

# **VERTICAL INTEGRATION OF CLIMATE CHANGE POLICIES AND ACTIONS IN ASIA-PACIFIC CITIES**



**United Nations publication**

**Copyright © United Nations 2020**

**All rights reserved**

## **ST/ESCAP/2924**

The designations employed and the presentation of the material in this publication do not imply expression of any opinion whatsoever of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries. The content and views expressed in this publication are those of the authors and do not necessarily reflect the views or policies or carry the endorsement of the United Nations.

Reference to a commercial entity or product in this publication does not imply endorsement. Trademark names and symbols are used in an editorial fashion with no intention of infringement of trademark or copyright laws. The publishing organization does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequences of their use.

This publication may be reproduced in whole or in part, and in any form for educational or non-profit services without special permission from the copyright holder, provided acknowledgement of the source is made. ESCAP would appreciate receiving a copy of any publication that uses this report as a source.

This publication is also available online at: <http://sdghelpdesk.unescap.org/> and [www.unescap.org](http://www.unescap.org) .



# Contents

Introduction and objectives _____	4
1. Background _____	5
2. Multilevel governance frameworks _____	10
3. Multilevel governance instruments, institutional arrangements and actors _____	14
4. Recommendations and conclusion _____	27

## Acknowledgements

This discussion paper was developed by the Environment and Development Division of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) under the guidance of Stefanos Fotiou and Curt Garrigan.

The coordinator of the paper was Omar Siddique, of the Environment and Development Division, Sustainable Urban Development Section, ESCAP. The authors were Liam Fee, Omar Siddique and Elena Boni.

We are grateful for the advice given by the following individuals who reviewed the paper and provided technical inputs from ESCAP: Stefanos Fotiou, Curt Garrigan, Ksenia Petrichenko, Solene Le Doze, Aneta Nikolova, Ram Tiwaree, Philip Kang, Ivana Brnovic, Alexander Vougioukas, Hirotaka Koike and Daniel Newns.

Heinrich Gudenus, Anka Derichs, Melissa Cruz and Patricia Mariano from GIZ provided comments and valuable insights during the development of the publication.

ESCAP and GIZ are thankful for the constructive inputs received from the more than 60 participants at the Virtual Expert Group Meeting on Vertical Integration of Climate Action in Asia and the Pacific, which took place on 30 October 2020 as part of the regional commemoration of World Cities Day 2020.

We appreciate the support and guidance received from: Bernadia Tjandradewi, Secretary-General, United Cities and Local Governments Asia-Pacific; Milag San Jose-Ballesteros, Regional Director for East, Southeast Asia and Oceania, C40 Cities Climate Leadership Group; and Firdaus Dahlan, Director, Centre for Indonesia-Malaysia-Thailand Growth Triangle Subregional Cooperation.

Robert Oliver edited the manuscript and project administration was provided by Sirikul Suvarnanetra and Orani Potchapornkul. Publication design and layout was by Jeff Williams.



# Introduction and objectives

**“Cities are where the climate battle will largely be won or lost”**

António Guterres, Secretary-General of the United Nations,  
speaking at the C40 World Mayors Summit, 2019

In late-2019, few would have imagined that it would be a global pandemic, not climate change, that would dominate the global agenda. While the pandemic continues to demand government attention throughout the Asia-Pacific region and beyond, focus will begin to shift from managing infections towards a sustainable economic recovery. As this happens, an opportunity for a green, low carbon and resilient recovery could present itself. Once the pandemic subsides, climate change mitigation and adaptation actions will return to the forefront, especially as we move towards the 26th Conference of the Parties (CoP) to the UNFCCC, due to take place in November 2021 in Glasgow. As we progress towards this milestone, can cities emerge as the leaders in promoting a low-carbon, climate resilient economic recovery in Asia-Pacific?

To achieve increasingly ambitious emissions reduction targets, while meeting adaptation needs that will arise from the ever more 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 vertical integration of climate change actions among and between different levels of government, under a multi-level governance framework that involves different combinations of public, private and non-state actors and, importantly, citizens themselves.

This discussion paper explores the linkages between climate change ambitions, policies, multi-level governance frameworks and vertical integration in cities in the Asia-Pacific region. In particular, it focuses on what the paper calls: (a) specific instruments – decentralization, finance, and measuring, reporting and verification systems (MRV); and (b) cross-cutting instruments – country and city-level capacity, citizen engagement and participation and digitization. The paper draws examples from countries throughout the Asia-Pacific region, with the scope and audience of the paper being climate and urban development policymakers, technical-level officials and practitioners from across the Asia-Pacific region.<sup>1</sup>

The objectives of this paper are to:

- a. Provide an assessment of how urban climate action is supported, promoted or obstructed by the countries' multi-level governance frameworks and instruments, and consider the role of new, emerging and existing governance mechanisms, including decentralization, digitization and innovative financing;
- b. Identify innovative and replicable instruments which support climate change mitigation and adaptation actions in Asia-Pacific that are (or are not) vertically integrated in national policies;
- c. Identify key policy pathways, lessons and takeaways on the role of vertical integration of climate change policies in the Asia and Pacific region, relevant to the cities' perspective.

