents have led to significant fatalities, losses and damages, posing a serious threat to the country's development efforts aimed at achieving its Sustainable Development Goals.

Figure 1 illustrates the consolidated disaster events by type from 2005 to 2024, and the percentage of losses and damages incurred. The economic loss due to disaster risks is estimated at Rp22.8 trillion (US\$ 1.4 billion) per year, while fatalities in the last decade reached over 9000 people (Government of Indonesia, 2025). Floods were the most frequent and responsible for the highest number of fatalities and infrastructure damages after earthquakes. Floods displaced people more than other disasters combined within this period. Most metropolitan and large cities in Indonesia have experienced floods during heavy rainfall. Some examples include the 2007, 2013 and 2020 Jakarta and Greater Jakarta floods, the 2021 South Kalimantan flood that affected multiple cities, the 2022 Jayapura flood, the 2023 West Sumatra floods that affected multiple districts, and the 2023 flood in Makassar.

Flooding is just one significant disaster linked to climate change, environmental degradation, and poor land-use governance. People living in cities and urban areas are also vulnerable to the effects of urban heat and climate externalities, such as air and water pollution, as well as waterborne and airborne diseases. Additionally, climate change poses a threat to food security for the urban population by impacting the agricultural sector. Furthermore, urban populations residing on small islands and coastal areas are particularly susceptible to cyclones and rising sea levels. According to Climate Central data, approximately 23 million coastal residents are projected to face annual coastal flooding by 2050 due to sea level rise (Government of Indonesia, 2025).

**Figure 1.1 Percentage of disaster events from 2005-2024 by type (left). Percentage of losses and damages caused by disaster 2005-2024 (right).**



**Source:** ESCAP calculations, based on data from Indonesia Disaster Database (DIBI), “Disaster Statistics by Type”, 2024. Available at [https://dibi.bnppb.go.id/statistik\\_menuurut\\_bencana](https://dibi.bnppb.go.id/statistik_menuurut_bencana) (accessed on 8 January 2025) (translated from Indonesian).

Almost 60 per cent of the population of Indonesia lives in urban areas, and this proportion is expected to rise as cities offer better opportunities. The World Bank has projected that by 2045 more than 70 per cent of its population will live in urban areas (Roberts, Sanders and Tiwari, 2019). The same report reveals that although urbanization in Indonesia has led to prosperity, it has not however reached its full potential, and while economic growth has lifted many people out of poverty, inequality remains high, in particular in the multi-district metropolitan areas of the country (Roberts, Sanders and Tiwari, 2019).

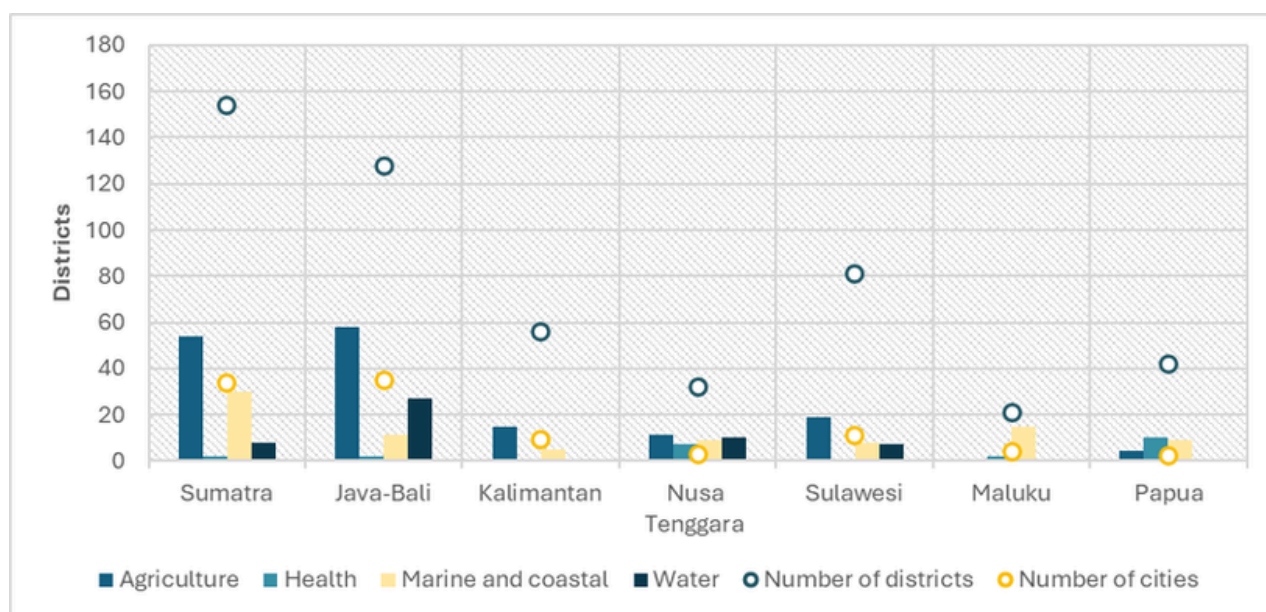
Disasters, including those related to climate change, disproportionately impact the most vulnerable populations. In urban settings, individuals living in poor living conditions, blue-collar workers, people with disabilities, the elderly, women and children are among the groups whose vulnerability increases when disasters strike.

Indonesia prioritizes its climate resilience strategies around four main sectors that are significantly impacted by climate change: marine and coastal, water, agriculture and health. In 2021, the Ministry of National Development Planning (Bappenas) released a list of priority interventions for climate resilience in these sectors. These interventions are categorized as ‘super priority’, ‘top priority’ and ‘priority’. The criteria for these categorizations include climate projections, potential hazards, vulnerability index, disaster ratio index, potential economic losses, recommendations from line ministries and validation from the field (Bappenas, 2021).

Java-Bali has the highest number of total districts with super priority, top priority and priority status, followed by Sumatra, Sulawesi, Nusa Tenggara, Kalimantan, Papua and Maluku. According to a World Bank report (2018), in 2016, 60 per cent of the population in the Java-Bali region lived in urban areas, followed by Kalimantan (43.6 per cent), Sumatra (40.2 per cent), Sulawesi (35 per cent), Nusa Tenggara (31.6 per cent) and Maluku-Papua

(31.3 per cent). Java-Bali accounted for the largest urban population percentage nationally at 68.9 per cent, with Sumatra following (World Bank, 2018). As more people will live in urban areas, strengthening the adaptation capacity of the urban population with equal access to basic services, resilient infrastructures and robust early warning systems needs to be prioritized in the country's urbanization strategies. This approach will help minimize future losses and damages from disasters, including those related to climate change.

**Figure 1.2 Number of climate resilient districts with 'super priority status' by sector and region in relation to number of districts and cities.**



**Source:** ESCAP, based on Bappenas, "List of Priority Locations and Climate Resilience Actions", 2021. Available at [https://lcdi-indonesia.id/wp-content/uploads/2021/11/1\\_List-of-Priority-Locations-Climate-Resilience-Actions.pdf](https://lcdi-indonesia.id/wp-content/uploads/2021/11/1_List-of-Priority-Locations-Climate-Resilience-Actions.pdf). For the number of districts and cities, see BPS-Statistics Indonesia, "Statistical Yearbook of Indonesia, 2021. Available at <https://www.bps.go.id/en/publication/2021/02/26/938316574c78772f27e9b477/statistical-year-book-of-indonesia-2021.html>.

**Note:** Urban/non-urban are segregated at the village level and districts are divided into regencies and cities; thus the number of cities does not represent the national share of urban areas.

**Although low in per capita GHG emissions, Indonesia is among the Asia-Pacific countries with the highest cumulative GHG emissions.** Home to more than 270 million people, the country emitted 1.2 Gt CO<sub>2</sub>eq GHG in 2022 (without land use, land-use change and forestry), accounting for 2.3 per cent of global emissions (Crippa and others, 2023). This share places the country as the third largest emitter in the Asia and Pacific region, after China and India, and slightly above Japan. Per capita emissions increase but remain below the global average (6.762 t CO<sub>2</sub>eq in 2022). With a strong commitment to reduce its GHG emissions, the country enhanced its NDC target in 2022 to 31.89 per cent with domestic sources and 43.20 per cent with international support (Government of Indonesia, 2022).

**Table 1.1 Greenhouse gas emissions profile for Indonesia.**

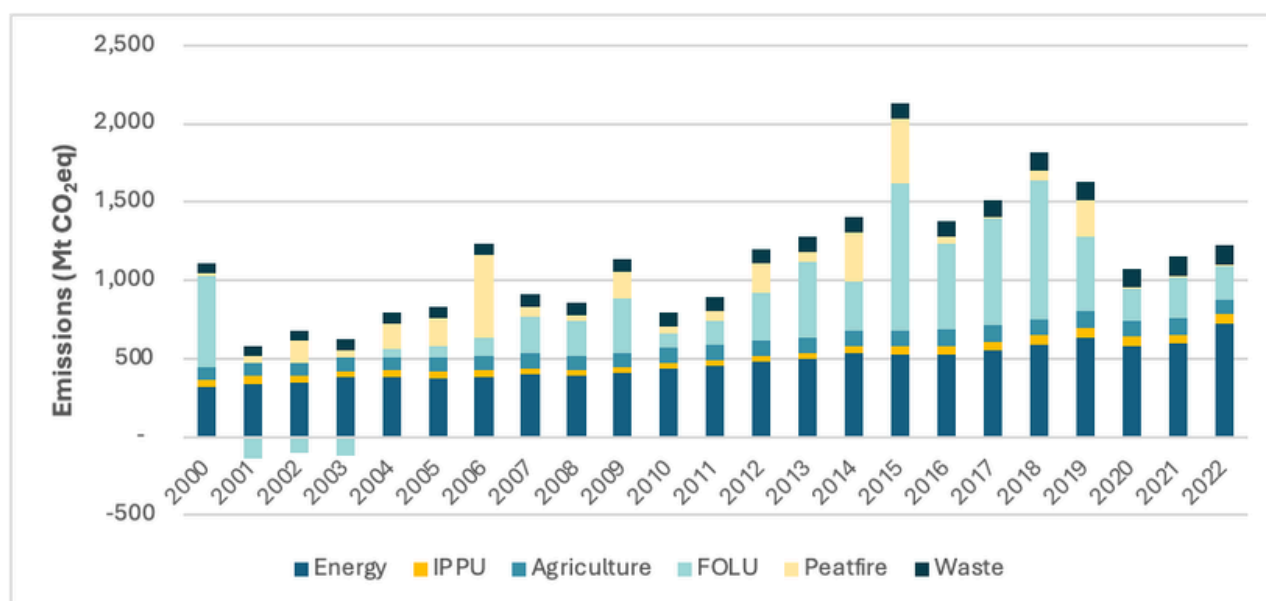
| Year | GHG emissions (Mt CO <sub>2</sub> eq) | GHG emissions per capita (t CO <sub>2</sub> eq) | GHG emissions per unit of GDP PPP (t CO <sub>2</sub> eq/k\$) | Population (millions) |
|------|---------------------------------------|-------------------------------------------------|--------------------------------------------------------------|-----------------------|
| 2022 | 1,240.833                             | 4.473                                           | 0.363                                                        | 277.425               |
| 2015 | 961.407                               | 3.724                                           | 0.367                                                        | 258.162               |
| 2005 | 694.314                               | 3.063                                           | 0.458                                                        | 226.713               |

**Source:** ESCAP, based on Crippa, M., and others, “GHG emissions of all world countries” (Luxemburg: Publications Office of the European Union, 2023). Available at [https://edgar.jrc.ec.europa.eu/report\\_2024](https://edgar.jrc.ec.europa.eu/report_2024).

**Note:** PPP = purchasing power parity. t CO<sub>2</sub>eq/k\$= tons of carbon dioxide equivalent per thousand US dollars.

The Ministry of Environment and Forestry conducts the GHG emissions inventories annually. According to the latest report, the two primary sectors that contributed significantly to GHG emissions from 2000-2022 were energy and forest and other land use (FOLU). Emissions from FOLU and peat fire fluctuated throughout the year and decreased in the past years. Emissions from energy exhibited a positive trend; though the number reduced between 2020-2021 due to COVID-19 measures, it exceeded the 2019 emissions in 2022, which was recorded as the highest (727.3 Mt CO<sub>2</sub>eq). The main contributors within the energy sector, between 2000-2022, were electricity generation, manufacturing and transportation (Indonesia, Ministry of Environment and Forestry, 2024).

**Figure 1.3 Greenhouse gas emissions profile for Indonesia, 2000-2022 in Mt CO<sub>2</sub>eq.**



**Source:** ESCAP, based on data from the Indonesian Ministry of Environment and Forestry, “Greenhouse Gas (GHG) Inventory Report and Monitoring, Reporting and Verification (MRV) 2023”, 2024. Jakarta.

According to EDGAR data, the power industry, industrial combustion and process, and transportation sectors were the three sectors that exhibited the highest changes between 1990 to 2023 (more than 300 per cent change), while emissions from buildings reduced by 7 per cent in the same time period, as shown in table 2 (Crippa and others, 2023). The trend remained consistent between 2005 to 2023, with the power industry, fuel exploitation and transport – all key components of the energy sector – contributing the most significant changes to support economic growth. In addition to land-use change, the energy sector is a priority for GHG emissions reduction, and urban areas play a significant role in this agenda.

**Table 1.2 Periodic changes in greenhouse gas emissions by sectors in Indonesia.**

| Year                              | 2023 versus 1990 | 2023 versus 2005 | 2023 versus 2022 |
|-----------------------------------|------------------|------------------|------------------|
| Power industry                    | > +300%          | +192%            | +6%              |
| Industrial combustion and process | > +300%          | +74%             | 0%               |
| Buildings                         | -7%              | -43%             | 0%               |
| Transport                         | > +300%          | +113%            | +1%              |
| Fuel exploitation                 | +248%            | +172%            | +11%             |
| Agriculture                       | +21%             | +16%             | 0%               |
| Waste                             | +181%            | +52%             | +1%              |
| All sectors                       | +202%            | +85%             | -4%              |

**Source:** Source: Crippa, M., and others, “GHG emissions of all world countries” (Luxemburg: Publications Office of the European Union, 2023). Available at [https://edgar.jrc.ec.europa.eu/report\\_2024](https://edgar.jrc.ec.europa.eu/report_2024).

**Note:** Sector definition: Power industry (power and heat generation plants (public & auto producers); Industrial combustion and process (combustion for industrial manufacturing and industrial processes); Buildings (small-scale non-industrial stationary combustion); Transport (mobile combustion); Fuel exploitation (production, transformation and refining of fuels); Agriculture (agricultural soils, crop residues burning, enteric fermentation, manure management, indirect N<sub>2</sub>O emissions from agriculture); Waste (solid waste disposal and wastewater treatment).

**Climate finance is crucial for Indonesia to reach its various climate targets, with subnational governments playing a key role in this process.** Subnational governments stand at the forefront of combating climate change as they bear significant responsibility for implementing policies that enhance the population’s capacity to adapt to potential climate impacts and minimize GHG emissions from daily activities. However, their capacities vary due to several factors including limited financing and human resources, and lack of knowledge for decision-making and administrative jurisdiction.

Estimating climate adaptation needs is challenging, but globally, cities require approximately \$4.3 trillion annually from 2024 until 2030 and over \$6 trillion from 2031 to

2050 for mitigation alone (Press-Williams and others, 2024). The Indonesian Government has estimated that the financing needed to meet its original NDCs will be approximately \$285 billion from 2018-2030 (Government of Indonesia, 2021a). This amount was considered conservative and needs to be updated in light of the enhanced NDC.

Globally, despite the pledges of developed countries in climate finance, the gaps remain significant (ESCAP and UNEP, 2024). Key challenges include insufficient financial flows, underfunded areas and low scale of innovative financing solutions.

**Creating the right enabling conditions at the national level can increase subnational funds for climate action.** Enabling framework conditions (EFCs) are essential for scaling subnational climate finance by strengthening local institutional capacity, mitigating investment risks and promoting stakeholder engagement. Assessing the national institutional and regulatory landscapes of countries can yield valuable insights into boosting their readiness and capacity to attract and effectively use subnational climate finance. A comprehensive understanding of enabling conditions can facilitate the design of tailored and innovative financing mechanisms, including those for incentivizing private-sector engagement.

**In light of these challenges, Urban-Act and the Cities Climate Finance Leadership Alliance (CCFLA) have assessed the national EFCs for Indonesia for subnational climate finance.** This work is part of the Urban-Act project, which aims to strengthen EFCs for collaborative climate action and the capacities of cities to engage in climate dialogue and action in five Urban-Act countries (China, India, Indonesia, the Philippines and Thailand). Together with Urban-Act, CCFLA has developed a National Assessment Tool for national government officials and other stakeholders to evaluate national-level EFCs to mobilize subnational climate finance. This tool focuses on four categories: (i) Climate policy, (ii) Budget and finance, (iii) Climate data, and (iv) Horizontal and vertical coordination. It aims to support national government officials and other stakeholders in identifying potential national EFC gaps and opportunities and to mobilize subnational climate finance in Indonesia.

**The discussion in this report is organized as follows:**

1. **Chapter 1: The Introduction** presents an overview of the current state of climate change in Indonesia, including climate vulnerabilities, greenhouse gas inventories, national targets, urban-related issues and the assessment framework.
2. **Chapter 2: Financing for Urban Climate Action** discusses development financing sources at the subnational level and potential sources for funding climate action.
3. **Chapter 3: Findings of the National Assessment Tool** presents assessment results on climate policy, budget and finance, climate data, as well as vertical and horizontal coordination.

4. **Chapter 4: Conclusions and Recommendations** provides a summary of the findings and offers recommendations based on the analysis presented in chapters 1-3.
5. **The Appendices** include detailed information about the assessment tool, the institutions responsible for implementing climate action at both the national and subnational levels, a list of regulations referenced in this assessment and those relevant to climate-related activities at subnational levels, a compilation of potential funding sources for subnational climate initiatives, and climate data reporting and analytical digital platforms.

## 1.2 Objectives

This national assessment aims to:

- Consolidate information on the efforts of Indonesia to mobilize finance to support action in strengthening adaptive capacity and reducing greenhouse gas emissions.
- Gather insights on the current national enabling conditions to mobilize finance for climate action, focusing on policy, budget and finance, data and intergovernmental relationships.
- Identify the strengths and opportunities in the current enabling conditions and provide recommendations based on the analysis of the current state of climate action, climate urgency and the enabling conditions.

## 1.3 Assessment tool and methodology

The assessment uses the National Assessment Tool, developed by CCFLA and the Urban-Act.<sup>1</sup> The Tool is divided into four categories, each with several subcategories. Subcategories were then divided into 64 detail dimensions to provide concrete parameters for assessment. The outline of the Tool is as follows:

1. **Climate policy:** Assess how the national government supports climate policy and planning processes for subnational governments within the country. Identify if there is a long-term national climate strategy in place that has been recently updated to provide a clear pathway to achieve subnational climate targets.
2. **Budget and finance:** Assess the country's national and subnational financial architecture to provide an explicit, clear and stable assignment of expenditures and responsibilities and to put in place incentives for subnational fiscal autonomy.

