



Economic and Social Commission for Asia and the Pacific**Seventy-ninth session**

Bangkok and online, 15–19 May 2023

Item 4 (c) of the provisional agenda*

Review of the implementation of the 2030 Agenda for Sustainable Development in Asia and the Pacific and issues pertinent to the subsidiary structure of the Commission: environment and development**Enabling cities to take climate action and advance the Sustainable Development Goals****Note by the secretariat***Summary*

While the coronavirus disease (COVID-19) pandemic continues to demand government attention throughout the Asia-Pacific region and beyond, focus has begun to shift from managing infections towards making a sustainable recovery. As this happens, an opportunity for a green, low-carbon and resilient recovery could present itself. Climate change mitigation and adaptation action has returned to the forefront, especially as the twenty-eighth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change is approaching. In the period ahead of that session, can cities emerge as leaders in promoting a low-carbon, climate-resilient future in Asia and the Pacific?

To achieve ambitious emissions reduction targets while meeting the adaptation needs that will arise from the evermore frequent and extreme impacts of climate change, countries in Asia and the Pacific, as well as throughout the world, will need to adopt increasingly innovative and responsive approaches. An essential part of these approaches is the vertical integration of climate change action among and between different levels of government under a multilevel governance framework that involves different combinations of public, private and non-State actors and, importantly, citizens themselves.

The present document explores the linkages between climate change ambition and policies, multilevel governance frameworks and the vertical integration of climate action in cities in the Asia-Pacific region. It focuses on (a) specific instruments, namely, decentralization, finance, and measurement, reporting and verification systems; and (b) cross-cutting instruments for increasing country- and city-level capacities and citizen engagement and participation.

The Economic and Social Commission for Asia and the Pacific may wish to take note of the findings and policy recommendations contained in the present document and advise on the future work of the secretariat, including in the lead-up to the Eighth Asia-Pacific Urban Forum, to be held in October 2023.

* ESCAP/79/1/Rev.2.

I. Strategic context

1. Cities play a critical role in achieving national targets for climate change mitigation and adaptation. The urban population in Asia and the Pacific is 2.3 billion, comprising 54 per cent of all persons living in urban areas on the planet. The region's urban population is expected to rise to more than 2.8 billion by 2030 and reach nearly 3.5 billion by 2050. Those numbers equate to adding four Tokyo-sized cities every year.¹ Urbanization pathways in terms of economies, buildings, transport systems and energy supplies will determine the regional trajectory of greenhouse gas emissions and the level of resilience to climate change. Many of the projected impacts of climate change could be avoided if the world rapidly decarbonized its urban economies. Global emissions could be halved just by countries building climate-smart cities (considering the emissions savings from the upgrades to existing infrastructure and from the use of new and energy-efficient infrastructure, despite the additional emissions generated by construction), adopting strong policies and accelerating the deployment of technologies to constrain urban energy use.²

2. The impacts of climate change are already being felt in the region's cities and are projected to significantly worsen as the region continues to urbanize in a largely unsustainable manner. According to the Intergovernmental Panel on Climate Change, current trends in greenhouse gas emissions will result in long-lasting changes in climate systems, increasing the likelihood of severe, pervasive and irreversible impacts on people and ecosystems, putting the achievement of all the Sustainable Development Goals into question.³

3. Climate modelling and economic forecasting suggest that more catastrophic events are on the way. Under projections by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, climate-induced catastrophic ecosystem loss will stress future human settlements by disrupting food supplies, increasing urban heat islands, inducing distress migration to cities from increased flooding, and lead to widespread drought and water stress.⁴

4. Nationally determined contributions form the backbone of the Paris Agreement. They are the commitments each of the parties to the Agreement made to reduce emissions and undertake adaptation action. They also form a key commitment to achieving Sustainable Development Goal 13, on climate action. Countries in the Asia-Pacific region have varying levels of commitment and ambition in their nationally determined contributions. Understanding these commitments (and future updates to them) is important because they signal

¹ *The Future of Asian and Pacific Cities: Transformative Pathways towards Sustainable Urban Development* (United Nations publication, 2019).

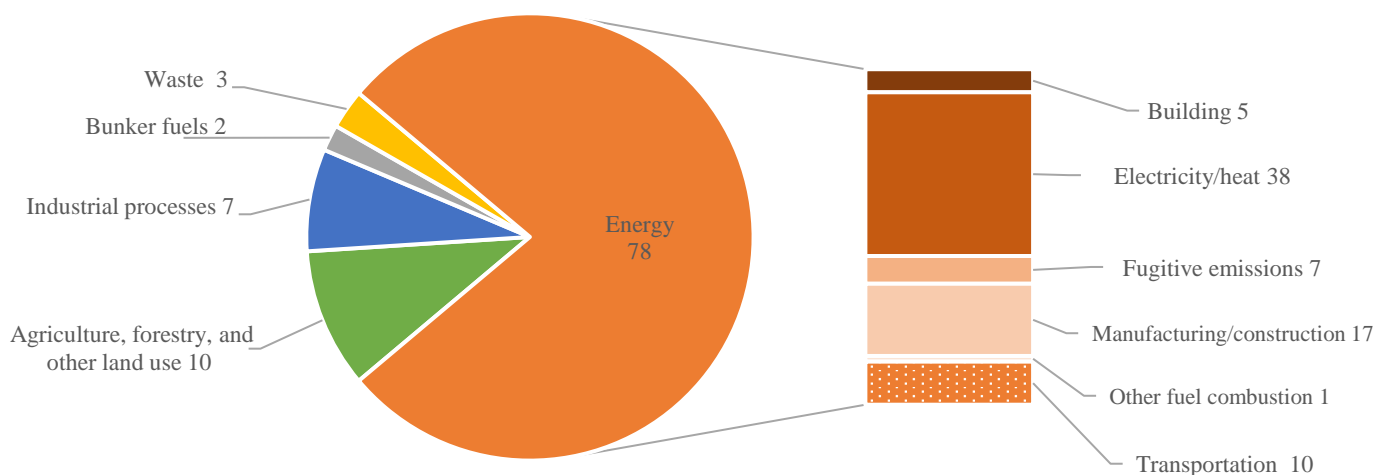
² Felix Creutzig and others, "Urban infrastructure choices structure climate solutions", *Nature Climate Change*, vol. 6, No. 12 (December 2016), pp. 1054–1056; and International Energy Agency, *Energy Technology Perspectives 2016: Towards Sustainable Urban Energy Systems* (Paris, Organisation for Economic Co-operation and Development (OECD) and International Energy Agency, 2016).