# 1. Background



## Key points

- The international governance architecture now provides more support to climate change action than at any other time in history, in the form of the Paris Agreement, the 2030 Agenda on Sustainable Development, the New Urban Agenda and the Sendai Framework for Disaster Risk Reduction.
- Levels of commitment in Nationally Determined Contributions vary across the region. The more ambitious commitments, such as those made by India and the Philippines, are compliant with a less than 2°C warming scenario. However, many countries don't match this level of ambition.
- Many countries, including China and India, have made urban commitments in their NDCs.
- National Adaptation Plans have been finalized in a few countries, but are in the early stages of formulation in many other nations.

The years 2015–2016 set the scene. In an 18-month period, United Nations member States agreed (in chronological order) on the Sendai Framework on Disaster Risk Reduction, the Addis Ababa Action Agenda, the 2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change and the New Urban Agenda. Arguably, for the first time in history, international agreements provided an opportunity to build coherence in different but overlapping policy priorities. As UNDRR and the International Council for Science argued at the time, “this coherence will serve to strengthen existing risk fragility and resilience frameworks for multi-hazard assessments, and aim to develop a dynamic, local, preventive and adaptive urban governance system at the global, national and local levels”.<sup>2</sup> But did it? Four years after the agreement of the last of these four frameworks, have the aims and objectives of the Paris Agreement – so well supported by the other frameworks – translated into actions on the ground in cities in Asia and the Pacific?

Governance frameworks, instruments to address climate change, sustainable development and disaster resilience, and actions taken vary greatly across the Asia-Pacific region. Unlike many similar papers, this one does not look for ‘good practices’ – all countries, in the region and beyond are working out how to utilize and adapt their governance structure to be more responsive to climate change. Rather, it provides potentially promising examples that vary in their scope and size, from initiatives under India’s Smart Cities Mission to the People’s Survival Fund in the Philippines. These examples were not necessarily selected because they have produced positive results, and certainly not because they can be copied without contextualization by other countries in the region; they were selected because they offer promising options for replication as well as lessons learnt to help make other countries aware of pitfalls to avoid.

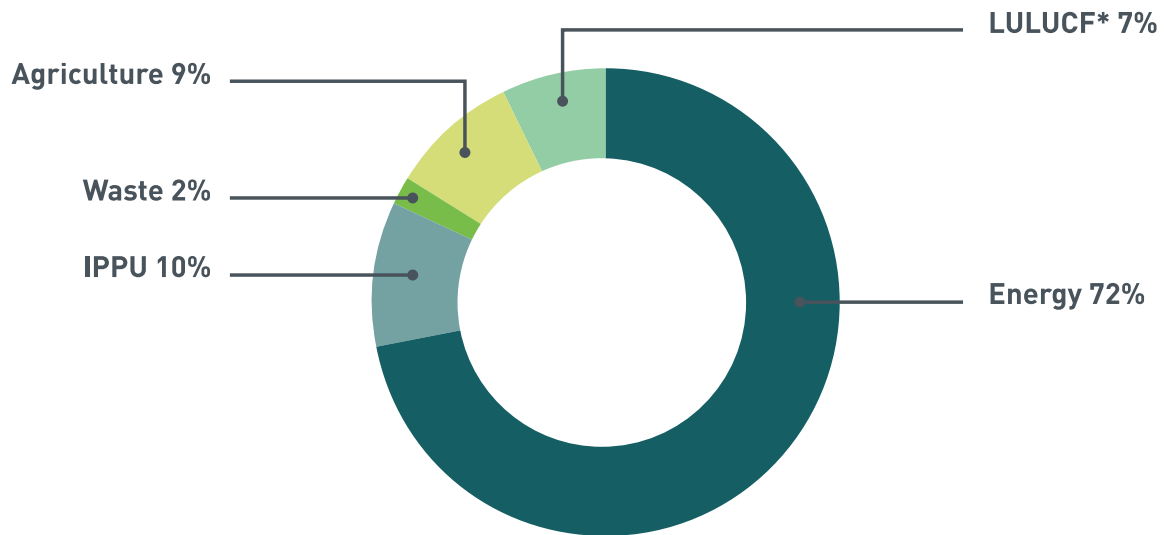
### Climate Policy: NDCs and NAPs

Nationally Determined Contributions (NDCs) form the backbone of the Paris Agreement on Climate Change. They are the commitments each of the 189 parties to the agreement made to reduce emissions and undertake adaptation actions. They also form a key commitment to Sustainable Development Goal 13 on Climate Action. Countries in the Asia-Pacific region have varying levels of commitment and ambition in their NDCs. While almost all countries in the region recognize the increasingly urgent adaptation needs, the commitment to emissions reduction varies. According to the Climate Action Tracker, some Asian countries, including the Philippines and India, have made commitments that, if implemented, would make them compliant with a less than 2°C warming scenario envisaged under the Paris Agreement. However, they are in the minority, as numerous countries in the region have made commitments that, even if implemented, are only compatible with a potentially devastating 4°C warming scenario”.<sup>3</sup>