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<sup>1</sup> The CCFLA/Urban-Act National and Subnational Assessment Tool builds on the 2021 approach developed by CCFLA and the Penn Institute for Urban Research, University of Pennsylvania, which aims to assess national EFCs and intergovernmental relationships to finance urban climate projects. Further description of the tools including the references is available in Appendix 1 and <https://www.unescap.org/kp/2024/assessing-national-enabling-framework-conditions-urban-climate-finance-tool-and-guide-ccfla>

3. **Climate data:** Assess the available mitigation and adaptation planning from national to local levels and how well data and analysis are incorporated into planning and strategy. Assess how the national government can support subnational governments to better access good quality climate data and use that in their climate policy and planning.
4. **Vertical and horizontal coordination:** Assess how the national government can work in cooperation with subnational governments to develop stronger climate policy and planning coordination both horizontally (across urban systems, processes and planning), and vertically (from local to national levels).

**Figure 1.4. The Assessment Framework.**

| CLIMATE POLICY                                                                                                                                                                                                                                      | BUDGET AND FINANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | CLIMATE DATA                                                                                                                                                                                                           | VERTICAL & HORIZONTAL COORDINATION                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. National climate change policies</li> <li>2. National regulations for subnational climate policies</li> <li>3. National requirements for involving subnational governments in climate planning</li> </ol> | <ol style="list-style-type: none"> <li>1. Public financing and national budget</li> <li>2. National funding sources for subnational climate action</li> <li>3. National support for subnational budgeting</li> <li>4. Systems of intergovernmental transfers</li> <li>5. Fiscal decentralization and subnational revenue generation</li> <li>6. Private finance mobilization at the subnational level</li> <li>7. Subnational creditworthiness and access to capital</li> <li>8. Potential for co-financing and/or innovative financing</li> </ol> | <ol style="list-style-type: none"> <li>1. National-level climate data</li> <li>2. National support for subnational climate data (data quality, data availability and incorporation into planning processes)</li> </ol> | <ol style="list-style-type: none"> <li>1. National support for subnational vertical and horizontal coordination</li> <li>2. Public involvement and subnational stakeholder engagement</li> <li>3. National external engagement and peer learning</li> </ol> |
| 14 Details                                                                                                                                                                                                                                          | 34 Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6 Details                                                                                                                                                                                                              | 9 Details                                                                                                                                                                                                                                                   |

The assessment involved an extensive document review, data collection and analysis, interviews and two roundtable discussions involving multiple stakeholders from national and subnational governments, financiers and development partners. The recommendations are drawn by linking the assessments findings, as described in chapter 3, with the current state of subnational climate finance in Indonesia discussed in chapters 1 and 2, with a particular focus on the urban context.

## 2. Financing for urban climate action

**The ratification of the Paris Agreement into law by Indonesia, in 2016, strengthened the foundation of its commitment to actively address the impacts of climate change.** This commitment has led to increased access to international resources, including financing. The ambition for net-zero emissions is also reflected in its updated NDC emissions reduction target, 31.89 per cent unconditionally and 43.20 per cent conditionally with international support (Government of Indonesia, 2022). Energy and forest and other land-use changes (FOLU) sectors have more ambitious targets than the other sectors.

The Long-Term Strategy for Low Carbon and Climate Resilience (LTS-LCCR) 2050 also set an ambitious target for Indonesia to tackle climate change by achieving net-zero emissions by 2060 or sooner, with expected emissions to peak in 2030 (Government of Indonesia, 2021b). The peak emissions are projected to be 1,244 Mt CO<sub>2</sub>eq, decreasing to 540 Mt CO<sub>2</sub>eq by 2050.

**Over the past 20 years, climate change has received increasing attention in each medium-term development plan, evolving from being recognized as a potential threat to the country's development to becoming a key priority.** The latest National/Subnational Medium-Term Development Plan (RPJMN) 2025-2029 includes objectives aimed at protecting the environment and enhancing resilience to disasters and climate change as one of the eight key national priorities. Both objectives are measured by the increase in the Environmental Quality Index to 77.20 in 2029 (as of 2023, the national Environmental Quality Index was 72.54, which is above 2024 targets). Several programmes that have been supporting this achievement at the subnational level include *langit biru* (blue sky to improve air quality by controlling vehicle emissions), *kali bersih* (clean river to restore and preserve river water quality), *Indonesia hijau* (green Indonesia to promote reforestation and land cover conservation), *gambut Lestari* (sustainable peatland to prevent fires and preserve carbon reserves) and *pantai lestari* (sustainable coast to conserve coastal and marine ecosystems); the reduction of potential GDP loss due to disasters and climate hazards by 0.137 per cent by 2025 and 0.135 per cent by 2029 from the baseline of 0.140 in 2022; the reduction of GHG emissions by 45.17 per cent by 2029 from the 2022 baseline year. Although these targets are not disaggregated to urban/non-urban areas, the development plan recognizes challenges related to urbanization, such as housing, transportation, air quality, environmental degradation, climate change and disaster management, and infrastructure deficiency.

The RPJMN also recognizes urban areas as centres for economic growth, along with green and blue economic development as strategic innovation priorities for 2025-2029. The aim is to increase the proportion of urban GDP within national GDP to 57.29 per cent by 2025 and 59.25 per cent by 2029, from the baseline of 56.56, in 2022, by prioritizing development in 50 urban areas. This includes 10 metropolitan areas, which

focus on strengthening: (i) transport and connectivity; (ii) urban planning to revitalize informal settlements and public housing; (iii) disaster resilience and climate change adaptation such as urban flood management and nature-based solutions; (iv) urbanization and urban-rural cooperation; and (v) multistakeholder cooperation and innovative financing. The remaining 40 urban areas are to focus on (i) spatial planning and mobility; (ii) basic services and infrastructure, including waste and water management; (iii) air quality improvement through open spaces; and (iv) education and workforce (Government of Indonesia, 2025).

To mainstream this development, the following frameworks are detailed in the RPJMN Plan and integrated into all governmental policies, programmes and activities (national and subnational levels), as well as into other development initiatives that are carried out by non-state actors.

1. Gender and social inclusion: Gender-responsive and inclusive policies/programmes/activities in all areas of development (planning, budgeting, implementation, monitoring, evaluation, oversight and reporting) at both national and subnational levels.
2. Sustainable Development Goals (SDGs): Including integration of SDGs to subnational medium-term development plans (RPJMD) as well as local action plans (RAD).
3. Digital transformation: Although the RPJMN Plan does not specifically mention climate-related data, there is emphasis on enhancing data ecosystems, quality and accessibility with multistakeholder involvement.
4. Low carbon development: Efforts to reduce greenhouse gas emissions focus on transforming key sectors such as energy, transportation, industry, agriculture and waste management. These include promoting clean energy, sustainable transport, low-carbon farming and better waste practices. Additionally, protecting forests, enhancing blue carbon ecosystems and strengthening governance are crucial for increasing carbon storage and achieving climate goals.
5. Climate-resilient development: Prioritizes efforts in four sectors (marine and coastal, water, agriculture and health) to ensure a percentage decrease in the potential economic losses due to climate change on GDP with increased climate resilience.

**Table 2.1 High-level climate targets.**

| Reference documents | Mitigation                                                                             | Adaptation                                                                                         |
|---------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| RPJPN 2025-2045     | Reduction of GHG emissions by 93.5% in 2045 from 2025 baseline.                        | The Environmental Quality Index increased from 76.49 to 83 in 2045.                                |
| RPJMN 2025-2029     | Reduction of GHG emissions from 34.09% in 2022 to 35.53% by 2025 and 45.17% by 2029.   | The Environmental Quality Index increased from 72.54 in 2023 to 76.49 in 2025 and 77.20 by 2029.   |
| Enhanced NDC        | Reduction of GHG emissions by 31.89% unconditionally and 43.20% conditionally in 2030. | Enhance adaptive capacity, reduce vulnerability and strengthen resilience against climate impacts. |
| LTS-LCCR 2050       | Peak national GHG emissions by 2030 and achieve net-zero emissions by 2060.            | Reduce the potential impact of climate change on national GDP loss by 3.45% by 2050.               |

**The most recent long-term development plan (2025-2045), places greater emphasis on climate change.** The reduction of GHG emissions intensity toward net zero is part of the primary target of the Golden Indonesia (Indonesia Emas) 2045 vision. The target is to be measured by a 93.5 per cent reduction in GHG emissions intensity by 2045 and the increase in the Environmental Quality Index from 74.49 to 83 by 2045. The vision is based on the development agenda, which includes implementing a green economy; promoting a quality environment; building resilience in energy, water and food systems; and enhancing climate and disaster resilience.

**Climate action in Indonesia is implemented through a sectoral and geographical approach,** through focus sectors which include energy; industrial processes and product use (IPPU); agriculture, forestry and other land use (FOLU); waste; marine and coastal; water; agriculture; and health. Climate-related activities are embedded into relevant institutions at national and subnational levels. At the national level, various line ministries are responsible for implementing climate action (see Appendix 2). Similar institutions exist at the subnational level, with some work scope modifications and adjustments to the local context. Respective institutions allocate budgets for activities in line with their roles and responsibilities that must be aligned with national and subnational priorities, whether through annual or five-year plans. Therefore, the budget for climate action at the national or subnational level depends on broader and overarching plans and policies.

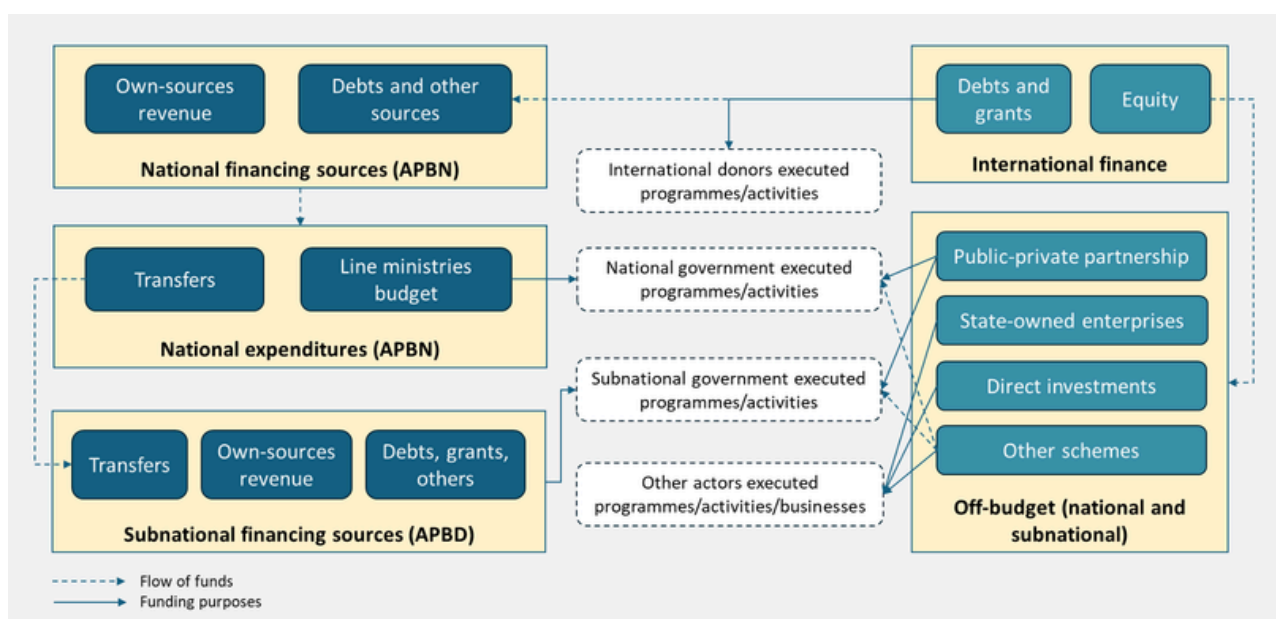
The geographical approach is particularly used to mitigate land-based emissions and improve ecosystem-based services. Bappenas has also developed a climate-resilient action plan in priority sectors, with indicators including those on climate projection and potential hazards. These priority locations inform line ministries in allocating budgets for national programmes/activities relevant to the specific sectors.

In addition to the top-down approach, Indonesia also employs a bottoms-up approach that encourages community participation in decision-making to enhance their capacity

and contribute to emissions reduction. This approach is implemented through initiatives such as the Climate Village programme and Disaster Resilient Village programme, which mainstream climate and disaster resilience as well as promote low carbon development at the village level as the smallest administrative function.

**Urban climate finance encompasses all financial resources directed towards cities and urban areas to enhance their capacity for climate change adaptation and mitigation.** In Indonesia, there is no distinction between urban and non-urban climate action or finance. Therefore, this assessment often considers subnational climate action and finance as the primary context for discussion with more attention to activities relevant to urban issues.

**Figure 2.1 The flow of development finance in Indonesia.**



**Source:** ESCAP.

Funding for activities to combat climate change in Indonesia comes from public and private sources, both domestic and international. Domestic public finance is primarily included in the national budget, which is either managed directly by line ministries/agencies or transferred to subnational governments. This financing accompanies own-source revenues, generated from other forms of revenue generation activities and financing at the subnational level. International public finance, be it debts or grants, needs approval from and must be channelled through the national government. Private finance and other sources of revenue can be mobilized through direct investment, public-private partnerships, corporate social responsibility, amongst others.

## 2.1.National government budget

The national budget can fund climate-related activities at the subnational level through transfers, programmes and activities managed by line ministries. These transfers come in various forms including general allocation fund, specific allocation fund, profit-sharing fund, village fund, special autonomy, and privilege funds. Transfers are based on several criteria, such as (but not limited to) the fiscal capacity for general allocation funds, the generated revenue for profit-sharing funds and other technical criteria for specific allocation funds.

The budget of line ministries funds national priority programmes at the subnational level, mainly for large-scale infrastructure projects and activities. To mobilize this kind of fund, subnational governments must prepare a proposal elaborating the needs and the readiness to support the implementation of these projects and activities, specifically aligning the proposal with the eligibility criteria determined by the relevant line ministries. Some examples of this fund are the Climate Village Program, Housing Improvement Program, Mass Transit Program, Renewable Energy Program, Flood Mitigation Program, Slum Upgrading Program, etc. Budget allocation for both national and subnational sources must receive approval from the Parliament at both levels of government.

Since 2016, six ministries have voluntarily tagged their budget expenditure for climate-related activities, beginning with mitigation action. These ministries include the Ministry of Agriculture, the Ministry of Environment and Forestry, the Ministry of Public Works and Housing, the Ministry of Energy and Mineral Resources, the Ministry of Transport, and the Ministry of Industry. Since 2018, national climate budget tagging (CBT) has been integrated into the national planning and budgeting system known as KRISNA (a collaborative platform for planning and budget performance information system) allowing tagging for adaptation action and the participation of more line ministries.

Cumulatively, between 2018 and 2020, around 4.3 per cent of the budget of participating line ministries, or around \$6.3 billion annually (at 2024 exchange rates), was allocated to funding activities that aimed to combat climate change (Indonesia, Ministry of Finance, Fiscal Policy Agency, 2020). The percentage remains at 4 per cent in 2021 with 13 participating line ministries/agencies and 81.38 per cent of the climate budget was allocated for capital expenditure (Indonesia, Ministry of Finance, Fiscal Policy Agency, 2023d). Although the amount is conservative considering not all relevant ministries/agencies participated, it is far below what the country needs to meet its NDC targets in 2030. According to the Medium-Term Development Plan (RPJMN) 2025-2029, 4.41-5.49 per cent of GDP is to be transferred to the subnational level (Government of Indonesia, 2025).

## 2.2.Subnational government budget

The budget of subnational governments is derived from various sources, including their own revenue, intergovernmental transfers, financing and other incomes. Own-source revenue encompasses taxes, fees and income from various economic activities. Intergovernmental transfers come from national and provincial budgets. Other sources can include grants and regulated revenues, and financing includes loans and financing surplus amongst others. The relationship between national and subnational financing is governed by the Law on the Relationship of National and Subnational Financing (HKPD) issued in 2022.

Subnational governments can generate revenue from taxes, retribution and economic activities permitted by HKPD Law. Provincial governments can collect the following taxes and levies, motor vehicle taxes, transfer of ownership for motor vehicles, fuel for motor vehicles, surface water taxes and cigarette taxes. Meanwhile, district governments can collect more variation of taxes including hotel and restaurant, entertainment, advertisement, parking, land and building, to name a few. However, only vehicle taxes that have specific earmarking purposes are used for environmental-related spending.

Efforts to increase tax revenue at the subnational level include (i) accelerating and expanding digitalization of local governments and particularly digitizing local government transactions, and (ii) strengthening human resources and institutions (Government of Indonesia, 2025). Other own-source revenue include proceeds from undivided regional assets sales, revenue from the utilization of non-separate regional wealth, interest income, damage claims, etc.

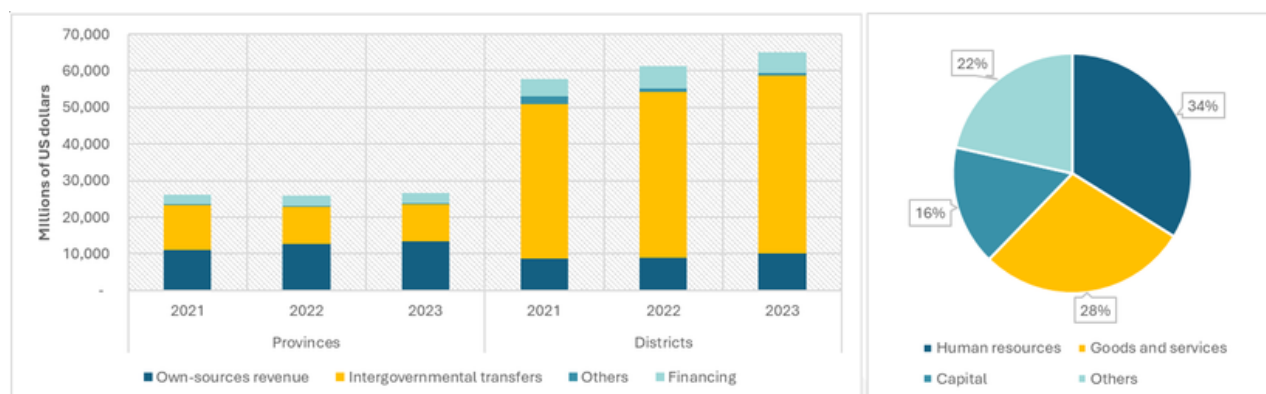
Intergovernmental transfers are funds allocated and channelled from higher-level government budgets, such as national or provincial, to finance expenditures at lower levels of government. Existing national government transfers that may fund climate-related activities include the General Allocation Funds (*Dana Alokasi Umum* (DAU)), Specific Allocation Funds (*Dana Alokasi Khusus* (DAK)), Revenue-Sharing Funds (*Dana Bagi Hasil* (DBH)), Village Funds, and Specific Autonomy Funds (limited to a few subnational governments). These funds are described in detail in Appendix 4.

Other potential sources of subnational budget can include grants and other incomes permitted by the Law. Financing includes all income that needs to be repaid and/or expenditures that need to be recovered within the same year or in the future. This includes financing surplus from the previous year, reserve fund disbursement, revenue from the sale of subnational assets, debts, debt returns and other financing returns regulated under the Law.

Despite the fiscal decentralization policy that allows subnational governments to diversify their incomes, the majority of subnational governments have low own-source revenue generation abilities and depend heavily on fiscal transfers from the higher level of governments, as shown in figure 2.1. District governments receive a bigger portion of

transfers than provinces as they can access funds both from national and provincial governments. Subnational debts accounted only for a tiny portion of subnational revenue.