³ *Climate Change 2014 Synthesis Report: Summary for Policymakers* (New York, 2014).

⁴ The Global Assessment Report on Biodiversity and Ecosystem Services, Eduardo S. Brondízio and others, eds. (Bonn, Germany, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019); and Guy J. Abel and others, "Climate, conflict and forced migration", *Global Environmental Change*, vol. 54 (January 2019), pp. 239–249.

countries’ climate change mitigation and adaptation priorities. City-level action should contribute to the realization of these commitments, and vertically integrated action will see high levels of cooperation between local and national levels (as well as non-State actors).

Figure I
Emissions by sector in Asia and the Pacific, 2020
 (Percentage)



Source: See <https://zenodo.org/record/5566761#.ZABspXZBzIW> (accessed on 30 November 2022); and European Commission, EDGAR: Emissions Database for Global Atmospheric Research, available at edgar.jrc.ec.europa.eu/emissions_data_and_maps (accessed on 1 March 2023).

5. Figure I shows that energy represents 78 per cent of emissions, with a further 7 per cent coming from industrial processes. Emissions in these sectors are closely correlated with urban areas, as more energy is consumed and more goods are produced in towns and cities, given that they function as centres of population and economic growth. As such, many Asia-Pacific countries, including Bangladesh, China, India, the Lao People’s Democratic Republic, Sri Lanka and Viet Nam, use their nationally determined contributions to make specific urban-related commitments. Meeting the net-zero targets in cities requires more efficient energy use, the expansion of renewable energy sources and effective waste management. These in turn require enhanced financial resources, appropriate technologies, capacity-building support, the availability of market-based mechanisms, and the absorptive capacity of forests and other ecosystems.

6. The table shows urban commitments within nationally determined contributions of members and associate members of the Economic and Social Commission for Asia and the Pacific (ESCAP). “Strong urban content” means that the nationally determined contributions focus on urban climate action explicitly or that there is a strong urban content within sectors. The list excludes members that do not back these priorities with the identification of challenges or with responses. “Moderate urban content” refers to nationally determined contributions with a reference to urban climate action. “Low or no urban content” refers to nationally determined contributions with no urban mention within the text.

7. China, for example, uses its nationally determined contribution to highlight major emissions reductions through improved urban public transportation, while the Republic of Korea will introduce an expansive new green building code. Several other countries, including Afghanistan, Indonesia, Kazakhstan and Myanmar, make commitments in their nationally determined contributions that indirectly address urbanization issues.⁵ Indirect commitments are commitments that refer to mitigation or adaptation priorities in areas such as energy, transport and waste that, while not specific to urban centres, are in greater demand in, and essential to the function of, urban areas. These areas will become more important as countries urbanize because energy consumption, transportation needs and waste generation all increase as a country's economy grows and its population urbanizes.

⁵ United Nations Human Settlements Programme (UN-Habitat), *Urban Climate Action: the Urban Content of the NDCs – Global Review 2022* (Nairobi, 2022), pp. 57–59.

**Urban commitments in nationally determined contributions of members
and associate members of the Economic and Social Commission for Asia
and the Pacific**

<i>Strong urban content</i>	<i>Moderate urban content</i>	<i>Low or no urban content</i>
Bhutan	Afghanistan	Armenia
Cambodia	Australia	Brunei Darussalam
China	Azerbaijan	Cook Islands
India	Bangladesh	Democratic People's Republic of Korea
Kyrgyzstan	Indonesia	Fiji
Lao People's Democratic Republic	Japan	Georgia
Malaysia	Kiribati	Kazakhstan
Myanmar	Maldives	Marshall Islands
Nepal	Mongolia	Micronesia (Federated States of)
Papua New Guinea	Nauru	New Zealand
Sri Lanka	Pakistan	Palau
Türkiye	Republic of Korea	Philippines
Viet Nam	Singapore	Russian Federation
	Solomon Islands	Samoa
	Tajikistan	Timor-Leste
	Thailand	Tonga
	Vanuatu	Turkmenistan
		Tuvalu
		Uzbekistan

Source: UN-Habitat, Urban Climate Action: the Urban Content of the NDCs – Global Review 2022 (Nairobi, 2022).

8. To varying degrees, there are also efforts by ministries in charge of urban development to ensure that climate change is considered in their countries' national urban policies, frameworks and instruments. In some cases, notably India, Indonesia and the Philippines, extensive consideration is given to climate change and urban development. For example, in its report for the Third United Nations Conference on Housing and Sustainable Development, Indonesia highlights the disproportionate consumption of energy in cities and argues that municipalities should be leaders in cutting emissions and that

creating low- or zero-emission cities is among the only way to avoid dangerous climate change.⁶ The Philippines also considers climate change across numerous areas in its report for the Conference, including spatially integrated and climate-resilient housing and basic infrastructure, resilient regional planning and city/local government-level capacity.⁷

9. While nationally determined contributions signal member States' ambitions, national adaptation plans are an important consideration. A national adaptation plan is a country's comprehensive plan for the implementation of adaptation action in the medium to long term and any associated monitoring and evaluation. While some Asia-Pacific countries provide details about implementation structures and responsibilities in their nationally determined contributions, many do not.

10. National adaptation plans have two aims: (a) to reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience; and (b) to facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities – particularly in developing planning processes and strategies – within all relevant sectors and at different levels, as appropriate. This latter aim in particular makes national adaptation plans important frameworks for vertical and horizontal integration because they go beyond stating intentions and setting targets to comprehensively integrating climate change action into sector strategies, plans and budgets. National adaptation plans will therefore become important governing frameworks that guide the interaction between cities and the multilevel governance instruments that are analysed later in the present document (i.e. decentralization; finance; measurement, reporting and verification; capacity; and citizen engagement and participation).

11. To that end, the following section considers whether countries in Asia and the Pacific have multilevel governance frameworks that will enable them to turn nationally determined contribution commitments into real, transformative action that will, through the nationally determined contribution update process, lead to an increase in climate ambition.