Analysis of the NDCs has shown that there are various pathways by which a country can achieve a 2°C warming-compatible set of commitments. India, for example, is a leader among Asia-Pacific countries in the transition from fossil fuels to renewable energy. In 2017, India reached the tipping point of more investment going into renewables than fossil fuels, and on current trajectory up to 43 per cent of its electricity generation will be from renewable sources by 2030.<sup>4</sup> If we accept that energy consumption and rapid urbanization are highly correlated in developing countries,<sup>5,6</sup> India presents an interesting opportunity to demonstrate that a growing urban population’s energy requirements can be met while achieving a Paris Agreement-compatible 2°C warming scenario.

Other countries have taken different approaches. Fiji, while likewise focusing on increasing the amount of renewables in its energy mix, has also focused on quick-win, demand-side reductions in energy use and cuts in transport sector emissions. The latter includes short-term actions, such as replacing older, high-emission vehicles, and longer-term actions, such as a move to all-electric public transport.<sup>7</sup> Fiji’s case demonstrates the fact that countries without the levels of domestic finance available in larger countries, like China and India, can still make gains in climate change mitigation.

The NDCs are scheduled for updating every five years from their initial development in 2015.<sup>8</sup> However, the 2020 global Covid-19 pandemic means that the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), which would be the culmination of the first five-yearly NDC update process, will take place in November 2021,<sup>9</sup> giving parties to the agreement an extra year to prepare their NDC updates.<sup>10</sup> Understanding NDC commitments (and future updates of these commitments) is important because they signal countries’ climate change mitigation and adaptation priorities and commitment levels. City-level actions should contribute to the achievement of these commitments, and vertically integrated actions will see high levels of cooperation between the local and national levels (as well as non-state actors).

**Figure 1:** Emissions by sector in Asia<sup>11</sup> – share of total emissions by sector

\* Excluding removals.

Source: NGHGI submitted to UNFCCC.

Figure 1 shows that energy represents 72% of emissions, with a further 10% coming from industrial and productive processes. Emissions in these sectors are closely correlated with urbanization, as towns and cities consume more energy and produce goods. With this in mind, many Asia-Pacific countries, including China, India, Viet Nam, Bangladesh, Sri Lanka and the Lao People's Democratic Republic use their NDCs to make specific urban-related commitments. As table 1 shows, it is very difficult to understand the exact share of these emission reductions that will come from cities. However, given that energy makes up the bulk of the region's emissions, and that cities are the main consumers, it is reasonable to assume that cities need to be highly proactive agents for mitigation actions.

China, for example, uses its NDC to highlight major emissions reduction through improved urban public transportation, while the Republic of Korea will introduce an expansive new green building code. Several other countries, including Indonesia, Kazakhstan, Myanmar and Afghanistan, make indirect urban commitments in their NDCs (figure 2).<sup>12</sup> Indirect commitments refer to stated mitigation or adaptation priorities in areas such as energy, transport and waste that, while not specifically urban, 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 the more a country's economy grows and its population urbanizes.



**Table 1:** A little foggy: Selected national NDC commitments and sector breakdowns in selected countries<sup>13</sup>

Country	Overall NDC emissions reduction pledge against BAU baseline	Sector breakdown
China	Peak by 2030, carbon neutrality by 2060 (announced)	20% renewables by 2030 65% reduction in carbon intensity
India	25% (emissions intensity)	Non-fossil fuel share of energy capacity to reach 40% by 2030.
Indonesia	29% (up to 41% with international support)	Energy 11% (14% with international support) Waste 0.38% (1%) IPPU <sup>14</sup> 0.1% (0.11%) Agriculture 0.32% Forestry 17.2% (23%)
Philippines	70%	Sector breakdown not provided
Thailand	20% (up to 25% subject to adequate and enhanced access to technology development and transfer, financial resources and capacity-building support through a balanced and ambitious global agreement under the United Nations Framework Convention on Climate Change (UNFCCC).)	Not provided. However, as 73% of Thailand's emissions come from energy, its mitigation efforts will focus primarily on this sector

**Figure 2:** Urban commitments in NDCs<sup>15</sup>



预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_675](https://www.yunbaogao.cn/report/index/report?reportId=5_675)



云报告  
https://www.yunbaogao.cn

云报告  
https://www.yunbaogao.cn

云报告  
https://www.yunbaogao.cn