**Figure 2.2 Subnational financing by source 2021-2023 (left) and subnational expenditure by type 2022-2023 (right).**



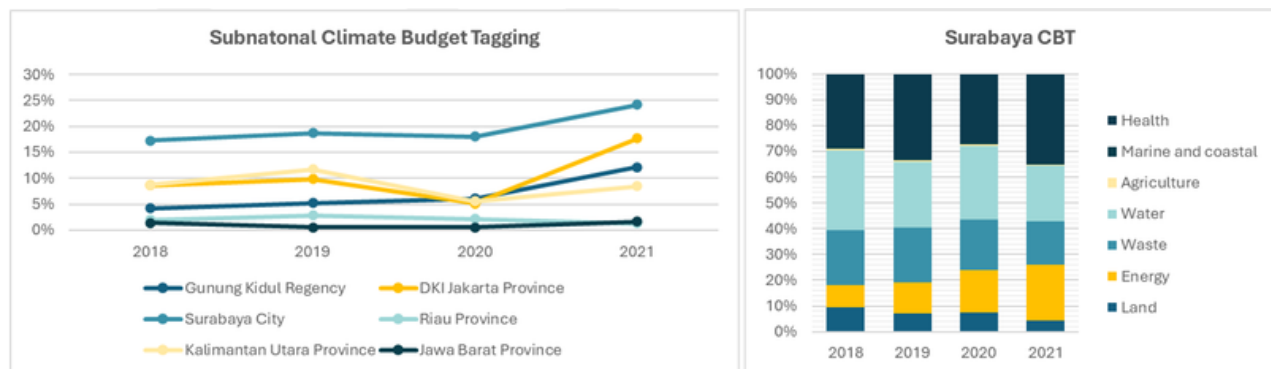
**Source:** ESCAP, based on data from the Indonesian Ministry of Finance, Directorate General of Fiscal Balance, n.d. Available at <https://djpk.kemenkeu.go.id/?p=5412> (accessed on 3 January 2025).

**Note:** The amount is denoted using the average 2023 exchange rate.

From the expenditure side, in 2022-2023, only 16 per cent of the budget was used for capital expenditures, and about one-third of the revenue was used for human resources including salaries. These expenditures covered health, education, housing and public facilities, social protection, environmental protection, tourism, security and general services. Mandatory spending applies to the first two sectors.

At the subnational level, CBT is conducted manually and on an ad-hoc basis as the digital planning and budgeting systems do not tag climate-related activities. The Ministry of Finance, with support from the development partners, has assisted several subnational governments at provincial or district levels in tagging their budget allocations. The rate ranges from less than 1 per cent to nearly 25 per cent. Figure 2.2 displays the CBT trend of several subnational governments, between 2018 to 2021, covering priority sectors: land, energy, waste, water, agriculture, marine and coastal, and health. Verifying the numbers or evaluating the understanding of the participating subnational governments about climate-related activities in conducting CBT is beyond the scope of this report.

**Figure 2.3 Percentage of climate budget tagging of several subnational governments 2018-2021 (left) and the portion of budget expenditure in climate priority sector in Surabaya (2018-2021) (right).**



The city of Surabaya, Indonesia, allocated more of its budget toward climate-related activities than other subnational governments in the sample used for this report. The Agency for Sanitation and Green Open Spaces allocated the highest budget for climate-related activities followed by the Agency for Public Works (Indonesia, Ministry of Finance, Fiscal Policy Agency, 2023g). This is followed by the Agency for Roads, Bridges and Drainage; the Agency for Housing, Human Settlements and Spatial Planning; the Agency for Transportation; Health; Education; and Food Estate and Agriculture. Surabaya is prominent for its effort to create clean and green cities through city and neighbourhood parks, urban forests, and green corridors. Efforts in promoting green open spaces proved successful as evidenced by the numerous awards received by the city and the resulting reduction in average temperatures (Tempo, 2023).

## 2.3. Private finance and other financing sources

Private finance and other financing sources include direct investments, guarantees, syndicated and credit loans, public-private partnerships, and those from corporate social responsibilities, international financing sources, civil society organizations, etc. Their contribution is crucial as the domestic public budget is limited, risking financial sustainability.

Private involvement in climate finance mainly targets low-risk projects and is particularly short in adaptation-related activities. According to the OECD (2023), economic and financial barriers that hinder private sector investment in adaptation include the difficulty of pricing climate risks, challenges of quantifying non-financial benefits, and lack of policies and regulations to internalize adaptation benefits. A study by the Fiscal Policy Agency mentions several available instruments for private sector involvement to attract climate change adaptation in Indonesia which include debts (microloans, corporate loans, public-private partnerships, or green bonds); business conduct (corporate social responsibility, business continuity plan, or corporate share value); and derisking instruments, which include insurance and grants (Indonesia, Ministry of Finance, Fiscal Policy Agency, 2020).

Public-private partnerships (PPP) are another mechanism that can involve private finance to deliver public services by sharing the risks and rewards. One form of PPP in Indonesia is known as KPBU or cooperation between governments and business entities. Of the 35 KPBU projects listed on the MoF website,<sup>2</sup> nearly half are proposed by subnational governments; however, their total value accounts for only one-fifth of the projects proposed by the national government, with most still in the preparation stage. The list covers water, health, transportation and waste sectors. Five of these projects have successfully secured a total capital expenditure of around \$497 million, and four of them are currently in the operational stage, as shown in table 4.

**Table 2.2 On-going public-private partnership projects in Indonesia that are initiated by subnational governments.**

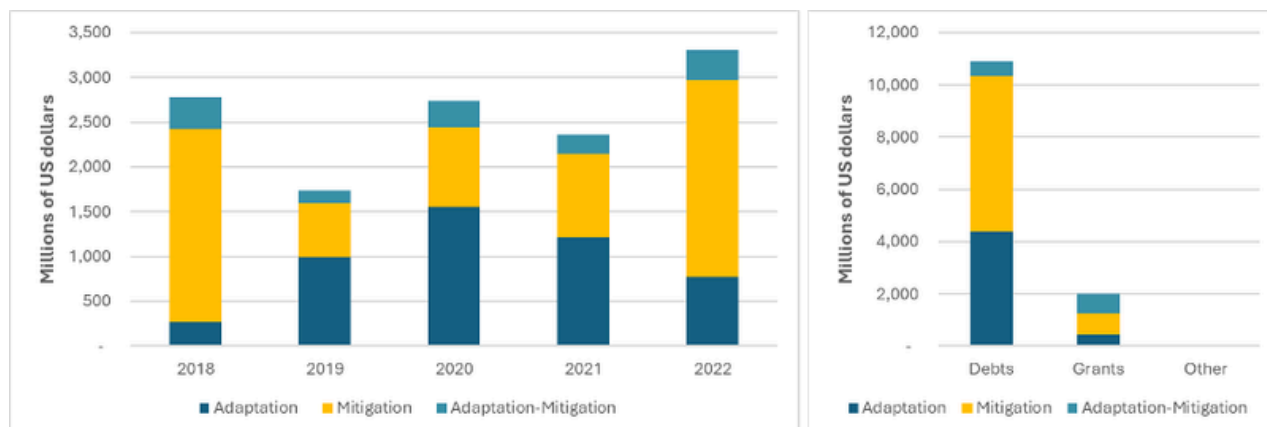
| Sector       | Location                    | Scope                                                                                                                  |
|--------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------|
| Water supply | Pasuruan, East Java         | Construction and operationalization of a water supply system and around 1.3 million house connections for 5 districts. |
| Water supply | Bandar Lampung, Lampung     | Construction and operationalization of a water supply system and around 60,000 house connections.                      |
| Water supply | West Semarang, Central Java | Construction and operationalization of a water supply system.                                                          |
| Water supply | Pekanbaru, Riau             | Rehabilitation and improvement of the existing reservoir, building part of the distribution network, and operations.   |

**Source:** Selected from Indonesia, Ministry of Finance, Government Cooperation with Business Entities, "Project List", n.d. Available at <https://kpbu.kemenkeu.go.id/proyek/proyeklist?sektor=-1&prov=-1&kota=-1&status=-1> (accessed on 5 January 2025).

International finance has also been mobilized to support Indonesia in achieving its climate targets. According to the OECD (n.d.), between 2018 to 2022, an average of \$2.6 billion annually was mobilized to finance climate-related activities, in the form of debts, grants, equity and other financial instruments. Cumulatively, over half of these commitments focus on mitigation but vary each year. The funds come from various international sources, Development Assistance Committee (DAC) member countries (48.9 per cent), multilateral development banks (45 per cent), other multilateral organizations (4.5 per cent), and the private sector (0.7 per cent). The funds are channelled through the national government, development partners, and other entities such as universities, non-governmental organizations, multilateral development banks, UN agencies and private sector organizations, amongst others.

<sup>2</sup> The list is available at Indonesia, Ministry of Finance, Government Cooperation with Business Entities, "Project List", n.d. Available at <https://kpbu.kemenkeu.go.id/proyek/proyeklist?sektor=-1&prov=-1&kota=-1&status=-1>

**Figure 2.4 International climate-related development finance (CRDF) by commitment for Indonesia (left). International climate-related development finance CRDF by financing mechanism (right).**



**Note:** Amounts are denoted in constant 2022 US dollar prices.

In addition to the regular budget, Indonesia has established several off-budget financing institutions for climate-related action, such as the Indonesia Environmental Fund (*Badan Pengelola Lingkungan Hidup* or *BPD LH*), SDGs Indonesia One (SIO), and the Indonesia Climate Change Trust Fund (ICCTF). The financiers manage funds from different sources including private, multilateral development banks, foreign countries and philanthropies. Several international climate or environment-related finance institutions also operate in Indonesia through national focal points, supporting projects that align with the country's vision to reduce greenhouse gas emissions and increase adaptation capacity to climate change such as the Green Climate Fund (GCF), Adaptation Fund (AF), and the Global Environmental Facility (GEF).

| Financiers                                                                                                                                                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indonesia Environmental Fund (Badan Pengelola Dana Lingkungan Hidup-BPDLH)<sup>3</sup></b>                                                                                      | Established in 2019, BPDLH is mandated to manage the environmental fund in forestry, energy, mineral resources carbon market, environmental services, industry, transportation, agriculture, marine and fisheries, and others. BPDLH manages funding from multiple sources including GEF, the World Bank, the State Budget, the Ford Foundation, UNDP, the Norwegian Embassy, and The Climate and Land Use Alliance.<br>Financing instruments: Grants and loans.                                                                                                                                                                                         |
| <b>SDG Indonesia One (SIO) by PT SMI<sup>4</sup></b>                                                                                                                               | Established in 2021 with support from the Asian Development Bank (ADB), the integrated funding collaboration platform aims to support infrastructure development that is in line with the efforts to attain the SDGs. It manages funds from multiple sources, such as private, philanthropic, donor agencies, bilateral and multilateral financial institutions, banking, insurance and occasionally other investors.<br>Facilities provided: Development facilities, derisking facilities, financing facilities and equity fund.                                                                                                                        |
| <b>Indonesia Climate Change Trust Fund (ICCTF) by Bappenas<sup>5</sup></b>                                                                                                         | Established in 2009, ICCTF is mandated to manage funds from multiple sources including the state budget to fund adaptation and mitigation efforts. ICCTF mainly manages small grants for sectors: land-based mitigation, adaptation and resilience, energy and marine-based activities. UNDP managed the fund until 2014 before it was handed over to Bappenas. Between 2010-2022, ICCTF managed 115 projects in 28 provinces, dominated by land-based mitigation, adaptation and resilience projects.                                                                                                                                                   |
| <b>Green Climate Fund (GCF)<sup>6</sup></b><br><br>National focal point:<br>Ministry of Finance<br>(Fiscal Policy Agency)<br><br>Current accredited entities: PT SMI and Kemitraan | GCF operates through accredited entities and delivery partners who work directly with developing countries for project design and implementation.<br>Financing instruments include concessional debt, guarantees, or equity instruments. At least half of adaptation resources must be invested in most climate-vulnerable countries.<br>According to the GCF Open Data Library, Indonesia is the second largest GCF recipient in the Asia-Pacific region after India, with 19 projects as part of multiple or single-country climate-related projects accounting for a total amount of \$624.6 million in projects that were and are being implemented. |
| <b>Adaptation Fund (AF)<sup>7</sup></b><br><br>Ministry of Environment and Forestry                                                                                                | Established in 2010, under the UNFCCC, the Adaptation Fund finances concrete adaptation projects and programmes in developing countries that are parties to the Kyoto Protocol and are particularly vulnerable to the adverse effects of climate change. It manages funds from countries and private entities.                                                                                                                                                                                                                                                                                                                                           |
| <b>Global Environmental Fund (GEF)<sup>8</sup></b><br><br>Ministry of Environment and Forestry                                                                                     | The GEF is a multilateral family of funds that focusses on addressing issues such as biodiversity loss, climate change and pollution, while also supporting land and ocean health. According to the GEF database, between 1991-2017, 84 projects were implemented in Indonesia as part of multiple and single-country projects through UN agencies, the World Bank and NGOs. Focus areas include biodiversity, climate change, land degradation, international waters, land degradation, chemical and waste.                                                                                                                                             |

<sup>3</sup> For more information, see <https://bpdh.kemenkeu.go.id/>

<sup>4</sup> For more information, see <https://www.ptsmi.co.id/sdg-indonesia-one>

<sup>5</sup> For more information, see <https://www.icctf.or.id/overviews/>

<sup>6</sup> For more information, see <https://www.greenclimate.fund/countries/indonesia>

<sup>7</sup> For more information, see <https://www.adaptation-fund.org/about/>

<sup>8</sup> For more information, see <https://www.thegef.org/who-we-are>

To enhance coordination among climate finance institutions in Indonesia, the Government of Indonesia has established the Climate Finance Focal Points Coordination Platform (CFFP).<sup>9</sup> Climate-related funding has been mobilized in the form of loans, grants, results-based payments, guarantees, and equity from climate finance focal points including BPD LH, GCF, SIO, GEF, ICCTF and AF. In descending order, the highest impacts of the fund are expected from agriculture, forest and other land use (AFOLU), disaster, energy, marine and coastal, IPPU, agriculture, water, health and waste. The funds have been distributed across multiple regions through broad or region-specific projects.

An example of the projects funded by the GEF is the Sustainable Cities Impact Program (SCIP) which is executed by Bappenas. This programme integrates biodiversity and climate-smart management into development planning and investment priorities, including exploration of innovative financing, using approaches that include urban shift, circular city, decarbonized city, resilient city and urban biodiversity. It targets five pilot cities in Indonesia including Bitung, Semarang, Balikpapan, Palembang and Jakarta.

In Pekalongan, a coastal city in Central Java, the Adaptation Fund supports the city in building resilience to disasters and climate change through the 3S approach (safekeeping, surviving and sustaining). As the largest financier, BPD LH funds multiple projects including Mangrove for Coastal Resilience, Global Risk Financing Facility and Solar Rooftop. The SDGs Indonesia One mostly funds projects on renewable energy, such as the project preparation for solar rooftop installation in multiple airports, biomass power plants and micro-hydro power plants.

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<sup>9</sup> For more information, visit <https://fiskal.kemenkeu.go.id/cffp/en/dashboard/>

## 3. Findings of the national assessment tool

As discussed in chapter 1, this assessment groups the findings across four categories: (i) Climate policy; (ii) Budget and finance; (iii) Climate data; and (iv) Vertical and horizontal coordination, thereby enabling the exploration of challenges and opportunities for mobilizing subnational climate finance. Each category is broken down into multiple dimensions; and explanations for each are provided in Appendix 2. This exercise involved desk research and discussions with stakeholders at national and subnational levels through workshops and interviews.

### 3.1 Climate policy

- *The commitment of Indonesia to combat climate change is becoming increasingly ambitious as reflected in stronger targets noted in the overarching national development plans.*
- *Synchronizing subnational target indicators, including climate-related targets with national indicators, has become imperative.*
- *Policies are mainly implemented using a sectoral approach and while most legally binding policy instruments do not explicitly mention climate benefits, they still contribute to combating climate change.*
- *Climate-related or any development targets are not segregated between urban and non-urban areas. However, Indonesia recognizes development challenges associated with urbanization.*
- *Monitoring and reporting mechanisms are in place, however there is no enforcement mechanism at any level of government if there are deviations from the targets.*
- *At the subnational level, various regulations serve as policy instruments for implementing climate action. While many may not explicitly mention climate benefits, these regulations could provide an umbrella for subnational governments to take action in combating climate change.*

**Table 3.1 Assessment results for climate policy in Indonesia.**

| Subcategory                                                          | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.1.1 National climate change policies</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>National mitigation and adaptation strategy</b>                   | <p>National mitigation and adaptation strategies are an integral part of the national development strategies in the medium and long-term development plans. The Medium-Term Development Plan (RPJMN) 2025-2029 includes objectives to strengthen the environment and improve resilience against disasters and climate change in its development priorities.<sup>10</sup> These objectives are to be measured by the increase in the Environmental Quality Index, the reduction of potential GDP loss due to disasters and climate hazards, and the reduction of GHG emissions and emission intensity. The Plan also aims to position metropolitan and urban areas as catalysts for economic development by improving disaster resilience and implementing nature-based solutions, among others (see chapter 2).</p> <p>The most recent National Long-Term Development Plan 2025-2045, effective since 2025, places greater emphasis on climate change.<sup>11</sup> The Golden Indonesia (Indonesia Emas) 2045 vision includes reducing GHG emissions toward net zero and increasing the Environmental Quality Index as part of its primary targets through strategies such as implementing a green economy; enhancing environmental quality; and strengthening energy, water, food, climate and disaster resilience.</p> <p>Apart from these two legally binding documents, Bappenas is developing overarching national climate adaptation and mitigation policy documents, providing landscape and guidance on national climate policies.</p> |
| <b>Regular updates on national climate policy</b>                    | <p>As climate policies and commitments are part of the national comprehensive plan, the update is typically done every five years following the presidential term. Hence, an update to the NDC will be reflected in the next term of the development plan cycle. The high-level development targets can be adjusted during mid-term evaluations regularly conducted by Bappenas or in response to extraordinary events. For instance, RPJMN 2020-2024 was revised in response to COVID-19 or financial crisis.</p> <p>However, the lower-level policy instruments, such as ministerial regulations or decrees, may adjust specific targets as long as they do not contradict the higher-level policy instruments to accommodate the recent update of the international commitment.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Climate policy monitoring and reporting at the national level</b> | <p>National and subnational governments have regular monitoring systems including climate-related activities/programmes. AKSARA, an information system managed by Bappenas, allows national and subnational governments to estimate GHG emissions reduction from climate-related activities upon submission.</p> <p>Monitoring and reporting through budgeting is in place through climate budget tagging (CBT). National climate budget tagging, which is part of the National Planning and Budgeting System, allows line ministries to tag their climate-related budget expenditures. However, this action is voluntary and there is no information on the budget needs of sectoral ministries to meet their climate targets, making it difficult to measure financial gaps in each sector.</p> <p>Besides AKSARA, MoEF also developed information systems allowing subnational governments and other entities to report their climate action through SRN. Similar to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

<sup>10</sup> For more information, see Presidential Regulation 12/2025.