II. Multilevel climate frameworks

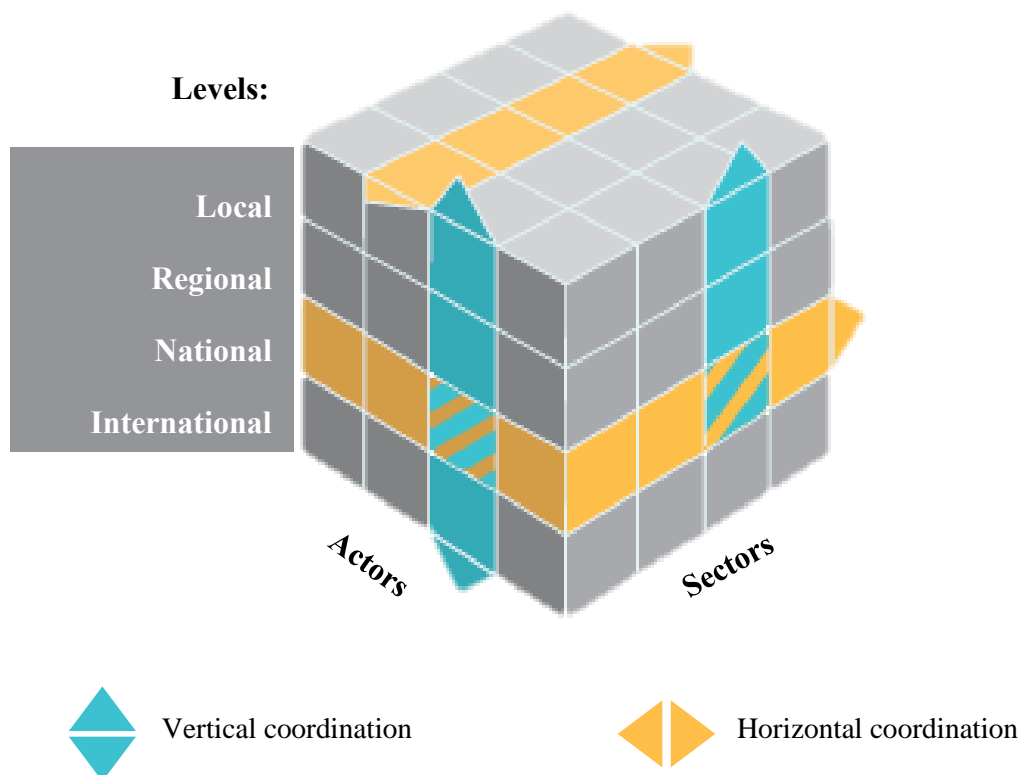
12. In the present document, “multilevel climate governance” refers to “the structural and institutional setting in which different levels of government distribute roles and responsibilities, coordinate and cooperate on climate action; as well as the specific instruments that are implemented at different levels of government to support and implement local climate action” (see figure II).⁸

⁶ Indonesia, Ministry of Public Works and Housing, *Indonesia National Report for Habitat III* (Jakarta, 2016), p. 57.

⁷ Philippines, *Habitat III: the Philippine National Report. A New Urban Agenda: Better, Greener, Smarter Cities in an Inclusive Philippines* (Manila, 2016).

⁸ German Agency for International Cooperation, *Multi-Level Climate Governance Supporting Local Action* (Bonn, Germany, 2018), p. 17.

Figure II
Vertical and horizontal coordination in multilevel climate governance



Actors: Governments, businesses, civil society, etc.

Sectors: Environment, transport, construction, agriculture, etc.

Source: German Agency for International Cooperation, *Multi-Level Climate Governance Supporting Local Action* (Bonn, Germany, 2018).

13. Critical to the concept of multilevel governance is the topic of vertical integration, defined in the present document as “the act of aligning and coordinating climate policies, plans and implementation across different levels of government, leveraging the potential of each respective level through collective efforts and promoting top-down and bottom-up information exchange”.⁹

14. Within the topic of multilevel governance and its frameworks and instruments, why is vertical integration particularly important? The simple answer lies in the complexity of the problems posed to cities by climate change and the opportunities for local action to lower greenhouse gas emissions and build resilience for climate-vulnerable groups. Much climate change mitigation and adaptation action requires complex technical know-how, significant investments of financial resources and delegation by the governing authority. In almost all but the largest cities in the Asia-Pacific region, these financial and technical resources are lacking. This means that even the best-resourced cities cannot address climate change without vertical integration – they rely on financial support, technical guidance, and advice or expertise from the national level (and most likely from the private sector, academia and civil

⁹ C40 Cities Climate Leadership Group, *C40 Climate Action Planning Programme: Vertical Integration Guide* (London, 2020), p. 4.

society). Meanwhile, national Governments rarely have the capacity to centrally plan all climate change mitigation and adaptation action – they need city authorities to be able to define and plan their priority action areas that also support the achievement of the broader national goals set out in the nationally determined contributions or climate change or urban policies.

15. Political alignment between national and city governments – for example, through a clear willingness or mandate – is important for fostering administrative collaboration. Such efforts can help to clarify expectations about what needs to be delivered by which level of government, and to build political consensus to enable each level to play their respective role. City-based coalitions – such as the Climate Alliance in India, which is a platform comprising more than 100 cities to provide peer advice on urban climate action – can enable cities to influence the national Government in a bottom-up process.

16. Vertical integration as part of an effective multilevel governance framework should be seen more broadly than just an approach to human and financial resource scarcity. Climate change mitigation and adaptation action has spatial and scale components that are too great for cities to manage; action to address climate change may not always take place where its consequences occur. Moreover, adaptation action is often required in a different location from where the greatest risk occurs.

17. Reducing emissions from the energy sector is critical. In almost all countries, major financial investment is required to upgrade energy generation and distribution systems to meet energy emissions reduction commitments in the nationally determined contributions. Those new upgrades are technically complex and extremely expensive and their implementation is time-consuming. They can also come with environmental and social risks that require complex safeguard measures to be incorporated into project designs. In addition, the holistic reform of the energy sector would involve major national or international investment in renewable resources, upgrades or overhauls of power grids and (especially in the short and medium terms) behavioural changes in the way people demand energy. Once implemented, renewable energy investments require close monitoring to ensure that the upgrade actually results in a reduction in emissions. This can only be achieved by different levels of government working collaboratively across sectors, often involving private or non-State actors that can provide additional resources. It requires multiple and often complex financial sources and instruments, the delegation of authority, and buy-in from multiple stakeholders, including citizens themselves.

18. Decentralization is the reconfiguring of the relationships between the central Government and subnational governments or administration towards a more cooperative and strategic role for national Governments. It is also a multidimensional concept, as it covers three distinct but interrelated dimensions – fiscal, political and administrative.¹⁰ Fiscal decentralization relates to the ability of local administrations to levy taxes, the extent to which subnational budgets are subsidized from the national level, expenditure autonomy and the ability to borrow. Political decentralization concerns the extent to which local legislators and executives are elected or appointed, including through direct democracy (such as in municipal elections). Administrative decentralization refers to the ability of local governments to appoint their own staff and decide on other local administrative processes.

¹⁰ OECD, *Making Decentralisation Work: a Handbook for Policy-Makers* (Paris, 2019).

These three dimensions have an important relationship with vertically integrated climate action when cities have the human and financial capacities to meet greater functional responsibilities. If cities can raise funds, plan their own action and recruit experts and staff from within and outside government, this will enable them to implement climate change priority action (if such action has been identified). If this action is aligned with national (and international) goals and coordinated with the national and local levels of government, such as city wards and community organizations, governments can be considered to be vertically integrated.

19. Among Asia-Pacific countries, the Philippines has decentralized climate change action to the city level. The Climate Change Act of 2009 was one of the first of its kind in the world; it was specifically designed to set up an institutional framework aimed at strengthening coherence and vertical and horizontal coordination across sectors and levels of government in order to drive forward meaningful climate change action. The Act compels local government units to prepare comprehensive land-use plans and comprehensive development plans that should be informed by risk assessments, scientific data and future climate change projections. Moreover, in accordance with the Act, local climate change action plans are to be aligned with national plans. This structure gives local government units in the Philippines the autonomy to decide their own climate change-related priorities, while ensuring that these priorities are still aligned with national-level goals. This is an example of a country effectively using decentralization and a framework for vertically integrated climate action.

20. However, despite its decentralized governance structure for climate action, there is limited capacity to ensure the effectiveness of local climate change action plans – the Department of the Interior and Local Government monitors only whether plans have been submitted, but not their quality or role in meeting the nationally determined contribution or other national-level policy commitments.¹¹ In the present document, capacity is a theme that is addressed in the following section. However, the key point is that the level of decentralization is an important, although complex, variable in effective multilevel governance for climate action in cities. Its complexity means that decentralization does not automatically result in positive action. Decentralization can lead to blockages and bottlenecks if other levels of government are given responsibilities that they (or their systems) are not capable of handling, or to a lack of transformative action if the incentive structure or financial or legal requirements to act are not in place, or political conflicts become a barrier.

21. In Japan, the Low Carbon City Act (Eco-City Act) also requires the formulation of low-carbon city development plans.¹² The Act is aimed at promoting cross-sectoral emissions reductions, providing tax breaks for certified energy-efficient buildings, and helping to overcome legal and jurisdictional constraints to creating low-carbon city plans. To promote low-carbon development, local governments need to use various legal systems

¹¹ Marcus Andreas and others, *Multi-Level Climate Governance in the Philippines: Shaping Connections for Climate Action* (Berlin, Adelphi; Manila, UN-Habitat, 2018).

¹² Japan, Ministry of Land, Infrastructure, Transport and Tourism, “Low carbon city development”. Available at www.mlit.go.jp/toshi/city_plan/eco-city.html (accessed on 1 March 2023).

(e.g. deregulation systems) and national support policies (e.g. policies for subsidy systems).

22. Another useful example of a State with a multilevel climate framework is Solomon Islands, whose national urban policy decentralizes climate change mandates into the country's decision-making regarding spatial planning, capital investment in infrastructure development, and environmental and ecosystem management. This approach is crucial for the informal settlements in the country's urban and peri-urban areas, which are home to 40 per cent of the country's urban population. Integrating these considerations into local vulnerability assessments of Honiara has supported a pathway that has helped to future-proof the city against climate risk.¹³

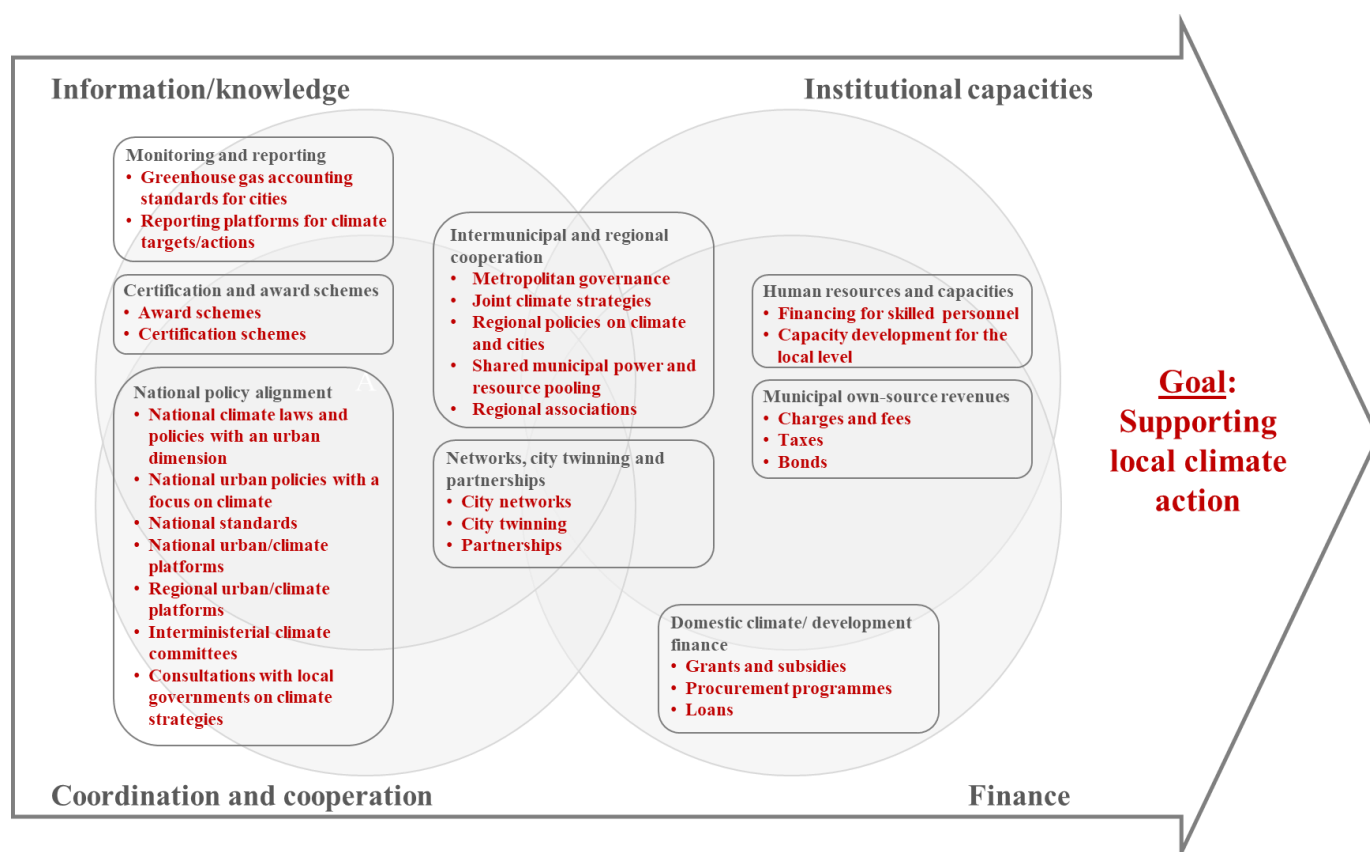
III. Multilevel climate governance instruments, institutional arrangements and actors