<sup>11</sup> For more information, see Law 59/2024.

| Subcategory                                                         | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                     | CBT monitoring, both AKSARA and SRN have no enforcement mechanism to prevent deviation from emissions reduction or adaptation capacity targets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>National Climate Change Risk Assessment</b>                      | <p>Bappenas has released a list of priority locations in four priority sectors (agriculture, health, marine and coastal, and water) as part of efforts to build the country's climate resilience. The list is based on climate projection, potential hazards, vulnerability index, disaster ratio index, potential economic losses, line ministries recommendations and field validation (see chapter 1).</p> <p>Furthermore, the Government regulates a strategic environmental assessment, which includes disaster risk analysis as the foundation for development planning and large projects. This allows risk reduction actions to be integrated into these plans and projects.</p> <p>According to the 2023 Disaster Risk Index assessment, 13 provinces are classified as having a high level of disaster risk (with West Sulawesi, Maluku and Kepulauan Bangka Belitung facing the highest risk), while the remaining 25 provinces fall under the medium-risk category. No province falls under the low risk category. Conversely, the provinces with the lowest relative risk include Kepulauan Riau, Papua Pegunungan, and DKI Jakarta (Government of Indonesia, 2025).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>3.1.2 National regulations for subnational climate policies</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Urban content in National Mitigation and Adaptation Strategy</b> | Although high-level climate targets and relevant indicators are not disaggregated to urban/non-urban areas in Indonesia, development plans recognize challenges related to urbanization such as housing, transportation, air quality, environmental degradation, climate change and disaster management, and infrastructure deficiency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Inclusion of urban climate targets and subnational roles</b>     | <p>As mentioned before, there is no definition or dedicated chapter on urban climate targets in the national and subnational plans. However, there are development targets that apply to urban areas and address impacts of climate change. The roles of subnational governments in achieving development targets refer to the Subnational Government Law and relevant regulations related to the targets. Some examples include:</p> <ul style="list-style-type: none"> <li>• Presidential Regulation on the Implementation of Green Building<sup>12</sup> mandates the implementation of green building policy within jurisdiction of subnational governments under the supervision of the national government. A green building should be 25 per cent more energy efficient and 10 per cent more water efficient than regular buildings. In light of this, the Ministry of Public Works and Housing has developed a Green Building Roadmap containing annual GHG emissions reduction targets for government buildings, commercial buildings and housing in a specific period (Indonesia, Ministry of Public Works and Housing, 2023).</li> <li>• The Minister of Transportation issued a Decree in 2023<sup>13</sup> on the mitigation action plan for the transportation sector, including indicators such as transit-oriented development, development of non-motorized transport infrastructures, electric vehicles, rail-based mass transportation systems, solar cells for street lighting and transportation infrastructures, renewable energy fuel for combustion, periodic emissions test, revitalization of public transportation fleets, greening of airport, etc. However, there is no information on the targets.</li> </ul> |

<sup>12</sup> For more information, see Presidential Regulation 16/2021.

<sup>13</sup> For more information, see Ministry of Transportation Decree 8/2023.

| Subcategory                                                                           | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                       | <ul style="list-style-type: none"> <li>Presidential Regulation on National Strategy on Municipal Solid Waste Management<sup>14</sup> projected the trajectory of waste volume each year from 2017 to 2025, and set the annual reduction and handling targets.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Key performance indicators to measure urban climate progress                          | Key performance indicators (KPIs) to measure climate targets are embedded into each responsible institution. They are derived from the overarching development plans that are translated into institutional strategic plans (Renstra) by each institution at national and subnational levels. For instance, national and subnational governments set up KPI to collect 70 per cent of municipal solid waste by 2025. All medium-term targets are integrated into annual plans.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| National regulation enables dedicated subnational climate bodies                      | <p>As climate change is a cross-sectoral issue, climate policies are implemented by different agencies at the subnational level to align with their roles and responsibilities. The agencies include the Disaster Management Agency, Environmental Agency, Development Planning Agency, Social Affairs Agency, Public Works Agency, Industrial Agency, Agriculture Agency, Water Resources Management Agency, etc. See Appendix 2 for the list of relevant agencies in focus sectors.</p> <p>No specific subnational climate bodies are dedicated to climate change issues. However, some of the above-mentioned agencies are responsible for coordinating climate-related tasks at the subnational level, such as the Development Planning Agency for planning, the Environmental Agency for GHG emissions inventory, or the Disaster Management Agency for disaster management.</p>                              |
| National regulation requiring local reporting on climate actions                      | <p>Several regulations mandate reporting of subnational climate action reporting, including for example:</p> <ul style="list-style-type: none"> <li>Presidential Regulation on Carbon Pricing mandated subnational governments and relevant entities to report their climate-related action through a digital platform, such as SRN.</li> <li>The joint circular letter between Bappenas and MoHA mandates subnational governments to report their climate action through AKSARA.</li> <li>The Minister of Environment and Forestry on SIPSN regulates the reporting mechanism of waste generation through a waste management information system. Although the system provides data on the volume of waste by type, it does not offer information on climate benefits.</li> <li>The MoEF also mandates provincial governments conduct the GHG emissions inventory which can be done through SIGN-SMART.</li> </ul> |
| National requirement for subnational GHG inventories, climate change risk assessment, | <p>The said Presidential Regulation mandates subnational governments based on their level of responsibility to:</p> <ul style="list-style-type: none"> <li>Conduct GHG emissions inventories, implement reduction targets and action plans.</li> <li>Develop climate resilience baselines, targets and adaptation action plans.</li> <li>Implement, monitor and evaluate.</li> <li>Update the plans if and when necessary.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

<sup>14</sup> For more information, see Presidential Regulation 97/2017.

| Subcategory                                                                                  | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| city climate action plans and urban resilience plans                                         | <p>Before this regulation, subnational governments were mandated to conduct strategic environmental assessment (KLHS) as a procedure to develop medium- and long-term development plans. Some subnational governments, such as Jakarta, have included climate risk assessment in their KLHS.</p> <p>There is no requirement for city governments to develop urban resilience plans. However, subnational governments are mandated to develop disaster risk assessments (<i>Kajian Risiko Bencana</i> (KRB)) and integrate them into subnational spatial plans. Bappenas and several development partners have also supported subnational governments in developing low-carbon and climate-resilient development plans (<i>Rencana Pembangunan Rendah Karbon dan Berketahanan Iklim</i> (RPKBI)). Prior to this, subnational governments were mandated to develop action plans to reduce greenhouse gas emissions (RAD-GRK). Most of the plans have expired and some subnational governments have evaluated their achievement and recalculated their GHG emissions inventory and projection.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>3.1.3 National requirements for involving subnational governments in climate planning</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| National requirements for involving subnational governments in climate planning              | <p>Development planning in Indonesia uses top-down and bottom-up approaches. National governments through relevant line ministries, such as Bappenas, the Ministry of Finance (MoF) and sectoral ministries, determine high-level development priorities and indicative budgets as the reference for subnational governments. The Ministry of Home Affairs (MoHA) issues annual guidance for subnational planning and budgeting concerning these priorities. The development plan and budget at both national and subnational levels must obtain parliamentary approval.</p> <p>Governments, with support and involvement of multiple stakeholders, discuss their development priorities during annual development planning meetings (<i>Musyawarah Perencanaan Pembangunan</i> (Musrenbang)) that are conducted at every level of government starting from the lowest levels. The extent of climate discussions depends on awareness and subnational development priorities, thus varying across subnational governments.</p> <p>Although mainly conducted by the national government, GHG emissions inventories and climate risk assessments involve the participation of subnational governments. The results are used as the basis for determining national priorities. Furthermore, to assist the subnational government in development planning and budgeting, MoHA has established information systems containing data, information and modules as guidance for subnational governments. Data submitted by subnational governments is used to improve national policy.</p> |

Source: ESCAP.

## 3.2 Budget and finance

- *Infrastructure financing, at the subnational level, mainly sources from the national budget through line ministries' budgets or intergovernmental transfers.*
- *Despite fiscal decentralization, revenue generation from subnational governments is lacking, creating a high dependency on the national government budget.*
- *Private finance contribution, debts and other innovative finance accounted for a small portion of subnational revenue sources or in financing climate-related activities, although channels are available.*
- *Although there is no dedicated intergovernmental transfer mechanism for climate action, most of the public finance instruments can be used for activities that contribute to combatting climate change. However, there is no enforcement and incentives mechanisms for climate-related activities are lacking.*
- *Ecological fiscal transfers, as a mechanism of result-based intergovernmental transfer, are available but mainly used for forestry and waste management. Result-based payment is also available for the carbon market.*
- *Although municipal bonds have been regulated, subnational governments have not been able to successfully issue any. Private finance is also limited. Reasons contributing to limited financing include lack of institutional capacity and the high level of risk and uncertainty for private investors.*
- *Incentivizing conditions to mobilize private capital to achieve national climate targets is available but can be expanded beyond renewable energy.*
- *International finance has been mobilized to implement subnational climate action in the form of debts, grants, equity and guarantees through national government budgets, non-government institutions operating in the countries, or national focal points.*

**Table 3.2 Assessment of results for budget and finance in Indonesia.**

| Subcategory                                       | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.2.1 Public financing and national budget</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>National definition of climate finance</b>     | <p>The definition of climate finance for public budgets follows climate budget tagging (CBT) guidance. The guidance sets the criteria for what counts as adaptation and mitigation activities. Furthermore, the CBT participating agencies may refer to the medium-term development indicators and guidelines issued by the Ministry of Environment and Forestry should there be changes in the commitment definitions (Indonesia, Ministry of Finance, Fiscal Policy Agency, 2021).</p> <p>However, from our consultative workshops, some subnational government officials mentioned the challenges to defining climate change adaptation and mitigation activities</p> |

| Subcategory                                                                              | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                          | <p>for CBT existed at the subnational level. This might create concern about the results if subnational governments begin to define climate finance without external assistance.</p> <p>For the private sector, the Financial Services Authority (FSA) issued a sustainable finance taxonomy (<i>Taksonomi untuk Keuangan Berkelanjutan Indonesia</i> (TKBI)) in 2022 and updated it in 2024 to improve common understanding of what counted as sustainable finance and to avoid greenwashing. TKBI classifies economic activities aiming to achieve the SDG targets and net-zero emissions while maintaining the synergy between economic, environmental and social aspects (Indonesia Financial Services Authority, 2024).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>National funding mechanism for subnational governments to achieve climate targets</b> | <p>The national budget is available to finance climate action at the subnational level through regular funding mechanisms. For example, the national government executed programmes/activities through line ministries/agencies. Budget distribution of the specific programmes/activities depends on the proposal submission from the subnational governments and the available budget. Subnational governments can also execute their climate-related programmes/activities. The fund is transferred to subnational government accounts in the form of block grants or grants with specific uses.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>National and subnational disaster-risk management funds</b>                           | <p>Disaster risk management is funded by several mechanisms: contingency funds, ready-to-use funds (Dana Siap Pakai (DSP)), and social assistance in the form of grants, all sourced from the public budget. Contingency funds and social assistance are allocated in the national budget. The latter can only be used in post-disaster situations. The ready-to-use fund for emergencies can be allocated by national and subnational government budgets. Furthermore, disaster management funds are regulated in a Government Regulation on Funding and Management of Disaster Assistance.<sup>15</sup> The regulation also allows funds from the public to support disaster management.</p> <p>Besides the state budget, the Government has also developed disaster risk financing and insurance (DRFI) strategies to safeguard the overall national budget from distress due to disasters and enhance sustainability (Indonesia, Ministry of Finance, Fiscal Policy Agency, 2018). The mechanisms include contingency credit from multilateral development banks, pooling funds and insurance. Furthermore, the pooling fund and insurance are regulated under the Presidential Regulation.<sup>16</sup></p> |
| <b>3.2.2 National funding sources for subnational climate action</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Domestic public finance for subnational climate action</b>                            | <p>Although Indonesia does not have a dedicated budget or mandatory spending regulation on climate-related activities, most of the public funding mechanisms can be used to enhance adaptation capacity and mitigate GHG emissions activities as long as they are part of the overarching development plan, as the country adopts “money follow programmes”. (See chapter 2 and Appendix 4 for the full list of available funding mechanisms and their potential use for climate-related activities).</p> <p>Some funds are executed directly by line ministries being co-financed by or supported by targeted subnational governments in various forms. The implementing agencies, be they at a national or subnational level, manage the funds specific to their role and responsibilities. For instance, the public budget for disaster management (including climate-related) is mainly managed by Disaster Management Agencies. However, other agencies, such as Social Affairs or Public Works, can allocate budgets for social</p>                                                                                                                                                                        |

<sup>15</sup> For more information, see Government Regulation 22/2008.

<sup>16</sup> For more information, see Presidential Regulation 75/2021.

| Subcategory                                                                      | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                  | <p>protection or river dredging, respectively. Another example is transportation agencies managing budgets for fleet procurement and operations, while public works focus on improving sidewalks. The level of responsibility depends on the scope of the projects or programmes, as regulated by the Law on Local Government.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>International public finance for subnational climate action</b>               | <p>Funding from international sources, such as multilateral/bilateral organizations, philanthropies and multinational development banks, is mainstreaming climate investments using different mechanisms:</p> <ul style="list-style-type: none"> <li>• Donor-executed activities (grants), where international financiers or their representatives may implement the activities under an agreement with the relevant national government agency, usually Bappenas.</li> <li>• National government-executed activities, where the fund is transferred to the national government budget in the form of debts or grants. Agreement is necessary with responsible national agencies. The fund can have a specific use (project-based) or general support for policy implementation.</li> </ul> <p>Upon the completion of specific infrastructure, financiers will hand over the output to the targeted subnational governments. The fund delivered to specific projects is usually accompanied by capacity-building for sustainability purposes. Examples of climate-related projects include the improvement of public transportation in the Bandung and Medan Metro Area, which is managed by the Ministry of Transportation and the Ministry of Public Works and Housing, whereby the subnational government acquires the land for the lanes, stations and bus depots. The responsibility of the national government includes the construction of bus rapid transit (BRT) lanes and the procurement of fleets.</p> |
| <b>Domestic and International private finance for subnational climate action</b> | <p>Domestic and international private finance is available in Indonesia. The latter can be accessed through full foreign capital or a joint venture. Furthermore, the investment procedure is regulated by the Head of Indonesia Investment Coordinating Board Regulation.<sup>17</sup></p> <p>The country focuses on localizing its investment in Special Economic Zones (<i>Kawasan Ekonomi Khusus</i> (KEK)). Some fiscal and non-fiscal incentives are available such as tax reduction, ease of doing business, integrated infrastructure support, etc. (Indonesia, Ministry of Investment, 2022). Although there is no incentive specifically for projects with climate benefits, the most recent RPJMN lists clean energy research and innovation as part of its tax incentive priorities (Government of Indonesia, 2025).</p> <p>Public-private partnerships (PPPs) have also become a vehicle for financing climate-related projects. Some examples of these include a water supply system in Pekanbaru, Bandar Lampung, Semarang Barat and Umbulan (see next subchapter on PPP). Domestic financial and capital markets are emerging as national governments begin frequently issuing sovereign bonds.</p>                                                                                                                                                                                                                                                                                                |

<sup>17</sup> For more information, see Head of Indonesia Investment Coordinating Board Regulation 4/2021.

| Subcategory                                                                                                         | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.2.3 National support for subnational budgeting</b>                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>National government provides technical assistance for subnational governments for budget/financing practices</b> | <p>The Ministry of Home Affairs (MoHA) with relevant line ministries/agencies supervises the subnational governments in planning and budgeting. The Government of Indonesia has established an information system called <i>Sistem Informasi Pemerintah Daerah</i> (SIPD) and <i>Sistem Informasi Keuangan Daerah</i> (SIKD) to assist subnational governments in managing relevant information on subnational development, subnational finance amongst others to support the administration function of subnational governments. The platforms include subnational data and information on planning and analysis. On the financing aspect, the platform has modules such as budget planning, finance management, and reporting.</p> <p>The assessment could not find government assistance for green planning and budgeting although the strategy was developed in 2014. However, MoEF and some development partners have provided several technical assistance such as training and guidelines related to green procurement although significant room for improvement remains (Erizaputri, Benchauf, and Casier, 2024).</p> |
| <b>Climate budgets include climate-risk components</b>                                                              | <p>Indonesia does not have a dedicated climate budget. However, in the CBT guideline, activities or programmes that aim to build resilience and reduce vulnerabilities are accounted for as climate action. For instance, adaptive social protection has been part of the RPJMN 2025-2029 target (coverage of 32.15 per cent by 2025 and 43.92 per cent from baseline of 29.77 per cent in 2024). Therefore, the Government has integrated the social protection system with social and economic risks from climate change and disasters, thereby strengthening the institutional arrangements and developing a financing mechanism.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>National framework allowing subnational budget tagging</b>                                                       | <p>The national government encourages subnational governments to conduct CBT, however support is available but limited to certain provinces and districts (see chapter 2). The existing planning and budgeting information system does not have a climate thematic tag, thus subnational CBT is conducted manually. The available themes in the current budgeting and planning information systems are education, public service infrastructure, minimum service standards, stunting alleviation, extreme poverty alleviation, inflation control, tax for dedicated activities, budget specific for Papua and other strategic issues.</p> <p>In further support of subnational CBT, Bappenas and the Fiscal Policy Agency are currently collaborating to synergize the planning and monitoring of climate adaptation and mitigation. This effort includes the integration of CBT into the subnational planning and budgeting system to widen the participation of subnational governments in CBT using artificial intelligence.</p>                                                                                           |
| <b>3.2.4 Systems of intergovernmental transfers</b>                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>National IGT supporting subnational mitigation and adaptation goals</b>                                          | <p>There are no dedicated intergovernmental transfers (IGT) for mitigation and adaptation goals. However, most intergovernmental transfers can be used to finance climate-related activities at the subnational level as long as they are part of the overarching plans. However, there are no IGT mechanisms mentioning climate benefits as the primary purpose (see below).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Subcategory                                                                             | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National IGT incentivizing subnational policies, including climate externalities</b> | <p>Several incentives for climate-related activities that consider environmental performance are available such as subnational incentive funds (<i>Dana Insentif Daerah</i> (DID)), TAPE and TAKE at provincial and district levels, respectively. DID provides incentives for subnational governments that have good performance in managing municipal solid waste management. TAPE is mostly used for reforestation and combating biodiversity loss. Another transfer incentivizing action related to climate externalities is the Profit-Sharing Fund for Reforestation (<i>Dana Bagi Hasil-Dana Reboisasi</i> (DBH-DR)).</p> <p>There are no IGT incentivizing activities to combat air pollution, water pollution, climate-resilient infrastructures, energy efficiency, health and social impacts of climate change.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Performance-based conditional transfers for subnational climate goals</b>            | <p>Ecological fiscal transfers (EFT), although with limited implementation, have used a performance-based approach. Technically all government levels can use this approach, from national, provincial and district governments, known as TANE, TAPE and TAKE, respectively. Besides these three mechanisms, the national government has also implemented another EFT, a subnational incentive fund or <i>Dana Alokasi Daerah</i> (DAD) that includes waste management as one of the indicators. The recent MoHA regulation on guidance for subnational planning and budgeting has included stronger suggestions for subnational governments to implement TAPE/TAKE.</p> <p>Prior to this regulation, in 2019, North Kalimantan Province issued a regulation on the Guidance on Provincial Financing Assistance Distribution and Accountability that includes ecological fiscal transfer.<sup>18</sup> The province has allocated IDR 5 billion in 2020 and 3 billion in 2021 for this transfer (TAPE) with 100 per cent disbursement (Indonesia, Ministry of Finance, Fiscal Policy Agency, 2023a). The usage included peat and forest fire prevention and control, green open spaces, waste management, water resources protection and air pollution prevention. Jayapura Regency has also implemented EFT (TAKE) and several other provinces and districts were in discussions to adopt the EFT schemes (Putra and others, 2019).</p> <p>A new finance mechanism using performance-based payment is carbon trading regulated by the Perpres on Carbon Pricing. The payment is made based on the GHG emissions reduction, conservation, or carbon capture from a certain activity by relevant stakeholders, including subnational governments.</p> |
| <b>National government climate-risk vulnerability for subnational transfers</b>         | <p>Bappenas has issued the list of locations (district level) for climate resilience action in four sectors (marine and coastal, water, agriculture and health). The MoEF also developed a digital system that can inform the geographic distribution of climate-risk areas. Although there is no specific financing mechanism that uses the list and risk map as the basis for determining the transfer amount, both can inform sectoral ministries in their planning and budgeting process to implement programmes that address national priorities.</p> <p>BNPB also published a Disaster Risk Index at the provincial and district levels that can inform subnational governments to prioritize disaster risk management activities in their respective jurisdiction (National Disaster Management Agency, 2023). This Index is also used as a consideration besides historical disasters, subnational proposals, and national and international frameworks for subnational budget allocation for disaster risk reduction activities.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

<sup>18</sup> For more information, see North Kalimantan Governor Regulation 6/2019.

| Subcategory                                                                                | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.2.5 Fiscal decentralization and subnational revenue generation</b>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Clear guidelines for fiscal decentralization</b>                                        | The HKPD Law regulates subnational revenue generation by provincial and municipal governments from tax and retribution, revenue-sharing and intergovernmental transfers. It also includes, for example, regulation on environmental damage factors to determine vehicle tax value and tax exemption for vehicles using renewable energy.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Subnational revenue diversification allowed and encouraged</b>                          | <p>Subnational governments can generate revenue from multiple sources and some can be used to finance climate-related activities, among others: tariffs from municipal solid waste management, wastewater management, water sources and public transportation. Other sources can also be from parking penalties for vehicles that do not pass emission tests (Indonesia National Police, 2023). The state-owned enterprises namely PT Transjakarta, PT MRT Jakarta and Indonesia Railway also generate revenue from advertisements on their fleets besides passenger tickets.</p> <p>The Carbon Pricing Regulation allows subnational governments to diversify revenue sources from carbon pricing through mechanisms such as results-based payments and levies.</p> |
| <b>Clarity on expenditures at levels of government</b>                                     | The Law on Local Governments regulates the division of responsibilities at each level of government, which varies across sectors. Each level of government also has a different budget code in the integrated planning and budgeting information system to avoid overlapping activities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Adequate subnational revenue generation</b>                                             | Despite fiscal decentralization and the availability of various subnational revenue sources, subnational governments are highly dependent on transfers from higher-level governments, particularly at the national level (see chapter 2).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>3.2.6 Private finance mobilization at the subnational level</b>                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Private sector investment possible in municipal infrastructure</b>                      | With regard to PPPs, the Presidential Regulation on Cooperation between Government and Business Entities ( <i>Kerjasama Pemerintah dan Badan Usaha (KPBU)</i> ) <sup>19</sup> for infrastructure provision sets a legal, financial and operational framework to mobilize private finance for infrastructure financing, including at the subnational level. The regulation encourages private investment in infrastructure projects by potentially offering incentives and risk mitigations.                                                                                                                                                                                                                                                                          |
| <b>National policies support private sector investment into subnational climate action</b> | Some incentives are available for private investors although there are no special incentives for climate-related activities. Private investments are highly encouraged in the national strategic location such as Special Economic Zones (see next discussion). The incentives include ease of doing business, land acquisition, tax waivers, longer land rights, etc. Other incentives include tax allowance, tax holiday, financial equity for electric vehicle charging stations and zero VAT for electric vehicles.                                                                                                                                                                                                                                              |
| <b>National support for subnational PPPs</b>                                               | The national government (MoF), under its special mission vehicle, PT Penjamin Infrastruktur (PT PII), provides guarantees for government projects under the PPP scheme, including subnational government projects. PT PII, in collaboration with multilateral agencies, also provides technical assistance to strengthen the capacity of governments as project owners to manage PPP projects. PT PII assists project owners in improving project creditworthiness, improving the guaranteed governance system,                                                                                                                                                                                                                                                      |

<sup>19</sup> For more information, see Government Regulation 38/2015.

| Subcategory                                                     | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Clear guidelines for fiscal decentralization</b>             | The national government provides several financial and non-financial incentives for KPBU projects. For example, the national government could provide viability gap funds (VGF) for economically viable projects that lack financial viability and no other alternative to cover the gap. <sup>20</sup> Local governments can also contribute with approval from the local House of Representatives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>3.2.7 Subnational creditworthiness and access to capital</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Subnational borrowing capacity for climate investments</b>   | <p>Subnational governments can borrow for climate investments through debts and bonds (both conventional and Sharia). Subnational debt sources can come from national governments, other subnational governments and financial institutions. Subnational governments can borrow for cash management, financing subnational infrastructure, subnational debt portfolio management and forward equity in subnational government-owned enterprises.</p> <p>Subnational governments must first secure approval from the local parliament regarding the maximum net debt amount during the annual budgeting audience. However, the subnational government cannot directly borrow from international sources without national government approval under a Subsidiary Loan Agreement. This Law applies to climate projects as specific borrowing rules pertinent to climate investments are not yet available.</p> <p>The HKDP Law also establishes guidelines for subnational borrowing limits, approval processes and the use of borrowed funds. Despite the policy to encourage subnational borrowing, the practice is not common. Among the reasons discussed in one of our workshops are the paradigm of the subnational governments to avoid intergenerational debts and the lack of motivation to generate more revenue beyond the public budget, in particular the national government budget.</p> <p>According to a World Bank report, the potential for municipal loans to address substantial infrastructure investment gaps, estimated at \$11.1 billion for 14 large Indonesian cities, remains largely untapped due to these constraints (World Bank, 2018). Therefore, reforms are necessary to enhance borrowing capacity and improve financial management practices at the local level, which would enable the subnational government to leverage municipal loans as a viable tool for financing essential infrastructure projects (Ihsan, Rahmawati and Ilman, 2023).</p> <p>The said report reveals that contributing factors hindering municipal financing include regulatory complexities, limited knowledge of financial instruments, and concerns over creditworthiness. Political dynamics and ongoing regulatory developments can create uncertainty that discourages local governments from pursuing municipal financing options.</p> |
| <b>Clear process for sovereign guarantees</b>                   | According to HKPD Law, the national government provides oversight and may offer a sovereign guarantee for certain projects for subnational governments. This is done, for instance, through the Indonesia Infrastructure Guarantee Fund (PT Penjaminan Infrastruktur Indonesia or PT PII), which plays a crucial role as a guarantee in facilitating subnational borrowing for infrastructure projects. PT PII can guarantee various risks that subnational governments might face when borrowing for infrastructure projects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

<sup>20</sup> For more information, see MoF Regulation 223/2012 and 170/2015.

| Subcategory                                                      | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                  | <p>The PT PII guarantee is intended to reduce political risks from both central and regional governments, as well as those responsible for cooperation projects, to provide certainty and comfort for investors. Although not every subnational government is aware of the mechanism to obtain a guarantee from PT PII, the Madiun Street Lighting Equipment Project is one of the successful mechanisms showcasing projects with energy-saving benefits to support green infrastructure and can have a significant impact on the community.</p>                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Subnational credit rating</b>                                 | <p>There is a credit rating mechanism whereby subnational governments engage multiple stakeholders to ensure that the creditworthiness of regional entities is accurately assessed and managed. Domestic credit rating agencies include:</p> <ul style="list-style-type: none"> <li>• PT Pefindo (Pemeringkat Efek Indonesia): Provides ratings for corporate and government entities, including subnational governments, by analysing financial statements, economic conditions and debt management practices to assign credit ratings.</li> <li>• PT ICRA Indonesia (affiliated with Moody's Investors Service): Offers credit ratings and financial research for various sectors, including subnational governments.</li> </ul>                                                                                                                                                                                                                |
| <b>Municipal bond issuance</b>                                   | <p>Although the MoF has issued a regulatory framework on Municipal Bond Issuance since 2012 (revised in 2015), subnational governments have not yet been able to issue municipal bonds. Several subnational governments have taken the initiative to pursue this fundraising but were unsuccessful.</p> <p>Similar to the World Bank's research on financing options for subnational governments, an assessment of Indonesia's Municipal Bond Landscape, by UN agencies in Indonesia and the MoF, indicates that subnational governments face significant challenges in their readiness to issue municipal bonds. Key barriers include a lack of understanding and experience with bond issuance processes, limited financial management capacity and insufficient regulatory frameworks. Additionally, many local governments struggle with creditworthiness assessments, which deter potential investors (UNDP Indonesia and others, 2023).</p> |
| <b>National support for first-time subnational bond issuance</b> | <p>Several international organizations, including the International Finance Corporation (IFC), World Bank, United Nations Development Programme (UNDP) and Asian Development Bank (ADB), have also provided technical assistance to support the development of municipal bonds in Indonesia. This assistance includes, for instance, supporting municipal green bonds through capacity-building workshops and preparation for feasibility studies; policy advice to municipalities in designing bond issuance frameworks aligned with international standards; and technical assistance to improve fiscal transparency to achieve higher credit ratings and reduce borrowing costs.</p>                                                                                                                                                                                                                                                           |
| <b>Municipal green bond issuance</b>                             | <p>The Indonesian government has regulated green bond issuance for infrastructure financing and for achieving the country's mitigation and adaptation targets. However, the same circumstances apply to municipal bond issuance, where no subnational government has yet been able to issue a green bond.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Subcategory                                                         | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National government facilitates pooled financing</b>             | Following the Financial Service Authority Regulation on Green Bonds in 2017, <sup>21</sup> The Ministry of Finance issued a green Islamic bond (Sukuk) in February 2018. Later that year, PT SMI with support from the World Bank issued the first corporate green bond worth IDR 500 billion for light rail transit (LRT) and Mini Hydro Power Plant with 3- and 5-year maturity periods (World Bank, n.d.). The turnover of the bond will be used to finance LRT in Palembang and mini hydro power plants in South Sulawesi and West Sumatra (Mufti, 2018).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>3.2.8 Potential for co-financing and/or innovative financing</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>National development banks' potential for co-financing</b>       | <p>Indonesia has not had a National Development Bank since 1999. The role of such a banking institution is now fulfilled by PT SMI, a non-bank financial institution that provides loans to subnational governments and state-owned commercial banks, which in turn provide loans to state-owned enterprises for infrastructure financing. Regional development banks can also finance development agendas at the subnational level. These financing institutions have co-financed numerous infrastructure projects across the country.</p> <ul style="list-style-type: none"> <li>PT SMI has financed various infrastructure projects, such as roads, irrigations, public facilities and energy transition projects such as the installation of solar panels at airports and streetlights. PT. Bank Rakyat Indonesia (BRI) recently co-financed the PPP project for the construction of some segments of the Trans Papua Road (Economic News, 2025). PT Bank Tabungan Negara (BTN) has also supported the One Million Houses program (Antara Indonesian News Agency, 2023). PT Bank Mandiri provided infrastructure loans for the construction of toll roads, airports, ports, railway lines amongst others (Paramacitra, 2024). Bank Jabar Banten (Bank BJB) has financed roads, government buildings, public open spaces and irrigation projects, to name a few, within West Java and Banten provinces.</li> </ul> |
| <b>National investment funds potential for co-financing</b>         | Co-financing of national or subnational funds is available in Indonesia, which could involve national financiers and subnational governments or other entities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Blended finance</b>                                              | PT SMI through SDG Indonesia One (SIO) is one of the institutions that has facilitated blended finance for infrastructure financing including climate related. As of 2022, there are 62 blended finance projects, some of them involving subnational government budgets (PT SMI, 2025).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Carbon markets</b>                                               | There are at least six technical regulations in the carbon market as derived from the Carbon Pricing Presidential Regulation (see Appendix 2). An MoEF representative noted, during one of the Urban-Act workshops, that MoEF and BPD LH are currently at a pilot stage in assisting subnational entities in implementing the carbon market on waste management. There are 10 entities including subnational governments, private and non-governmental organizations that have the potential to generate revenue from their waste management mechanism.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

<sup>21</sup> For more information, see Head of OJK Regulation 60/2017.

| Subcategory                    | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Special purpose vehicle</b> | <p>National support for the use of special-purpose vehicles or special-purpose entities is well-established. Two main special-purpose entities that have played a role in innovative project funding are:</p> <ul style="list-style-type: none"> <li>PT Sarana Multi Infrastruktur (PT SMI) is a state-owned enterprise whose entire capital is owned solely by the Republic of Indonesia under the Ministry of Finance. Since its establishment, PT SMI has supported subnational governments to develop public infrastructure through regional debt products and credit enhancement schemes. PT SMI is also an accredited entity for the Green Climate Fund.</li> <li>Indonesia Environment Fund (IEF) or BPD LH brings multiple sources of funding together to be deployed through a variety of instruments across several different sectors (including forestry, energy and mineral resources, and carbon trading). Currently, IEF is developing a special funding window to support subnational governments to explore the potential of carbon economies.</li> </ul> <p>The national government is currently developing several regulations to support innovative financing, such as fiscal incentives for subnational governments, and to encourage collaboration through blended finance, besides building the capacity of subnational governments.</p> |

Source: ESCAP.

### 3.3 Climate data

- The national government conducts the annual GHG emissions inventory as a monitoring and reporting mechanism, and to support evidence-based planning.*
- Several digital platforms have also been established to support subnational governments in climate data reporting and analysis, although the participation levels vary across platforms. However, this assessment is in no position to assess the effectiveness of the platforms for evidence-based planning, monitoring and evaluation.*

**Table 3.3 Assessment of results for climate data in Indonesia.**

| Subcategory                                                         | Details                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.3.1 National-level climate data</b>                            |                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Local climate databases</b>                                      | The national government has built several digital platforms that can benefit the subnational governments in managing their climate-related databases and use them for analytical works for evidence-based planning, monitoring and evaluation at the subnational level. Platforms include: AKSARA, SIGN-SMART, SIDIK and SRN, among others. See Appendix 4 for further details. |
| <b>National government has access to good national climate data</b> | National GHG inventory is conducted annually involving relevant line ministries, subnational governments, universities and enterprises. The latest inventory shows an increase in GHG emissions in 2022 compared to 2021 in all sectors, but is below the business-as-usual scenario of about 41.61 per cent (Indonesia, Ministry of Environment and Forestry, 2024).           |

| Subcategory                                                                                  | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National government has access to good national climate data</b>                          | <p>On adaptation, the responsibility is shared among various national and local government entities. At the national level, key ministries involved include MoEF, which oversees climate policies and adaptation strategies; Bappenas, which integrates climate considerations into development planning; and MoHA, which supports local governance in climate initiatives. At the local level, regional working units (SKPD) are responsible for implementing and monitoring adaptation actions in their respective areas.</p> <p>Furthermore, development partners supporting Indonesia in monitoring climate adaptation include organizations such as USAID, which funds various climate resilience programmes; UNDP, which provides technical assistance and funding for adaptation projects; and the World Bank, which offers financial resources and expertise for climate-related initiatives. These partnerships aim to enhance the capacity of Indonesia to monitor and evaluate its climate adaptation efforts effectively.</p> |
| <b>3.3.2 National support for subnational climate data</b>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Self-reporting mechanism for subnational governments to update their climate data</b>     | <p>Subnational governments have access to SRN, SIGN-SMART, AKSARA and SIDIK as climate data systems. Our observation of the publicly accessible part of the above-mentioned platforms shows that the participation rate of data submission in these platforms can be improved to instantly show the national profile from data aggregation.</p> <p>Regardless of this, subnational governments can use them as a basis to create evidence-based development plans. From our workshop in Medan on subnational enabling conditions for urban climate finance, participants' feedback on the platforms ranged from unfamiliar, previously used, to actively used.</p>                                                                                                                                                                                                                                                                                                                                                                        |
| <b>National support for subnational research centres on climate data</b>                     | <p>There are no dedicated regional research centres to support all subnational climate data. However, the Meteorological, Climatological and Geophysical Agency (BMKG) has a regional office that can provide historical climate data such as rainfall, temperature change, wind speed and direction for projection analysis.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>National financial support and technical assistance to analyse climate data</b>           | <p>The national government has supported subnational governments to analyse subnational climate data, for example through the development of low carbon and climate-resilient action planning, disaster risk assessment and accessing carbon pricing. In addition, no dedicated national support is found to establish regional and/or local-level research centres to support subnational climate data.</p> <p>Also from the said workshop, collaboration with BMKG is done under the Climate Village Program in several locations and several subnational governments have collaborated with universities in climate analysis.</p>                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>National government ensures good quality and availability of subnational climate data</b> | <p>The digital climate data platform owners at the national level are responsible for ensuring the quality of the data submitted through the platforms with verification mechanisms.</p> <p>The national government provides technical assistance for subnational governments in climate data analysis including using proxy to fill the data gaps. Such technical assistance is part of the development of the subnational RPRKBI and regular supervision by the Ministry of Environment and Forestry.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

Source: ESCAP.

### 3.4 Vertical and horizontal coordination

- *Horizontal and vertical coordination follows the current hierarchy of the relationship between national and subnational governments.*
- *Cross-jurisdiction collaboration is mainly initiated by the national government as part of national strategic priorities.*
- *Public participation in decision-making is mandated by law. Public consultation is mandatory in regulation making and development planning.*
- *Indonesia participates in projects across multiple countries facilitating peer learning among the beneficiaries from these countries.*

**Table 3.4 Assessment of results for vertical and horizontal integration in Indonesia.**

| Subcategory                                                                                                  | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.4.1 National support for subnational vertical and horizontal coordination</b>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>National support for horizontal coordination for climate planning and risk assessment</b>                 | <p>Horizontal coordination for planning and risk assessment is facilitated by higher-level governments. For example, in conducting risk assessments, cross-jurisdiction assessment is conducted at the upper levels of government. The provincial level covers cross-district jurisdiction and at least two unified areas with the same ecosystem or climate. This is regulated by the MoEF Regulation on the Guidance for Vulnerabilities, Risks and Climate Change Impact Assessment, which mentions different spatial scales of the analysis, from site (village) to macro level (national).<sup>22</sup></p> <p>Vertical and horizontal coordination of climate action planning follows the development planning system. Every year, a development planning forum is conducted from the village to the national level, called <i>Musrembang</i>. Similar to the analysis, cross-jurisdiction planning is the responsibility of the upper level of government. For example, the outcomes of the village-level planning forum are consolidated at the upper level of government (sub-districts). Vertical and horizontal coordination for supervision and reporting of climate action also follows a similar approach.</p> |
| <b>National support for vertical and horizontal coordination for shared climate investment opportunities</b> | <p>Some support for subnational governments to coordinate and identify opportunities for shared investment exists, although most of the initiative is driven down from the top. For example, the Regional Offices of the Ministry of Public Works and Housing, in collaboration with subnational governments, manage several projects on river management, one of which are for flood mitigation that involve multiple districts and provinces.</p> <p>Another example is the construction of waste-to-energy facilities in 12 cities, which are regulated under a Presidential Regulation.<sup>23</sup> The Regulation mandates vertical and horizontal coordination among beneficiaries' cities and provinces, relevant stakeholders and their roles, and financing sources and other arrangements.</p>                                                                                                                                                                                                                                                                                                                                                                                                                    |

<sup>22</sup> For more information, see MoEF Regulation 7/2018.