23. In the present document, multilevel governance instruments are the specific platforms, initiatives, funding mechanisms and action plans that are implemented to support climate action at the local level. These instruments are then subcategorized further. Given that decentralization is a critical enabler of vertically integrated climate action, finance and measurement, reporting and verification as implementing and institutionalizing instruments are addressed. The present document then provides a review of more general instruments to increase city- and country-level capacities, citizen engagement and participation, and digitization. These instruments are necessary for city- and national-level governments, whether they are planning, implementing, reviewing or institutionalizing climate action. However, these instruments – whether implementing and institutionalizing or cross-cutting – should not be seen in isolation. Rather, improving the use and effectiveness of any of the instruments will generally be supportive of improvements in the others. Increased city-level capacity, for example, can be an enabler for improving city-level finance and measurement, reporting and verification, while greater levels of digitization can support increased citizen engagement and participation.

24. The present document addresses only a limited selection of the instruments for climate action that governments have at their disposal. Figure III highlights a larger selection of possible instruments, with a focus on capacity.

¹³ ESCAP and UN-Habitat, *Climate Change and National Urban Policies in Asia and the Pacific* (Bangkok and Nairobi, 2018).

Figure III
Instruments for climate action at subnational and local levels



Source: German Agency for International Cooperation, *Multi-Level Climate Governance Supporting Local Action* (Bonn, Germany, 2018), p. 27.

A. Leveraging climate and municipal finance for implementation

25. Finance is a critical instrument for cities to implement climate and other action aimed at achieving sustainable development. Finance is interlinked with the other issues highlighted in the present document, especially decentralization. Put simply, without finance, the authority to raise it and the capacity to allocate and monitor its use effectively, cities are unable to undertake significant or meaningful action on climate change. There is a need to improve awareness-raising about climate finance among city-level actors in order to strengthen their capacity to mobilize and gain access to it.

26. Globally, as reported in *Global Landscape of Climate Finance 2021*, total climate finance has steadily increased over the past decade, reaching an average of \$632 billion per year for the years 2019 and 2020.¹⁴ However, this is nowhere near enough finance to limit global warming to 1.5°C above pre-industrial levels. In line with aggregated scenarios that explore climate finance needs for energy systems, buildings, industry, transport and other mitigation and adaptation solutions, it is estimated that climate finance must increase by at least 590 per cent – to \$4.35 trillion annually by 2030 – to meet climate objectives. This means that, at present, the world is mobilizing only a fraction of the climate change mitigation and adaptation investment needed to meet current nationally determined contribution commitments. A total of 76 per cent of climate finance is raised in the country it is invested in, meaning that domestic finance can be an area on which cities can focus their attention in the

¹⁴ Climate Policy Initiative (2021).

future – especially as almost all cities can gain access to international funds only through partners and intermediaries. This fact alone highlights the need for effective cooperation between different levels of government. In addition, it is essential that financing be better aligned with local needs and priorities, with a focus on accelerating green transition in key sectors with high greenhouse gas emissions.

27. Financing climate action requires Governments to establish enabling policies and instruments that raise the required finance and direct it towards implementation at the city level. Such action may include the Government raising funds for distribution to city governments in the form of special purpose vehicles (following the PT Sarana Multi Infrastruktur model in Indonesia, for example) or empowering city governments to raise their own finances, including by providing access to debt capital markets for creditworthy cities.

28. Most international climate finance is available only to national Governments, so cities are dependent on national counterparts to provide them with access. For cities to be able to raise the finances necessary to modify their infrastructure, capital investments and urban development systems in line with their country's nationally determined contributions and national adaptation plan targets, national and city governments need to collaborate on establishing financial policies, instruments and flows. Governments are mutually dependent on one another and they therefore need to collaborate on developing policies that promote innovation and make clean energy affordable, which is crucial to ensure that no one is left behind.

29. Climate public expenditure and institutional reviews are excellent tools for understanding public climate finance at the country level. They have been undertaken in numerous Asia-Pacific countries, including Indonesia, the Philippines and Thailand. In the Philippines, it was found that the local government units “most vulnerable to the impacts of climate change have the greatest need for public support, yet have the least capacity to provide support under current revenue-sharing arrangements”.¹⁵ It was also found that, on average, local government units receive 70 per cent of their funds from the central Government and that, in less developed areas of the country, this rises to 90 per cent.¹⁶

30. The private sector can also play a key role in financing low-carbon and climate-resilient development in cities. This includes the use of green bonds, impact investing and innovative financing instruments such as EIT Climate-KIC, which combines public and private financing to support innovative climate solutions. In China, the greater decentralization of authority to cities has also facilitated the greater use of market-based instruments in cities. Through the low-carbon city pilot policy of China, significant investments are made in clean energy development through subsidized loans and other subsidies.¹⁷ Overall, the greater alignment of national and city-level climate action plans, cross-sectoral approaches and the mobilization of private sector financing is required.

¹⁵ World Bank, *Getting a Grip ... on Climate Change in the Philippines: Executive Report* (Washington, D.C., 2013), p. 15.

¹⁶ *Ibid.*

¹⁷ Yufei Wang and others, “Developing low-carbon cities through pilots”, *Climate Policy*, vol. 15, No. S1 (2015), pp. S81–S103.

31. In Thailand, the act on decentralization sets a floor of 25 per cent of municipal funding coming from locally generated sources.¹⁸ However, this target has been widely missed and there remains a significant financial shortfall at the municipal level in terms of the national Government continuing to meet local needs.¹⁹ As in many other countries, local administrations in Thailand have three main ways to raise revenue. The first way is through locally levied revenues, which primarily consist of property tax and land development tax and which are levied at a fixed rate determined by the central Government. This means that improved enforcement is the only way that municipalities can increase this revenue stream. The second means is through shared taxes (primarily value added tax), which are divided between the local and central Governments and levied nationally. The third way is through grants, which are funds that municipalities receive from the central Government.