<sup>23</sup> For more information, see Presidential Regulation 35/2018.

| Subcategory                                                              | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National support for vertical coordination on climate action</b>      | <p>Vertical coordination on climate action follows the hierarchy of the governance system in Indonesia. The Ministry of Home Affairs with relevant technical ministries supervises relevant subnational offices in charge of particular affairs. For example, the Ministry of Environment and Forestry supervises environmental offices at the provincial level on landfill management. The Ministry of Energy and Mineral Resources coordinates the implementation of provincial energy plans in line with the National Energy Plan.</p> <p>Bappenas and MoHA have issued a joint circular letter mandating vertical integration of subnational climate targets in the long-term development plans. This circular letter makes vertical integration of climate action at the indicator level become imperative to subnational governments.</p> <p>Technical supervision of climate action is conducted by relevant ministries to relevant technical subnational offices in charge. For example, the MoEF supervises environmental offices at the provincial level on landfill management that fall under the authority of the provincial government.</p> |
| <b>National support for horizontal coordination on climate action</b>    | <p>Horizontal coordination follows the hierarchy of the governance system in Indonesia. Subdistrict coordination is facilitated by the district government. District coordination is facilitated by the provincial government, and so forth by the national government. National government supports horizontal coordination between subnational governments in infrastructure development, such as for river and forestry management, water supply and sanitation, renewable energy, food security and disaster risk management, to ensure that both rural and urban communities are better equipped to adapt to the changing environment.</p> <p>For example, subnational governments located along the Ciliwung River, particularly Jakarta and neighbouring cities such as Bogor, have collaborated extensively to manage flood risks through a series of integrated initiatives.</p>                                                                                                                                                                                                                                                                 |
| <b>National support for international coordination on climate action</b> | <p>In addition to cooperation between subnational governments in Indonesia, subnational governments can also cooperate with their counterparts in other countries as regulated by MoHA Regulation.<sup>24</sup></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.2 Public involvement and subnational stakeholder engagement

|                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National requirements for public participation in subnational climate regulation</b> | <p>Public participation is regulated by the Law on Legislation Making and the Law on Local Government. Both laws grant the public's right to give input or feedback on the legislative processes including subnational regulations development.</p> <p>Despite being regulated by Law, the implementation is not always enforced. For instance, the formation of the Law on Job Creation is considered procedurally flawed with the lack of meaningful participation being among the problems (Makarim and Taira, 2022).</p> |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

<sup>24</sup> For more information, see MoHA Regulation 25/2020.

| Subcategory                                                                                                     | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National support to integrate civil society in subnational climate planning</b>                              | <p>Musrembang is a platform allowing public participation in the development planning process at all levels of government. Thematic Working Groups (Pokja) such as Climate, Disaster Management, Water, Housing and Human Settlements are also available at various levels of government consisting of experts from government agencies, universities and the private sector working on the issues.</p> <p>The Presidential Regulation on Carbon Pricing also encourages public participation in implementing climate action at all levels of government. The national government encourages such participation in the implementation of carbon trading, climate change mitigation, GHG emissions inventory, annual reduction achievement, climate change adaptation action and shared benefits of climate action adaptation and mitigation.</p> <p>The SRN also aims to encourage public participation in climate-related activities. Some subnational governments have voluntarily established a multi-stakeholder climate forum to assist with vulnerability assessment, GHG emissions inventory, climate action planning, monitoring and evaluation. The members of the forum comprise those working in different local offices, local universities, NGOs and private entities. The operational cost of this forum is part of the local budget for climate action implementation.</p> |
| <b>3.4.3 National external engagement and peer learning</b>                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>National government engages in peer learning</b>                                                             | <p>The national government actively engages in international peer learning on climate finance and action. For example, in the Conference of Parties or the Asia Pacific Climate Week, to name a few. Indonesia is also involved in climate projects across multiple countries that allow peer learning. For instance, Indonesia is part of 15 GCF projects addressing multiple countries, such as E-Mobility Program, GCF-IFC Scaling Resilient Water Infrastructure Facility, Community Resilience Partnership Program, Programme for Energy Efficiency in Buildings (PEEB) Cool, ASEAN Catalytic Green Finance Facility, Global Subnational Climate Fund, amongst others (GCF, n.d.).</p> <p>Furthermore, Indonesia also a part of GEF's projects in multiple countries, such as Integrated Collaborative Approaches for Sustainable Tourism, Global Biodiversity Framework Early Action Support, Promoting Resource Efficiency and Circularity to Reduce Plastic Pollution for Asia and the Pacific, Sustainable Cities Impact Program, to name a few (GEF, 2024). Urban-Act is also a regional project allowing peer learning among countries beneficiaries which include China, India, Indonesia, Thailand and the Philippines.</p>                                                                                                                                                  |
| <b>National cooperation with project preparation facilities for subnational climate infrastructure projects</b> | <p>Indonesia is eligible to access international climate finance through national focal points that allow peer learning on climate finance and climate action among other country beneficiaries. To support international coordination among the national focal points, the Government of Indonesia has established The Climate Finance Focal Point Coordination Platform consisting of MoF, MoEF, Bappenas, BPD LH and PT SMI (see chapter 2).</p> <p>The national government has cooperated with project preparation facilities to support climate-related infrastructure projects to access financing. Several examples include Integrated Sustainable BRT Development in Semarang from GCF; waste management facilities in Jakarta, Tangerang and Malang from the Transformative Action Program (TAP) Fund; electric buses for Jakarta's Sustainable Mobility from C40 City Finance Facility (CFF); and waste management master plans for several cities from the City Climate Gap Fund.</p>                                                                                                                                                                                                                                                                                                                                                                                          |

| Subcategory | Details                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>Although many cities have benefited from the said programmes that help them in project preparation, the capacity of subnational governments to access the funds without external assistance remains lacking. In one of our workshops, some subnational government officials were not even familiar with the funds (not just PPF), especially those in small cities.</p> |

**Source:** ESCAP.

## IV. Conclusion and recommendations

The commitment of Indonesia to reduce its greenhouse gas emissions and build adaptative capacity to the potential impacts of climate change is becoming increasingly ambitious, as reflected in its long- and short-term development plans and international commitments. These documents can provide international financiers with insight into the country's vision for combating climate change, thereby helping to attract the necessary finance. The implementation is mainly sectoral and mainstreamed into the programmes and activities of multiple institutions both at national and subnational levels.

Policy instruments, such as regulations or roadmaps, have been issued as frameworks for various actors to address climate change, although few explicitly mention climate benefits. These policy instruments might need to be translated into practical guidelines accompanying technical assistance from national governments and other concerned institutions.

Financing for climate-related activities in urban areas or those that impact urban areas is sourced from various channels, with public funds, in particular the national government budget, being the primary contributor. Although all available development financing mechanisms can be used to fund climate-related activities, incentive and disincentive mechanisms could be explored further for those activities affecting adaptation capacity and emissions reduction in urban areas. The role of subnational governments in innovative financing is hindered by the limitations in capacity for fund management, hence creating high dependency on the initiatives of the national government.

The national government has access to good-quality climate data, some sectors even use Tier 2 for the GHG emissions inventory that is reported annually. This allows the national government to create national priorities to curb GHG emissions. National climate risk assessments have also been conducted extending to the district level in four climate-resilient priority sectors that can inform the planning and budgeting efforts of the relevant line ministries. The national government has also developed several climate data reporting and analyses that can assist subnational governments in planning, monitoring and evaluating their climate-related activities. However, the level of familiarity with these platforms varies, as reflected by the lack of participation.

The hierarchy system of the Government of Indonesia is vertically integrated, while cross-jurisdiction collaboration is mainly initiated by the national government. Public participation is mandated in crafting regulations and development planning processes to better reflect the citizens' aspirations despite not being fully implemented. Some subnational governments have benefitted from international climate financiers in the form of project preparation, grants, capacity-building and other forms of technical assistance that also allow peer learning.

## Recommendations

Based on the discussion in the previous chapter, the following actions are recommended to improve the national enabling conditions to mobilize additional funding for climate-related activities that will benefit urban areas:

1. **Translate relevant policy instruments into practical guidelines and capacity-building activities.** A series of practical guidelines and capacity-building activities segregated by characteristics of urban areas can support city government officials with practical expertise to build climate resilience and low-carbon cities. The support should include (but not limited to):
  - a. **Climate data and analysis for planning, monitoring and evaluation.** This aims to familiarize subnational governments with relevant climate data for evidence-based planning and tracking development progress against climate targets. This competence will benefit subnational governments in developing project conception and improve transparency and accountability, both to attract financial and non-financial contributions from non-state actors.
  - b. **Programmatic theory or results framework.** This builds the capacity of city officials to integrate climate targets into the development agenda and refine key performance indicators.
  - c. **Financing mechanisms and sources.** This should cover financing in all project development cycles and urban services delivery. Financing sources include own-sources revenue, transfers, private and other sources of financing. This should also cover topics to create and optimize revenue streams from public services, thereby avoiding financial burdens. For example, tariff adjustments in waste management, congestion pricing in transportation, waste reduction and recycling, and land-value capture. The implementation depends on specific urban characteristics.
  - d. **Fund management.** This competence is crucial to managing funds beyond own-source revenue and transfers such as debts or private investments.
  - e. **Relevant good practices nationally and internationally.** This provides successful examples by outlining practical actions, financing mechanisms, impacts and key success factors.
2. **Expand incentives for climate-related activities that benefit urban areas.** These include, for example, performance-based transfers in mass transportation based on increase in ridership, performance-based payments for low-carbon and climate-resilient infrastructures (new construction or retrofitting), non-financial incentives for developers adopting compact development, green building implementation, or nature-based solutions. These will accompany the ongoing ecological fiscal transfers on forestry and waste management.
3. **Leverage blended finance and explore specific sectors and geographical locations where private finance can be more attractive.** Blended finance can attract private

finance by sharing the risks. Prioritizing attractive areas in climate action can strategically mobilize private finance while improving enabling environments in other areas. Providing incentive mechanisms might also attract private investment where necessary.

4. **Explore digital platforms to synchronize between institutional GHG emissions reduction targets, climate impacts (positive or negative) from programmes/activities and budget needs.** This action will allow the concerned institutions at national and subnational levels to track progress and identify financial gaps to achieve the targets. Adding a menu to calculate the negative impact of development activities on GHG emissions or those that hinder progress toward building climate-resilient cities could also be considered to design preventive measures and anticipate additional financing needs.
5. **Encourage cross-jurisdictional collaboration in realizing low-carbon and climate-resilient cities.** This can be achieved by providing mechanisms and assistance for subnational governments in preparing joint project proposals to address cross-border challenges. Facilitating peer learning between neighbouring cities that benefit from international climate projects could also leverage project impact and maintain sustainability.
6. **Strengthen urban discussion in national climate strategies.** This will amplify the urgency of addressing climate challenges in urban areas as significant contributors to GHG emissions and present multidimensional vulnerabilities and high exposure to climate change impacts.

## Further works

The results of the assessment provide an indication of gaps in the national EFCs and the results need to be followed up to expand access of cities to climate finance. Targeted recommendations have been provided to address those gaps:

1. **Apply the accompanying Subnational Assessment Tool**, also developed by CCFLA and Urban-Act, to assess enabling conditions in particular subnational jurisdictions. The results of the assessment in this report focus on national government actions and enabling conditions. A follow-up activity targeting a particular province and/or city would add a deeper understanding of the gaps in enabling conditions at the subnational level.
2. **Develop follow-up actions based on the recommendations identified in this report.** This assessment serves as a diagnostic and foundational tool to provide direction on gaps and possible opportunities to improve enabling framework conditions to fund urban climate action. Follow-up actions could focus on some or all the priority recommendations. The action can be in the form of pilot projects, technical studies, practical guidelines, gathering documentation of good practices, thematic training, or other form of capacity development.

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# VI. Appendices

## Appendix 1: National assessment tool: description and methodology

The CCFLA/Urban-Act National Assessment Tool is intended to enable better access to climate finance for subnational governments by evaluating the national-level EFCs. The Tool can facilitate recommendations and is designed to be primarily utilized by national government officials. However, it can also be used by other stakeholders wanting to understand national-level enabling conditions, such as local implementers, city networks, NGOs and subnational officials (for their perspective on the national government).

The CCFLA/Urban-Act National Assessment Tool and forthcoming Subnational Assessment Tool build on the 2021 standardized approach developed by CCFLA and the Penn Institute for Urban Research at the University of Pennsylvania. This approach aims to assess national EFCs and intergovernmental relationships that finance urban climate projects,<sup>1</sup> and has been piloted in Ecuador and Indonesia.

As part of this project, CCFLA and Urban-Act enhanced the standardized approach through desk research and reviews by CCFLA members, Urban-Act implementing partners and external experts. This process resulted in the National Assessment Tool, which is structured around four categories: (i) Climate policy, (ii) Budget and finance, (iii) Climate data, and (iv) Vertical and horizontal coordination.<sup>2</sup> The Tool was further developed based on the piloting experiences in India and Indonesia.

Moreover, the Tool draws from the City Enabling Environment (CEE) Assessment findings conducted by United Cities and Local Governments Asia-Pacific (UCLG ASPAC). The CEE Assessment examines the legislative frameworks of the enabling environments of cities in five Asia-Pacific countries, examining elements related to finance and the environment. It builds upon previous assessments conducted in the Asia-Pacific region in 2018 and the assessments conducted in Africa in 2012 and 2015.

Furthermore, the Tool assesses the regulatory framework and policies for innovative financing mechanisms, public-private partnerships, and domestic and international cooperation to bridge the urban finance gap, as highlighted in the ESCAP report *Future of Asian and Pacific Cities 2023: Crises Resilient Urban Futures* (ESCAP, 2023). The Tool emphasizes the pivotal role that national and subnational governments play in designing, planning and managing sustainable urban development, as articulated in Resolution 79/7 (E/ESCAP/RES/79/7).

The “Dimension” column below refers to national EFC components being assessed to improve urban access to climate finance. “Dimension Detail” provides a more nuanced

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<sup>1</sup> The standardized approach consists of six components: (i) Country profile, (ii) Administrative structure, (iii) Legislation and regulation, (iv) Climate policy, (v) Public finance and budget, and (vi) Climate data.

<sup>2</sup> Considerations about the country profile and the administrative structure have been integrated in this report under the introduction.

understanding of good practice examples for each dimension. The toolkit was developed based on the reports, tools, frameworks and case studies. Further information regarding The National Assessment Tool and methodology including resources used for each category and examples of good practices is available at <https://www.unescap.org/kp/2024/assessing-national-enabling-framework-conditions-urban-climate-finance-tool-and-guide-ccfla>.

## Explanation of the assessed dimensions

| Dimension                                                                       | Dimension detail                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Climate policy (CP)</b>                                                   |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>CP Subcategory 1.1: National climate change policy</b>                       |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>1.1.1 National Mitigation Strategy</b>                                       | Mitigation: The national government has a national climate change mitigation strategy, such as a Nationally Determined Contribution or similar document. The strategy includes a long-term pathway to achieve climate targets. Targets are binding.                                                                                                                        |
| <b>1.1.2 National Adaptation Strategy</b>                                       | Adaptation: The national government has a national climate change adaptation strategy, such as a National Adaptation Plan (NAP) or similar document. The strategy includes a long-term pathway to achieve climate targets. Targets are binding.<br><br>This assessment consolidates 1.1.1 and 1.1.2.                                                                       |
| <b>1.1.3 National government regularly updates national climate policy</b>      | The national government updates climate policies/commitments for both mitigation and adaptation regularly according to the NDC cycle or voluntarily depending on their macroeconomic situation, developmental trajectory, climate-related incidents, or similar.<br><br>For example, adaptation plans are updated after a climate-related disaster such as an urban flood. |
| <b>1.1.4 Climate policy monitoring and reporting at the national level</b>      | Transparent monitoring and reporting systems track progress towards climate goals using climate data. Enforcement mechanisms can enforce any deviation from climate goals.                                                                                                                                                                                                 |
| <b>1.1.5 National Climate Change Risk Assessment</b>                            | The national government regularly conducts a national climate risk assessment, which includes various climate change factors, such as temperature changes, extreme weather events, sea-level rise, infrastructure vulnerability, and socioeconomic vulnerability, among others.                                                                                            |
| <b>CP Subcategory 1.2: National regulation for subnational climate policies</b> |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>1.2.1 National mitigation strategy has urban content</b>                     | The national government's mitigation strategies include specific urban and/or subnational content. The national policies/strategies specifically elaborate subnational governments' roles and/or standards of action in climate mitigation actions.                                                                                                                        |

| Dimension                                                                                   | Dimension detail                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1.2.2 National adaptation strategy has urban content</b>                                 | The national government's adaptation strategies include specific urban and/or subnational content. The national policies/strategies specifically elaborate subnational governments' roles and/or standards of action in climate adaptation actions.                                                                                                      |
| <b>1.2.3 National policies include urban climate targets and specify subnational roles</b>  | National urban policies specifically include climate targets. The national urban policies specifically elaborate subnational governments' roles and/or standards of action in climate mitigation and adaptation actions.                                                                                                                                 |
| <b>1.2.4 National government sets KPIs to measure urban climate progress</b>                | <p>The national government sets key performance indicators (or additional metrics) to measure urban climate progress towards targets (e.g., percentage reduction in GHG emissions compared to a baseline year, number of climate-resilient infrastructure projects implemented).</p> <p><i>Note: Include city and/or urban data where available.</i></p> |
| <b>1.2.5 National regulation enables dedicated subnational climate bodies</b>               | There is a national legal/regulation/policy framework at the national level that enables subnational governments to establish a dedicated local agency/body for planning and implementation of climate actions. Through this body, subnational governments can plan for long-term local climate actions.                                                 |
| <b>1.2.6 National regulation requiring local reporting on climate actions</b>               | There is a national legal/regulation/policy framework requiring subnational governments to report their implementation of climate actions.                                                                                                                                                                                                               |
| <b>1.2.7 National requirement for subnational GHG inventories</b>                           | There is a national legal/regulation/policy framework requiring subnational GHG inventories to be conducted. The national government provides support for subnational governments to conduct these inventories.                                                                                                                                          |
| <b>1.2.8 National requirement for city climate change risk assessment</b>                   | There is a national legal/regulation/policy framework requiring city-level climate change risk assessments. The national government supports cities in incorporating climate risks into their development planning documents.                                                                                                                            |
| <b>1.2.9 National requirement for city climate action plan &amp; urban resilience plans</b> | There is a national legal/regulation/policy framework that requires subnational governments to develop city-level climate action plans, urban resilience plans, or similar documents. Specify if the city- or municipality-level plans are mandatory or not.                                                                                             |

| Dimension                                                                                      | Dimension detail                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CP Subcategory 1.3: National requirements for involving subnational in planning</b>         |                                                                                                                                                                                                                                                                                                                                             |
| <b>1.3.1 National requirement for involving subnational government in climate planning</b>     | There is a national legal/regulation/policy framework, such as National Planning Document(s), requiring the integration of subnational government perspectives on local climate actions into national planning processes. This can include national strategies on disaster risk reduction and biodiversity protection or similar documents. |
| <b>2. Budget and finance (BF)</b>                                                              |                                                                                                                                                                                                                                                                                                                                             |
| <b>BF Subcategory 2.1: Public financing and national budget</b>                                |                                                                                                                                                                                                                                                                                                                                             |
| <b>2.1.1 National definition of climate finance</b>                                            | The national public financial framework (or similar documents) sets out clear criteria for what counts as climate/green/sustainable finance for domestic and donor finance.                                                                                                                                                                 |
| <b>2.1.2 National funding mechanism for subnational governments to achieve climate targets</b> | There is a national funding mechanism or program for subnational governments to achieve climate targets attached to national strategies/policy documents.<br><i>For example, sectors receiving funding may be indicated in NDCs if the national government provides funding support to specific industries.</i>                             |
| <b>2.1.3 National and subnational disaster-risk management funds</b>                           | Disaster-risk management or reduction emergency funds, or similar, are in place on the national and subnational levels.                                                                                                                                                                                                                     |
| <b>BF Subcategory 2.2: National funding sources for subnational climate action</b>             |                                                                                                                                                                                                                                                                                                                                             |
| <b>2.2.1 Domestic public finance for subnational climate action</b>                            | The national government has used domestic public finance sources (e.g., taxes, subsidies) to finance subnational climate action within the last 2 years.                                                                                                                                                                                    |
| <b>2.2.2 International public finance for subnational climate action</b>                       | The national government has used international public finance sources (e.g., grants, bilateral/donor funding, MDB, global funds) to finance subnational climate action within the last 2 years.                                                                                                                                             |
| <b>2.2.3 Domestic private finance for subnational climate action</b>                           | The national government has used domestic private finance sources (incl. private finance generated by NDBs, non-bank financial institutions (NBFI), financial markets, and capital markets) to finance subnational climate action within the last 2 years.                                                                                  |
| <b>2.2.4 International private finance for subnational climate action</b>                      | The national government has used international private finance sources to finance subnational climate action within the last 2 years.                                                                                                                                                                                                       |

| Dimension                                                                                                                  | Dimension detail                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BF Subcategory 2.3: National support for subnational budgeting</b>                                                      |                                                                                                                                                                                                                                                                                                                                                           |
| <b>2.3.1 National government provides technical assistance for subnational governments for budget/ financing practices</b> | <p>The national government provides TA for subnational governments to implement green budget and financing practices.</p> <p><i>For example: TA may include support for green subnational procurement and/or initiatives, taxonomies, bonds, certification etc. to support subnational green budgeting and financing practices.</i></p>                   |
| <b>2.3.2 Climate budgets include climate-risk components</b>                                                               | <p>National climate budgets include climate-risk assessment components and support for vulnerable groups on the subnational level.</p> <p><i>For example: support may include allocations to mitigation and adaptation projects, capacity-building measures for groups at risk, and social safety nets.</i></p>                                           |
| <b>2.3.3 National framework allowing subnational budget tagging</b>                                                        | <p>There is a framework/policy at the national level which allows subnational governments to develop toolkits, budget tagging, tax tagging and/or revenue tagging for tracking climate-specific revenue or expenditure.</p>                                                                                                                               |
| <b>BF Subcategory 2.4: Systems of Intergovernmental Transfers</b>                                                          |                                                                                                                                                                                                                                                                                                                                                           |
| <b>2.4.1 National intergovernmental transfers supporting subnational mitigation Goals</b>                                  | <p>Intergovernmental transfers (from national to subnational) are in places that consider subnational mitigation goals. These transfers are reliable.</p> <p><i>For example, conditional transfers, matching transfers, grants, subsidies, and/or direct performance contracts.</i></p>                                                                   |
| <b>2.4.2 National intergovernmental transfers supporting subnational adaptation Goals</b>                                  | <p>Intergovernmental transfers (from national to subnational) are in place, and subnational adaptation goals are considered. These transfers are transparent and reliable.</p> <p><i>For example, conditional transfers, matching transfers, grants, subsidies, and/or direct performance contracts.</i></p>                                              |
| <b>2.4.3 National intergovernmental transfers incentivizing subnational policies, including climate externalities</b>      | <p>Intergovernmental transfers (from national to subnational) are in place to incentivize subnational government officials to consider climate externalities (such as regional pollution) in their policy and planning.</p> <p><i>For example, conditional transfers, matching transfers, grants, subsidies, and/or direct performance contracts.</i></p> |
| <b>2.4.4 Performance-based conditional transfers for subnational climate goals</b>                                         | <p>There are conditional transfers in place from the national to subnational governments based on climate performance.</p> <p><i>For example, evaluation is based on GHG inventory.</i></p>                                                                                                                                                               |

| Dimension                                                                                        | Dimension detail                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2.4.5 National government climate-risk vulnerability for subnational transfers</b>            | <p>The national government considers climate-risk vulnerability when determining subnational transfers.</p> <p><i>For example, the vulnerability evaluation of subnational regions to climate change impacts (adaptation), considering the specific needs of each subnational region, and distributive justice and prioritization of most affected regions.</i></p>                                                                          |
| <b>BF Subcategory 2.5: Fiscal decentralization and subnational revenue generation</b>            |                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>2.5.1 Clear guidelines for fiscal decentralization</b>                                        | There is a clear regulatory framework and operating policy for fiscal decentralization, including climate action, subnational revenue generation, and reporting mechanisms.                                                                                                                                                                                                                                                                  |
| <b>2.5.2 Subnational revenue diversification allowed and encouraged</b>                          | Subnational governments are allowed and encouraged to diversify their revenue sources to address climate action through a basket of resources such as taxes, including carbon tax, fees and charges.                                                                                                                                                                                                                                         |
| <b>2.5.3 Clarity on expenditures at levels of government (avoid overlapping budgets)</b>         | There is clarity on what level of government is responsible for different functions and corresponding expenditures, and no overlapping governance. Laws/regulations determine the level of government responsible for different expenditures, and there are no overlapping budgets between different levels of government.                                                                                                                   |
| <b>2.5.4 Adequate subnational revenue generation</b>                                             | Subnational governments have adequate revenue generation for climate action and do not rely only on emergency funds or other special funds to cover regular expenses for climate planning.                                                                                                                                                                                                                                                   |
| <b>BF Subcategory 2.6: International and private finance mobilization</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>2.6.1 Private sector investment possible in municipal infrastructure</b>                      | <p>Private investment into municipal infrastructure sectors is allowed. There are no procurement laws or policies which prevent or discourage this type of investment.</p> <p><i>For example, there are tax benefits and/or subsidies in place for the private sector; there are regulatory incentives (e.g., feed-in tariffs, risk mitigating insurance, or others) in place.</i></p>                                                       |
| <b>2.6.2 National policies support private sector investment into subnational climate action</b> | <p>National policies and regulatory frameworks support the engagement of the private sector in subnational climate projects and across subnational regions.</p> <p><i>For example, support may include tax benefits and/or subsidies for private sector investment, regulatory incentives such as feed-in tariffs or risk-mitigating insurance, or funding pools to combine investment across neighboring subnational jurisdictions.</i></p> |
| <b>2.6.3 National support for subnational PPPs</b>                                               | <p>There is national support for public-private partnerships (PPPs) for climate action at the subnational level and across subnational regions.</p> <p><i>For example, support may include national incentives that support PPPs for subnational climate action and also through subnational cooperation.</i></p>                                                                                                                            |

| Dimension                                                                         | Dimension detail                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BF Subcategory 2.7: Creditworthiness and access to capital</b>                 |                                                                                                                                                                                                                                                                      |
| <b>2.7.1 Subnational borrowing capacity for climate investments</b>               | Subnational governments are able to borrow for climate investments. Fiscal frameworks are in place for subnational borrowing. These encourage fiscal responsibility and may include borrowing rules.                                                                 |
| <b>2.7.2 Clear process for sovereign guarantees</b>                               | Subnational governments require a sovereign guarantee/approval from the national government to borrow for climate investments. There is a clear process in place, and this has been done successfully before for at least one subnational government in the country. |
| <b>2.7.3 Subnational credit rating</b>                                            | Subnational governments in the country have applied for and been granted a credit rating.                                                                                                                                                                            |
| <b>2.7.4 Green bond issuance</b>                                                  | Subnational governments in the country have issued municipal bonds. There are frameworks in place for municipal bond issuances at the subnational level.                                                                                                             |
| <b>2.7.5 Municipal bond issuance</b>                                              | Subnational governments in the country have issued green bonds. There are frameworks in place for municipal bond issuances at the subnational level.                                                                                                                 |
| <b>2.7.6 National support for first-time subnational bond issuance</b>            | The national government provides TA and/or capacity-building programmes for subnational governments to issue municipal bonds for the first time, including guidance on managing bond proceeds.                                                                       |
| <b>2.7.7 National government facilitates pooled financing</b>                     | The national government facilitates pooled financing mechanisms that can issue bonds on behalf of multiple subnational governments.                                                                                                                                  |
| <b>BF Subcategory 2.8: Potential for co-financing and/or innovative financing</b> |                                                                                                                                                                                                                                                                      |
| <b>2.8.1 National Development Bank potential for co-financing</b>                 | The country has a national development bank(s) (NDB) and/or public development bank(s) (PDB) that supports subnational or urban climate infrastructure projects, which could offer the potential for co-financing and de-risking financing for externals.            |
| <b>2.8.2 National investment funds potential for co-financing</b>                 | There are national and/or regional investment funds that could offer the potential for co-financing of urban climate initiatives/projects.                                                                                                                           |
| <b>2.8.3 Blended finance</b>                                                      | There is national support for subnational involvement in innovative financing mechanisms for climate action, such as blended finance.                                                                                                                                |
| <b>2.8.4 Carbon markets</b>                                                       | There is national support for subnational involvement in innovative financing mechanisms for climate action, such as carbon markets.                                                                                                                                 |
| <b>2.8.5 Special purpose vehicle</b>                                              | There is national support for the use of a special purpose vehicle (SPV) or special purpose entity (SPE) to limit liability, provide innovative project funding, and allow cross-border transactions on the subnational level.                                       |

| Climate data (CD)                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subcategory 3.1: National-level climate data                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3.1.1 Local Climate Databases                                                               | There is a national mechanism for locally centralized & digitalized database services on climate adaptation and mitigation (including GHG inventory).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3.1.2 National government has access to good national climate data                          | The national government has access to good, comprehensive climate data at the national level covering both mitigation and adaptation. For mitigation, data should follow the Transparency, Accuracy, Consistency, Comparability, and Completeness (TACCC) principles.                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Subcategory 3.2: Subnational-level climate data                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3.2.1 Self-reporting mechanism for subnational governments to update their climate data     | There is a digitalized self-reporting mechanism for subnational governments to update their data on the national database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3.2.2 National support for subnational research centers on climate data                     | <p>The national government provides support to establish regional and/or local-level research centers to support subnational climate data.</p> <p><i>These centres could, for example, include partnerships with universities and/or research bodies, civil society, and the private sector.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3.2.3 National financial support and TA to analyze climate data.                            | The national government provides financial support and TA to the subnational government to analyze subnational climate data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3.2.4 National government ensures good quality and availability of subnational climate data | <p>The national government ensures that there is good quality subnational climate data available for subnational governments. For mitigation data, this is defined as following TACCC principles: transparency, accuracy, consistency, comparability and completeness. The data is also timely and covers mitigation and adaptation (including identifying emissions sources, designing GHG inventories, disaster and climate risk assessments, and long-term climate change scenarios).</p> <p><i>For example, support may include technical support, developing protocols and associated standardized terms of reference, creating national information technology platforms to host inventory data, etc.</i></p> |

## Vertical and horizontal coordination (VHC)

### VHC Sub-Category 4.1: National support for subnational coordination

|                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4.1.1 National support for horizontal coordination for climate planning and risk assessment</b>             | The national government supports and/or mandates regional strategies that coordinate climate actions between subnational governments and encourage climate planning and assessment of risks beyond individual boundaries. Specify whether support includes technical and financial support.                                                                                                                                                                                                                                         |
| <b>4.1.2 National support for horizontal/vertical coordination for shared climate investment opportunities</b> | The national government supports subnational governments in coordinating and identifying opportunities for shared climate investments (whether across levels of government or between jurisdictions). Specify whether support includes technical and financial support.                                                                                                                                                                                                                                                             |
| <b>4.1.3 National support for vertical coordination on climate action</b>                                      | <p>There are mechanisms in place for vertical coordination (across levels of government) on climate action supported by the national government. Specify whether support includes technical and financial support.</p> <p><i>For example, there are city deals or contracts, regional or local development strategies, platforms for intergovernmental dialogue and dedicated regional development agencies.</i></p>                                                                                                                |
| <b>4.1.4 National support for horizontal coordination on climate action</b>                                    | <p>There are mechanisms in place for horizontal coordination (between/across jurisdictions) on climate action supported by the national government. Specify whether support includes technical and financial support.</p> <p><i>For example, the national government encourages horizontal coordination through financial or non-financial incentives, agreements between jurisdictions, regional or local development strategies, platforms for intergovernmental dialogue and/or dedicated regional development agencies.</i></p> |
| <b>4.1.5 National support for international coordination on climate action</b>                                 | There are mechanisms in place for international coordination and international peer learning for subnational governments supported by the national government. Specify whether support includes technical and financial support.                                                                                                                                                                                                                                                                                                    |

### Subcategory 4.2: Public involvement and stakeholder engagement

|                                                                                               |                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4.2.1 National requirements for public participation in subnational climate regulation</b> | There is a national regulation/legislation/mechanism that requires subnational governments to integrate public participation into their climate actions regulation/mechanism. |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                             |                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4.2.2 National support to integrate civil society in subnational climate planning</b>    | The national government facilitates forums and/or partnerships for subnational governments to integrate civil society, the public, and the private sector into their climate actions and planning. |
| <b>Subcategory 4.3: National cooperation and peer learning</b>                              |                                                                                                                                                                                                    |
| <b>4.3.1 National government engages in peer learning</b>                                   | The national government engages in peer learning (with other countries, networks, or technical advisers) on climate finance and/or subnational climate finance.                                    |
| <b>4.3.2 National cooperation with PPFs for subnational climate infrastructure projects</b> | There is evidence of national cooperation with Project Preparation Facilities (PPFs) for climate infrastructure projects on the subnational level.                                                 |

### Appendix 3. Institutions responsible for the implementation of sector-specific climate action

| Sector                    | National Level <sup>1</sup>                                                                                           | Subnational Level <sup>2</sup>                                                                            |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Energy</b>             | Ministry of Energy and Mineral Resources<br>Ministry of Transportation<br>Ministry of Industry                        | Energy and Mineral Resources (only at the Provincial level)<br>Transportation Agency<br>Industrial Agency |
| <b>IPPU</b>               | Ministry of Industry                                                                                                  | Industrial Agency                                                                                         |
| <b>AFOLU</b>              | Ministry of Agriculture<br>Ministry of Environment and Forestry                                                       | Environmental (and Forestry) Agency<br>Agriculture Agency                                                 |
| <b>Waste</b>              | Ministry of Public Works and Housing<br>Ministry of Environment and Forestry                                          | Environmental Agency<br>Public Works Agency                                                               |
| <b>Marine and coastal</b> | Ministry of Marine and Fisheries<br>Ministry of Public Works and Housing<br>Ministry of Agrarian and Spatial Planning | Marine and Fisheries Agency<br>Public Works, Water Resources, Spatial Planning Agency                     |
| <b>Water</b>              | Ministry of Public Works and Housing<br>National Disaster Management Agency                                           | Public Works, Water Resources, Spatial Planning Agency<br>Disaster Management Agency                      |
| <b>Agriculture</b>        | Ministry of Agriculture<br>Ministry of Public Works and Housing                                                       | Agriculture Agency<br>Public Works Agency                                                                 |
| <b>Health</b>             | Ministry of Health                                                                                                    | Health Agency                                                                                             |

In addition to the above-mentioned ministries, there are ministries/agencies with relevant responsibilities to climate change which have participated in national climate budget tagging, including the Ministry of Social Affairs for social protection, the Ministry of Home Affairs for subnational government supervision, the National Research and Innovation Agency, the Geospatial Information Agency, the Meteorology, Climatology, Geophysics Agency and the Statistical Agency.

<sup>1</sup> The names of Line Ministries are based on the 2020-2024 Presidential administration.

<sup>2</sup> Nomenclature at the subnational level depends on the needs and scope of works which vary across subnational governments.

## Appendix 4. Reference regulations

Some of the regulations discussed in this report are detailed below, while others can be used for further reference with the understanding that they serve as an umbrella for implementing climate-related activities at the subnational level. This list is consolidated by ESCAP using the snowball and browsing approach, which does not guarantee comprehensiveness and some relevant regulations might be missing from this list. This assessment only identifies the availability of specific content in the regulations and does not conduct a deep analysis of each of them. A detailed and comprehensive analysis of the respective regulations is beyond the scope of this assessment.

| Regulations | Title                                                                                                                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Law 6/1994  | <b>United Nations Framework Convention on Climate Change (UNFCCC) Ratification</b><br>Encourages subnational governments to develop and coordinate local climate action plans that reflect the commitments under UNFCCC. |
| Law 17/2004 | <b>Kyoto Protocol Ratification to the UNFCCC</b><br>Necessitates subnational governments to harmonize regulations with national laws derived from international commitments.                                             |
| Law 24/2007 | <b>Disaster Management</b><br>Mandates the establishment of local disaster management agencies (BPBD) at subnational level, to align and complement national laws.                                                       |
| Law 27/2007 | <b>Coastal Zone and Small Islands Management</b><br>Mandates subnational governments to develop plans for managing coastal and marine resources.                                                                         |
| Law 30/2007 | <b>Energy</b><br>Mandates subnational governments to create local energy plans.                                                                                                                                          |
| Law 18/2008 | <b>Waste Management</b><br>Mandates subnational governments to develop solid waste management plans and implement waste segregation at the source.                                                                       |
| Law 32/2009 | <b>Environmental Protection and Management</b><br>Mandates subnational governments as integral to implementing environmental policies.                                                                                   |
| Law 12/2011 | <b>Legislation Making</b><br>Establishes a clear hierarchy of legal instruments, which includes subnational (provincial, regency/city) as part of the legal framework.                                                   |
| Law 23/2014 | <b>Local Governments</b><br>Distinguishes the role and responsibility of each level of government in delivering services.                                                                                                |
| Law 16/2016 | <b>Paris Agreement Ratification to the UNFCCC</b><br>Encourages subnational governments to create climate action and adaptation plans to reflect the Paris Agreement's commitments.                                      |

| Regulations                     | Title                                                                                                                                                                                                                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Law 7/2021                      | <b>Harmonization of Tax Regulations</b><br>Clarifies taxation roles and responsibilities of national and subnational governments and incentivizes businesses to reduce emission.                                                                                                           |
| Law 4/2023                      | <b>Collection of Certain Goods and Services Tax on Electricity</b><br>Mandates subnational governments to use at least 10% of income from electricity for lighting public walks. Under carbon exchange, can impact how subnational governments manage emissions from industrial processes. |
| Government Regulation 38/2011   | <b>River Basin Management</b><br>Requires subnational governments to develop management plans that consider climate impacts on water availability and quality.                                                                                                                             |
| Government Regulation 81/2012   | <b>Management of Household Waste and Household Waste</b><br>Guides the national government to support subnational governments in research and development to manage waste.                                                                                                                 |
| Government Regulation 79/2014   | <b>National Energy Policy</b><br>Mandates subnational governments to develop their own energy plans that are consistent with the national energy policy.                                                                                                                                   |
| Government Regulation 46/2016   | <b>Guidelines to Conduct Strategic Environmental Assessment</b><br>Mandates subnational governments to conduct strategic environmental assessments (KLHS) for major development projects.                                                                                                  |
| Government Regulation 46/2017   | <b>Environmental Economic Instrument</b><br>Requires subnational governments to align their environmental policies with national objectives.                                                                                                                                               |
| Government Regulation 27/2020   | <b>Specific Waste Management</b><br>Emphasizes the responsibilities of subnational governments in managing waste to reduce environmental impacts.                                                                                                                                          |
| Government Regulation 16/2021   | <b>Implementation of Green Building</b><br>Empowers subnational governments to enforce green building standards for particular building type within their jurisdiction.                                                                                                                    |
| Government Regulation 22/2021   | <b>Implementation of Environmental Management and Protection</b><br>Gives responsibility to subnational governments to ensure businesses within their jurisdictions comply with environmental standards.                                                                                   |
| Government Regulation 112/2022  | <b>Acceleration of Renewable Energy Development for Electric Power Supply</b><br>Empowers subnational governments to actively participate in the transition towards renewable energy.                                                                                                      |
| Government Regulation 59/2022   | <b>Urban Areas</b><br>Provides guidelines for the planning, development and management of urban areas, which include both cities and districts.                                                                                                                                            |
| Presidential Regulation 38/2015 | <b>Government Cooperation with Business Entities in the Provision of Infrastructure</b><br>Mandates subnational governments to plan and identify infrastructure activities in cooperation with business entities.                                                                          |