32. These three revenue streams give municipalities little room to raise additional funds. All taxes collected at the municipal level are set by the central Government, which means that municipalities cannot adjust them or create new revenue streams and, instead, they rely mostly on improving the efficiency of collection rather than setting tax rates. This is an example of where insufficient decentralization constrains the ability of local or municipal administrations to act.

33. ESCAP estimates that the developing countries in the region need to invest an additional \$1.5 trillion annually to achieve the Sustainable Development Goals by 2030 (see figure IV).²⁰ In the New Urban Agenda, it is noted that improvements in traditional local government revenue sources should play a significant part in helping to finance this infrastructure gap.²¹ This means that cities need to generate and invest enormous sums to meet their development challenges, mitigation goals and adaptation needs.

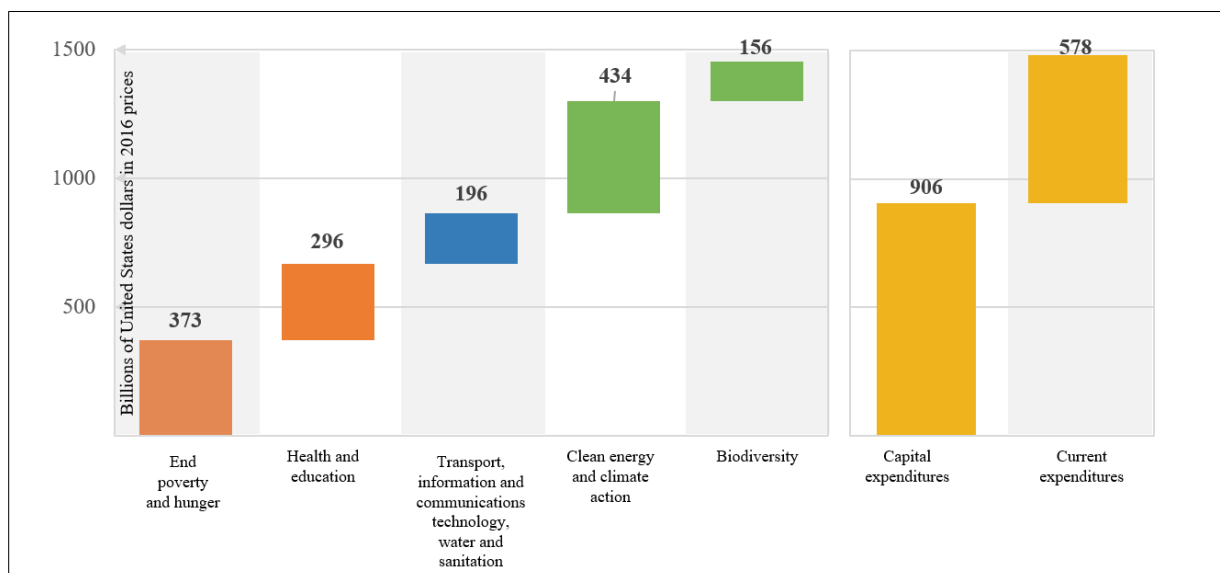
¹⁸ United Cities and Local Governments and OECD, “Thailand: unitary country”, October 2016. Available at www.oecd.org/regional/regional-policy/profile-Thailand.pdf.

¹⁹ Overseas Development Institute, “Thailand: climate public expenditure and institutional review”, p. 81.

²⁰ *The Future of Asian and Pacific Cities*, p. 131.

²¹ General Assembly resolution 71/256, annex, para. 137.

Figure IV
Sustainable Development Goals investment gaps



Source: *The Future of Asian and Pacific Cities: Transformative Pathways towards Sustainable Urban Development* (United Nations publication, 2019).

34. To do so, there are numerous options for city and local governments to raise revenue to finance climate change action, many of which are well-established in municipal and climate finance literature. These include public-private partnerships, targeted levies or charges, land value capture mechanisms, municipal pooled financing and specific climate funding sources. As countries develop, they tend to reduce city and local government dependence on transfers from the central Government. In countries such as Japan and the Republic of Korea, transfers from the central Government make up about 40 per cent of local government revenue, whereas in China it is as much as 66 per cent, and in Thailand and India it is 85 per cent and 90 per cent, respectively.²²

35. However, increasing the share of own-source municipal revenue and reducing the dependence of cities on budget allocation from the central Government are not easy. Increased fiscal autonomy at the subnational level is a critical component of decentralization and an important part of vertical integration. Vertically integrated climate finance implies empowering local government administrations to raise a greater share of their total revenue while collaborating with the national Government to ensure that this revenue is directed towards mutually beneficial action and goals. Attempts to innovate in the face of revenue allocation challenges have led to progress, but they could hardly be described as having resulted in unequivocal success.

²² *The Future of Asian and Pacific Cities*, p. 135.

B. Measurement, reporting and verification

36. Under the United Nations Framework Convention on Climate Change, measurement, reporting and verification is a process that precedes the Paris Agreement, having first been outlined in the Bali Action Plan in 2007. The Action Plan laid out a process for measurement, reporting and verification at the international level and encouraged countries to develop voluntary processes at the national level. Under this process, developing countries have submitted national communications and biennial update reports.

37. The results of the measurement, reporting and verification system have been mixed at best so far, and there is little evidence that the domestic systems are vertically integrated in a way that city or local governments are meaningfully engaged in the process. For example, ahead of its second biennial update report, published in 2018, Indonesia digitized its measurement, reporting and verification system in an attempt to standardize the way action implementers report and how their results are verified, as well as to make the system easier for actors at the subnational level to use. This transparency is important for vertical integration because it enables any user to view progress by sectors towards emissions reduction goals. However, such information is still complicated for actors at the subnational level to use.²³ Cities have so far not been active participants in the system.

38. However, there are two important caveats: first, as a result of the global stocktake of the Paris Agreement, which will conclude in 2024, the existing measurement, reporting and verification system may be replaced, creating little incentive for countries to invest in building robust systems under the current framework. Second, capacity-building efforts have taken time to gather pace. All the biennial update reports reviewed in the preparation of the present document highlight a lack of capacity at some or many levels of each country. In particular, capacity-building on measurement, reporting and verification at the city level has been in evidence only during the past two to three years,²⁴ and attempts to build capacity have not met city and country demand. To maximize synergies and align reporting on climate action and the Sustainable Development Goals, the voluntary local reviews of city and subnational authorities could be used in reporting on city climate action plans.