| Regulations                                                    | Title                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Presidential Regulation 22/2017</b>                         | <b>National Energy Master Plan</b><br>Guides subnational governments in their planning coordination for cross-sectoral energy.                                                                                                                                                                                                    |
| <b>Presidential Regulation 97/2017</b>                         | <b>National Policy and Strategy on Household Waste Management</b><br>Mandates subnational governments to formulate local policies and strategies based on the national framework on household waste.                                                                                                                              |
| <b>Presidential Regulation 35/2018</b>                         | <b>Acceleration of the Construction of Waste Processing Plants into Electrical Energy Based on Environmentally Friendly Technology</b><br>aims to accelerate the establishment of waste to energy (WtE) facilities using environmentally friendly technology.                                                                     |
| <b>Presidential Regulation 77/2018</b>                         | <b>Environmental Fund Management</b><br>Mandates the development of a national body for environmental fund management.                                                                                                                                                                                                            |
| <b>Presidential Regulation 27/2021</b>                         | <b>Facilitation, Protection and Empowerment of Cooperatives &amp; MSMEs</b><br>Introduces provisions for carbon taxation and trading, influencing subnational governments' approach to emissions from IPPU.                                                                                                                       |
| <b>Presidential Regulation 98/2021</b>                         | <b>Carbon Pricing</b><br>Mandates subnational governments (provincial and municipal) to act on climate based on GHG inventory and vulnerability analysis.                                                                                                                                                                         |
| <b>Presidential Regulation 112/2022</b>                        | <b>Renewable Energy Acceleration for Electricity</b><br>Sets the price of renewable energy and is inclusive to subnational governments to accelerate the development of renewable energy.                                                                                                                                         |
| <b>Presidential Regulation 12/2025</b>                         | <b>National Medium Term Development Plan (RPJMN) 2025-2029</b><br>Prioritizes green and blue economic development, urban areas as centres for economic growth, industrialization supported by natural resources, among others.                                                                                                    |
| <b>Minister of Environment and Forestry 68/2016</b>            | <b>Domestic Wastewater Quality Standards</b><br>Emphasizes subnational government responsibilities in reducing waste generation and improving waste processing techniques.                                                                                                                                                        |
| <b>Minister of Environment and Forestry Regulation 70/2017</b> | <b>Procedures for the Implementation of Reducing Emission from Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forest and Enhancement of Forest Carbon Stocks</b><br>Provides guidelines for subnational governments and how to engage in emission reduction activities related to forests. |
| <b>Minister of Environment and Forestry Regulation 72/2017</b> | <b>Guidelines for the Implementation of Measurement, Reporting and Verification of Climate Change Control Actions and Resources</b><br>Mandates subnational governments to comply with national standards on emissions reductions in the AFOLU sector.                                                                            |
| <b>Minister of Environment and Forestry Regulation 73/2017</b> | <b>Guideline to Implement and Report National Greenhouse Gas Inventory</b><br>Provides guidelines inclusive to subnational government as one of the parties who are in charge for GHG inventory.                                                                                                                                  |

| Regulations                                                 | Title                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minister of Environment and Forestry 20/2017                | <b>Emission Quality Standards for New Types of Motor Vehicles Category M, N, O</b><br>Gives responsibilities to subnational governments to enforce the emission standards set by this regulation within their jurisdictions.                                    |
| Minister of Environment and Forestry Regulation 7/2018      | <b>Guidance for Vulnerability, Risks and Climate Change Impact Assessment</b><br>Requires subnational governments to implement the guidelines by conducting vulnerability assessments tailored to local contexts.                                               |
| Minister of Environment and Forestry 75/2019                | <b>Roadmap for Waste Reduction by Producers</b><br>Extends the responsibility of waste producers in manufactures, food and beverages, and retails to also be involved in solid waste management.                                                                |
| Minister of Home Affairs 70/2019                            | <b>Subnational Government Information System</b><br>Establishes a framework to enhance data management and information-sharing among subnational governments, including climate data.                                                                           |
| Minister of Home Affairs Regulation 90/2019                 | <b>Classification, Codification and Nomenclature of Regional Development and Financial Planning</b><br>Focuses on enhancing local administrative functions and public service delivery.                                                                         |
| Minister of Finance 137/2019 and 24/2021 (amendments)       | <b>Organization and Work Procedures of the Environmental Fund Management Agency</b><br>Formalizes the establishment of the BPD LH, which is responsible for managing environmental funds across various sectors, including forestry, energy and carbon trading. |
| Minister of Finance Regulation 216/2021                     | <b>Use, Monitoring and Evaluation of Forestry Natural Resources Sharing on Reforestation</b><br>Encourages subnational governments to optimize the use of sharing fund reforestation (DBH-DR).                                                                  |
| Minister of Energy and Mineral Resources Regulation 16/2022 | <b>Carbon Pricing Implementation for Power Plant Subsector</b><br>Encourages subnational governments to engage in monitoring emissions, facilitating carbon trading and enforcing emission reduction targets.                                                   |
| Minister of Energy and Mineral Resources Regulation 16/2022 | <b>Carbon Trading for the Forestry Sector</b><br>Empowers subnational governments to oversee local carbon trading initiatives and ensure compliance with national standards.                                                                                    |
| Minister of Environment and Forestry Regulation 21/2022     | <b>The Procedure for Carbon Pricing Implementation</b><br>Tasks subnational governments to ensure local businesses and industries comply with established carbon pricing mechanisms.                                                                            |
| Minister of Environment and Forestry Regulation 168/2022    | <b>Operational Plan for FOLU NET SINK 2030</b><br>Provides operational guidance to accelerate the mitigation actions particularly for the FOLU sector.                                                                                                          |
| Minister of Finance Regulation 125/2023                     | <b>Subnational Incentive Fund Management</b><br>Regulates the implementation of Subnational Incentive Funds (DID), with incentives based on subnational government performance. Waste management has been part of the indicators since 2018.                    |

| Regulations                                                                                                        | Title                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Head of Indonesia Financial Authority Regulation 14/2023                                                           | <b>Carbon Trading through Carbon Exchange</b><br>Tasks subnational governments to establish local carbon exchanges and facilitate participation of local stakeholders in carbon trading.                                                                            |
| Minister of Environment and Forestry Regulation 7/2023                                                             | <b>The Procedure of Carbon Pricing Implementation in the Forestry Sector</b><br>Tasks subnational governments to oversee carbon pricing compliance and ensure forestry activities align with national climate objectives.                                           |
| Minister of Home Affairs Regulation 15/2024                                                                        | <b>Guideline for 2025 Subnational Budget Planning</b><br>Mandates subnational governments to implement ecological fiscal transfer to consider environmental protection and management performance.                                                                  |
| Presidential Regulation 38/2015                                                                                    | <b>Cooperation between Governments and Enterprises (KPBU) for Infrastructure Provision</b><br>Encourages subnational governments to facilitate infrastructure investments in the water sector through public-private partnerships.                                  |
| Minister of Finance Regulation 223/2012                                                                            | <b>Provision of a Viability Gap Fund as part of the Construction Cost in the KPBU Project for Infrastructure Provision</b><br>Allows subnational governments to access financial support from national government to bridge the project costs and expected revenue. |
| Minister of Finance Regulation 170/2015                                                                            | <b>Guidance to Provide Viability Gap Fund as part of the Construction Cost in the KPBU Project for Infrastructure Provision</b><br>Empowers subnational governments to initiate and implement essential infrastructure projects that address local needs.           |
| Minister of Public Works and Housing Regulation 21/2021                                                            | <b>Green Building Performance Assessment</b><br>Empowers subnational governments to enforce compliance, encourage the adoption of environmentally friendly construction practices and facilitate the certification process for buildings that meet green standards. |
| Joint Circular Letter between Minister of National Development Planning Agency and Minister of Home Affairs 1/2024 | <b>Synchronization of national long-term development plan and subnational long-term development plan 2025-2045</b><br>Mandates subnational governments to follow climate-related indicators included in the national long-term development plan.                    |
| Financial Services Authority (OJK) 51/2017                                                                         | <b>Implementation of Sustainable Finance for Financial Services Institutions, Issuers and Public Companies</b><br>Guides the implementation of sustainable finance for financial service institutions, issuers and public companies.                                |
| Financial Services Authority (OJK) 60/2017                                                                         | <b>Issuance and Requirements for Green Debt Securities (Green Bond)</b><br>Provides a framework for the issuance of green bonds, aimed at financing projects with positive environmental impacts.                                                                   |

## Appendix 5. Financing instruments that can fund climate action at the subnational level

| Financing Instruments                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National ministries/agencies budget</b> | National ministries/agencies manage activities that are part of national priorities at the subnational level in coordination with their regional offices and targeted subnational governments. This fund can finance climate-related activities under national ministries/agencies' authorities such as Climate Village Programs. Subnational governments are encouraged to co-finance the activities for sustainability purposes. Budget allocation requires parliamentary approval.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>General Allocation Fund</b>             | This transfer is a semi-block grant that is regularly allocated by national governments to reduce inequality in fiscal capacity and public services among subnational governments. This transfer has two components: a full-block grant in which subnational governments have full authority to allocate the use of the grant and the specific-block grant in which subnational governments must follow the specific use of the fund regulated by the national government. Subnational governments may use this fund to finance activities related to climate change although there is no specific indicator on climate or environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Specific Allocation Fund (DAK)</b>      | <p>This transfer targets national priorities (sector or project) that fall on subnational government responsibilities. DAK has three types:</p> <ul style="list-style-type: none"> <li>• Physical DAK targets constructing infrastructures or procuring equipment for public services. The allocation is based on the budget, past or ongoing performance, fiscal capacity, amongst others. This includes roads and bridges, housing and human settlements, health and education facilities, energy, or public transportation.</li> <li>• Non-physical DAK targets the operational cost of public services. The allocation is based on the needs of the subnational governments, fiscal capacity and performance. This includes education, health and poverty reduction.</li> <li>• Grants target specific physical infrastructure and/or public services based on agreements between national and subnational governments. The allocation is based on the needs of the grant, fiscal capacity and performance.</li> </ul> <p>Based on policy direction, Bappenas determines DAK's themes, types, sector, subsector and indicative priority locations. Accordingly, subnational governments submit proposals for physical DAK or grants. Together with the relevant ministry, Bappenas will assess the proposal of physical DAK, while MoF will determine the grant proposal.</p> |

| Financing Instruments                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fiscal incentive funds</b>            | <p>Several incentives are highly relevant to environmental protection:</p> <ul style="list-style-type: none"> <li>• Ecological fiscal transfer: This transfer is a performance-based incentive that encourages local governments to invest in environmental protection initiatives and sustainable land-use practices. By linking fiscal incentives to ecological outcomes, this transfer aims to foster a balance between economic development and environmental sustainability. It can be managed by national governments (TANE), provincial governments (TAPE) and district governments (TAKE). The fund is mostly used for reforestation and environmental protection purposes.</li> <li>• Subnational Incentive Funds (Dana Insentif Daerah (DID)). This fund is a performance-based transfer that includes waste management as one of the indicators.</li> </ul> |
| <b>Revenue-sharing funds</b>             | <p>Revenue-sharing funds (<i>Dana Bagi Hasil</i> (DBH)) are origin-based transfers that include revenue from taxes and natural resources management. It is transferred as a form of block grant thus giving subnational governments full authority to use the fund based on needs. This fund can finance climate action. For example, the Reforestation Fund (DBH-DR), a type of DBH from the forestry sector, can be used to expand forest area, improve forest management and biodiversity, and empower forest communities.</p>                                                                                                                                                                                                                                                                                                                                      |
| <b>Public-private partnerships (PPP)</b> | <p>PPP are increasingly recognized as essential mechanisms for funding climate action at the subnational level.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Debts</b>                             | <p>Subnational governments can utilize debt instruments, such as bond issuance (green sukuk, green bond, municipal bond, etc.), and access loans from national development banks or special mission vehicles such as PT SMI. To do so, it is crucial for subnational governments to improve creditworthiness which can be achieved through capacity-building initiatives that focus on financial management and project development, enabling local authorities to create bankable projects that attract investment.</p>                                                                                                                                                                                                                                                                                                                                               |
| <b>Direct investment</b>                 | <p>Private capital can be mobilized to contribute to addressing the impacts of climate change at the subnational level through direct investment. FSA has established a sustainable financial taxonomy to guide entities in balancing economic growth and environmental protection.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Grants</b>                            | <p>Subnational governments can access both national and international grants aimed at climate action. National programmes often provide funding for local initiatives that align with national climate goals, while international grants from organizations, such as UNDP or Donor/Fund agencies, support specific projects and capacity-building efforts related to climate resilience and adaptation. Conducting feasibility studies and engaging stakeholders can ensure that proposed initiatives meet both local needs and funding criteria.</p>                                                                                                                                                                                                                                                                                                                  |
| <b>Others</b>                            | <p>Other sources include corporate social responsibility, faith-based funds and other funding from the society that can fund climate-related activities. Funding from society has been utilized during disaster emergencies.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Appendix 6. Some climate data reporting and analytical information systems

| Platform                                          | Purpose                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AKSARA<sup>1</sup></b>                         | Adaptation, mitigation                 | As of the latest update year (2023), the platform has recorded 32,439 climate mitigation activities with a potential reduction of 6,374 Mt CO <sub>2</sub> eq cumulatively and 1,308 adaptation activities with a potential reduction of IDR 108.29 billion in economic losses. There are significant gaps between the targets set and the implementation since 2021, which may indicate a lack of participation in reporting. Raw data cannot be downloaded.                                                                                                                                                                                                 |
| <b>National Registry System (SRN)<sup>2</sup></b> | Adaptation, mitigation, carbon pricing | The SRN records mitigation and adaptation activities, verified GHG emissions reductions, cap and trade (PTBAE-PU) data, and emissions reduction certificates (SPE). The latter two can be used for carbon trading, however there is no data on the issued PTBAE-PU. As of the latest update (December 2024), the platform dashboard has recorded 15,253 climate-related activities, most of which are related to mitigation activities, and only 103 are verified. There is an inconsistency between the latest update of the emission reduction which shows the year 2022. The platform also records 428,027 emission reduction certificates (year unknown). |
| <b>SIGNSMART<sup>3</sup></b>                      | Mitigation                             | The platform shows national GHG emissions from 2000-2023 with fluctuating trends. However, it lacks a feature to view the participation rate. The sectors are divided into energy, IPPU, agriculture, forestry and waste. Enterprises can also submit their data through this platform.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>SIDIK<sup>4</sup></b>                          | Adaptation                             | An online tool that provides the level of vulnerability (indicative) of an area (available all the way to the village administration units) throughout Indonesia. The Fifth Assessment Report (AR5) of the IPCC is used as an approach in the calculation process in SIDIK to assess the level of vulnerability, potential impacts and climate risks. SIDIK supports subnational governments in developing their environmental assessments, setting priorities for the Climate Village Program (Proklim). At the same time, Proklim can be used to verify SIDIK's data.                                                                                       |

<sup>1</sup> For more information, see [https://pprk.bappenas.go.id/aksara/aksara\\_dashboard\\_nasional/](https://pprk.bappenas.go.id/aksara/aksara_dashboard_nasional/)

<sup>2</sup> For more information, see <https://srn.menlhk.go.id/index.php?r=home%2Findex>

<sup>3</sup> For more information, see <https://signsmart.menlhk.go.id/v2.1/app/>

<sup>4</sup> For more information, see <http://sidik.menlhk.go.id/>

## Appendix 7. Recommended short-, medium-, and long-term actions at the national and subnational levels to improve subnational climate finance

| Area                                            | National-Level Actions                                                                         | Subnational Role                                                                      |
|-------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Short-term actions</b>                       |                                                                                                |                                                                                       |
| <b>Climate Budget Tagging (CBT)</b>             | Make CBT mandatory across ministries and integrate climate tags into SIPD/SIKD systems         | Begin tagging climate-related expenditures and participate in training                |
| <b>Data systems &amp; literacy</b>              | Consolidate AKSARA, SRN, SIGN-SMART into a unified portal with localized dashboards            | Use platforms for planning and reporting; request technical support when/where needed |
| <b>Public participation</b>                     | Issue national guidelines for inclusive climate planning (e.g., climate assemblies, forums)    | Establish multistakeholder climate forums and integrate feedback into local plans     |
| <b>Capacity building</b>                        | Launch national training programmes on climate finance, project preparation, and data analysis | Nominate focal points and participate in peer learning and workshops                  |
| <b>Medium-term actions</b>                      |                                                                                                |                                                                                       |
| <b>Ecological Fiscal Transfers (EFT)</b>        | Expand EFT schemes (TAPE/TAKE) to include broader climate indicators and link to performance   | Align local plans with EFT criteria and report outcomes                               |
| <b>Green budgeting &amp; revenue tools</b>      | Introduce green budgeting guidelines and enable climate-linked local revenue instruments       | Implement environmental fees and earmark revenues for climate action                  |
| <b>Municipal bonds &amp; creditworthiness</b>   | Provide technical assistance and pooled financing mechanisms for municipal green bonds         | Prepare feasibility studies and improve financial management practices                |
| <b>Vertical &amp; horizontal coordination</b>   | Formalize regional climate coordination bodies and joint investment planning platforms         | Participate in cross-jurisdictional planning and shared infrastructure projects       |
| <b>Long-term actions</b>                        |                                                                                                |                                                                                       |
| <b>Dedicated climate transfers</b>              | Establish climate-specific intergovernmental transfers based on risk and performance           | Use funds for strategic climate investments and report transparently                  |
| <b>Subnational climate institutions</b>         | Create legal mandates for dedicated climate units in local governments                         | Operate climate units to coordinate planning, budgeting, and implementation           |
| <b>International access &amp; peer learning</b> | Decentralize access to international climate finance and promote city-to-city partnerships     | Engage in global networks and develop joint climate projects                          |
| <b>Integrated climate governance</b>            | Embed climate resilience into all aspects of national and subnational development planning     | Mainstream climate across sectors and update local regulations accordingly            |

The proposed short-, medium-, and long-term actions listed above are recommendations based on the analysis undertaken in chapter 3. They are intended to serve as illustrative examples of potential prioritized actions that could strengthen national systems and empower subnational governments.

The actual prioritization and implementation of the recommended actions should be conducted through an inclusive and participatory process, involving all relevant stakeholders, including national and subnational governments, civil society organizations, academia, private sector actors, and development partners. This collaborative approach is essential to ensure that climate finance strategies are contextually appropriate, equitable, and aligned with the country's development and climate goals.

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## Urban-Act

Integrated Urban Climate Action  
for Low-Carbon & Resilient Cities

**JOINT ACTION FOR  
CLIMATE-FRIENDLY  
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