39. In fact, rather than seeing measurement, reporting and verification as an instrument of vertical integration, it may be more helpful to think of each element as being mutually re-enforcing. An effective measurement, reporting and verification system in a country will improve the vertical integration of climate action because it will empower stakeholders at the subnational level – as Indonesia has recently attempted to do with its system. Meanwhile, improved vertical integration, including with well-defined roles and responsibilities for subnational government authorities and better coordination, will strengthen a country's measurement, reporting and verification system. The new requirements in the form of the enhanced transparency framework to be effective from 2024 present an opportune moment for countries to approach these issues as mutually supportive – gains in one area will lead to improvements in the others.

²³ Indonesia, Ministry of Environment and Forestry, *Indonesia Second Biennial Update Report* (Jakarta, 2018), sect. 4.4.

²⁴ Local Governments for Sustainability published *From Strategy to Delivery: Measuring, Reporting, Verification (MRV) of Urban Low Emission Development*, a handbook for local governments in 2016.

40. Building an effective measurement, reporting and verification system will also have the benefit of improving data gathering and management, as the system is inherently a data-driven process. To be vertically integrated, the system also has to operate alongside, and in support of, improved data-sharing, both horizontally, among ministries, departments and non-government actors at the local level, and vertically, between national and city levels.

C. Cross-cutting instruments for building institutional capacities at the national and city levels

41. A lack of capacity, and therefore the need for capacity-building, is perhaps the most ubiquitous challenge cities and countries face. To make an analysis of the situation more manageable in the present document, capacity is conceptualized at two levels – institutional and individual. For institutional capacity, structures and working arrangements, information- and data-sharing, and cooperation are considered. Individual capacity relates to human resources and skills. The capacity analysis contained in the present document continues the themes highlighted in the abovementioned discussions on decentralization and finance.

42. The need for continuous capacity-building support for climate action has been recognized at the international level through the establishment of the Paris Committee on Capacity-building, designed to bring coherence and coordination to capacity-building both under and outside the Paris Agreement. The Committee noted that “capacity-building is a critical means of implementation, and achieving the goals of the Paris Agreement requires enhanced, sustained and long-term capacity if countries are to close the gap between ambition and implementation. Effective implementation also requires coherence and coordination, including of climate-related capacity-building.”²⁵

43. The international community has also responded to the climate change capacity-building needs of countries through other initiatives. Under the Green Climate Fund, the Readiness and Preparatory Support Programme, launched in 2015, currently provides capacity-building support in five related areas: (a) coordination of climate finance; (b) strategic frameworks for low-emission investment; (c) strengthened adaptation planning; (d) paradigm-shifting pipeline development; and (e) knowledge-sharing and learning.²⁶ Capacity-building under the Readiness Programme is a process that entails a systemic paradigm shift, whereby sustainable climate finance planning is based on national policies, laws, nationally determined contributions, development and sectoral plans, and economic goals. However, this paradigm shift has primarily been occurring at the national level. So far, there is little evidence that these capacity-building initiatives are vertically integrated. While the enhanced capacity for climate action achieved through the Readiness Programme at the national level is undoubtedly positive, the lack of evidence of vertical integration to date suggests that more and continued support will be needed.

²⁵ *Coherence and Coordination of Capacity-Building Activities of Constituted Bodies and in Other Relevant Processes under the Convention* (Bonn, Germany, United Nations Framework Convention on Climate Change, 2019), p. 7.

²⁶ For additional information, see www.greenclimate.fund/readiness.

44. Beyond gaining authority through decentralization and finance, local government administrators require human resources with adequate technical, institutional and strategic capacities to develop and implement locally appropriate adaptation and mitigation strategies and concepts.²⁷

45. There are capacity challenges throughout the multilevel governance system. In the Philippines, blockages at the national level in terms of reviewing proposals and disbursing budgets, and inadequate oversight of budgets in the early stages of the People's Support Fund meant that support for local government was inadequate. While efforts have been made to resolve capacity issues through the provision of guidance, improved training and additional support, such as that provided under the Global Green Growth Institute project, substantial challenges remain at the city level. As already highlighted in the present document, local government staff have limited capacity to report on climate change action and the achievement of the Sustainable Development Goals in an integrated way.

46. One approach to improving individual and institutional capacity at the city or local government level is to have dedicated climate change officers or managers who support the development and implementation of vertically integrated city climate action plans. Dedicated human resources who enable a city to work towards its climate change plan anchor climate change in the city; as they hold civil rather than political positions, they continue to work even with changes in political leadership. Because of these benefits, this approach has been replicated and widely rolled out by the C40 Cities Climate Leadership Group, which supports its member cities in employing or hosting city climate advisers, who can lead the development and implementation of climate change-related plans, policies and projects.²⁸

47. Dedicated climate managers (ideally with a supportive team, especially in larger cities) can carry out three main functions. First, they can research and compile data and knowledge on climate change in the city (possibly in partnership with civil society or local academic institutions). Second, they can act as project developers, managers or focal points for dedicated climate projects. Third, they can play a vertical and horizontal coordination role, ensuring that climate action in the city is aligned with national policies, targets and commitments and is complementary to other non-climate development initiatives in the city.

D. Citizen engagement and participation

48. Climate change mitigation and adaptation actions are unlikely to be successful or have legitimacy unless the citizens want them. As discussed in the following section, digitization and new communications technology make it easier for people to interact directly with their local government officials. However, before discussing this, it is important to establish the role of citizen engagement and participation in vertically integrated climate action.

²⁷ German Agency for International Cooperation, *Multi-Level Climate Governance Supporting Local Action*, p. 53.

²⁸ German Agency for International Cooperation, *Multi-Level Climate Governance Supporting Local Action*, p. 55.

49. Citizen participation is widely accepted as a critical component of good governance²⁹ and it follows that it must also be a critical component of effective multilevel climate governance. As a point of definition, citizen engagement is the active dialogue between citizens and public decision makers that is usually top down (i.e. initiated by the Government), whereas participation is a bottom-up process initiated by citizens themselves, which can also include dialogue. Participation is more ad hoc and informal than engagement. However, the terms are often used interchangeably, such as in the widely used term “participatory budgeting”, where local or national governments invite citizens to give inputs to or help define public finance allocation.

50. Where decentralization describes the important process of transferring power from the central to the subnational government level, citizen engagement and participation are then essential to good multilevel governance because they describe the sharing of power between government and civil society.³⁰ Citizen engagement and participation are well-documented in areas such as the provision of urban basic services, where people’s needs are immediate and visible (e.g. if a community does not have adequate water and sanitation facilities, this will inevitably be a cause of regular hardship). Participatory budgeting is also a concept that has been practised for some time throughout the region and beyond. Chengdu, in China, and Surakarta, in Indonesia, are examples of cities that have used this approach for urban infrastructure development and service delivery.³¹ However, this practice has not been widely adopted for climate change mitigation and adaptation action. This is partly because it is still difficult to obtain accurate data on the type and value of participatory budgeting projects in certain countries and cities.

51. Participatory budgeting is an approach that has been used in Semarang, Indonesia, which has taken great strides to encourage participation and citizen engagement. In Semarang, like most cities in Indonesia, it is difficult to identify climate change projects that have been funded through participatory budgeting processes. Finalized participatory budgeting projects are managed by the different departments or agencies that implement them; it is impossible to determine whether projects are funded through participatory budgeting or conventional government budgets because the records do not distinguish between them.³² Citizen engagement and participation may be easier to implement with regard to adaptation measures, which are likely to bring more immediate benefits, or in mitigation projects when they include tangible co-benefits.

²⁹ ESCAP, *Effective Stakeholder Engagement for the 2030 Agenda: Training Reference Material* (Bangkok, 2018), p. 75.

³⁰ Monica Di Gregorio and others, “Multi-level governance and power in climate change policy networks”, *Global Environmental Change*, vol. 54 (January 2019), pp. 64–77.

³¹ Yves Cabannes, “Highlights on some Asian and Russian participatory budgeting pioneers”, April 2018.

³² Yves Cabannes, *Contributions of Participatory Budgeting to Climate Change Adaptation and Mitigation: Current Local Practices around the World and Lessons from the Field* (Barcelona, Spain, International Observatory on Participatory Democracy, and others, 2020), p. 13.

IV. Main findings and policy implications

52. The present document was designed to promote reflection and discussion on vertical integration and multilevel governance for climate action, rather than to reach definitive conclusions about which actions are best. However, several themes emerge, as detailed below.

53. Decentralization is a vital enabling instrument for multilevel climate action when clear targets, governance authority and reporting mechanisms for the subnational government are established, supported and monitored by the national Government. Without the requisite authority to plan for climate change and take action to address it, cities are disempowered. While decentralization can be politically contentious, there are governance frameworks (in federal and unitary States) that enable cities to work more collaboratively with national Governments. Moreover, decentralization should not be seen as leaving cities on their own to address their climate and broader development challenges, but rather a way of sharing responsibility among all levels of government. When this sharing of responsibility occurs, decentralization is a vital instrument for reducing the burden on central Governments. When implemented under a supportive political, constitutional and legal framework, it enables local and national governments to act as partners in planning and implementing climate action while addressing other development priorities.

54. Citizen acceptance of climate action or even the co-production of them – gained through formal engagement processes or less formal participatory approaches – is essential. To be effective, climate change mitigation and adaptation action must have the acceptance of the people whom they serve. Because it can take a long time for climate action to result in adaptation or mitigation benefits, or because the benefits may not be obvious, citizen acceptance is most easily achieved by providing co-benefits. These can be numerous, ranging from ecosystem-based adaptation action that provides improved public space, to zero- or low-emissions public transport that provides cheaper and faster commuting times. However, media engagement can be another supporting action that enables citizen engagement and participation to be more effective instruments. Climate change problems and solutions can be complex, thus making the media an important tool for cities to communicate the need for climate action, while also to hear about concerns from citizens.

55. Finance is a critical implementation instrument for climate change adaptation and mitigation action. Without access to new and additional finance, all but the largest, best-resourced cities in Asia will struggle to allocate resources to climate change mitigation and adaptation action. Without those financial resources, it will be difficult for cities to act beyond planning and advocating, that is, to take concrete action. While multilateral funding sources, such as the Green Climate Fund, attract attention among practitioners in the field, more than three quarters of climate finance is domestically sourced, as stated above, and much of it is from the private sector. Cities must therefore look to more innovative and less traditional sources of finance in the future. There are many reasons for this, such as the fact that multilateral public climate finance is falling far short of its initial resource mobilization targets. In addition, domestic public finance, while sometimes available, can be prone to low utilization rates or political pressure.

56. Measurement, reporting and verification systems are new to many countries in the Asia-Pacific region. They are evolving, with the current system scheduled to be replaced in 2024, after the global stocktake of the Paris Agreement. This makes measurement, reporting and verification a difficult tool for cities to use. However, it is essential to understand how successful adaptation, and particularly mitigation, measures have been and how much action has contributed to national-level goals. Cities can also leverage voluntary local or subnational review processes to align with local climate reporting, and vice versa. The continuous development and refinement of such tools would ensure that cities and local governments are active stakeholders in ensuring that climate action is effective.

57. Capacity at the city level remains patchy at best. If cities aim to enhance climate change action, having dedicated staff who can work across municipal departments is a necessary step to ensuring sufficient capacity. However, many cities do not yet have climate managers or city resilience officers because, for example, many Governments are seemingly unwilling or unable to fund such positions. People in these positions can support the institutionalization of climate action by developing plans or overseeing adaptation and mitigation projects. Critically, they can also be a liaison and focal point between a city government and the national Government – thereby strengthening relationships, collaboration and, consequently, vertical integration.

58. Achieving the 1.5°C target by 2050 and establishing low-carbon cities and societies require regional collaboration to support a common agenda, enhance partnerships across the region, develop the technical capacity of cities, and promote knowledge- and information-sharing. Building collaboration through peer-to-peer learning, South-South exchanges, and enhancing and leveraging existing platforms and networks for climate action are critical. Increasing technical cooperation for developing, deploying and replicating decarbonization technologies and innovative approaches adds to regional learning and growth. Lastly, regional organizations can be critical enablers of the type of South-South cooperation and collaboration that will be needed for countries in Asia and the Pacific to address both their shared and unique climate change experiences, as well as multilevel governance challenges.

V. Issues for consideration by the Commission

59. The Commission may wish to take note of the findings and policy recommendations contained in the present document and advise on the future work of the secretariat, including in the lead-up to the Eighth Asia-Pacific Urban Forum, to be held in October 2023.

60. In particular, the Commission may wish to provide directions and suggestions on strengthening the secretariat's work on city climate action as a vehicle to implement sustainable urban development and localize the Sustainable Development Goals.

61. Members and associate members are invited to share their experiences in promoting a whole-of-government approach to city climate action and provide suggestions for enhancing regional cooperation to strengthen the capacity of cities for the effective implementation of the Paris Agreement and the 2030 Agenda for Sustainable Development.