Engagement Discussion

Pack One: Analytical Foundation

STRENGTHENING CLIMATE GOVERNANCE: FROM TARGETS TO DELIVERY IN HONG KONG

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香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
ENVR Division of Environment and Sustainability
ADM CAPITAL FOUNDATION
BUSINESS ENVIRONMENT COUNCIL 商界環保協會
Climate Governance Initiative Hong Kong
Part of Chapter Zero Alliance
HKGBC 香港綠色建築議會
HKGFA 香港綠色金融協會
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Pack One: Foundations for Engagement Discussion

Chapters 1-3
This pack includes the first three chapters of the *Engagement Discussion document Strengthening Climate Governance: From Targets to Delivery in Hong Kong*. It is intended to provide a shared analytical foundation for discussion among stakeholders in climate and sustainability policy.

Purpose of this Pack
The material in Pack One is designed to support common understanding and constructive dialogue. It sets out why climate change is fundamentally a governance challenge, how different jurisdictions organise their climate governance systems, and what international experience suggests are the core elements of effective climate governance.

Readers are not expected to agree with every interpretation or emphasis. Rather, the aim is to establish a shared language and conceptual framework that can support informed discussion across policy domains and institutional boundaries.

What this Pack Contains
- **Chapter 1 – Understanding the Governance Challenge**
  Introduces climate change as a systemic, long-term governance issue that cuts across policy sectors, time horizons, and stakeholder groups. It situates Hong Kong within the global climate framework, China's national direction, and the city's own institutional context, and explains the structure of the whole report including other chapters (Pack Two and Pack Three).

- **Chapter 2 – Comparative Climate Governance**
  Examines how four jurisdictions – the United Kingdom, Chinese Mainland, Singapore, and Hong Kong – organise climate leadership, coordination, accountability, and implementation. The purpose is not to rank systems, but to understand their institutional logic and extract insights relevant to Hong Kong's own governance setting.

- **Chapter 3 – Good Climate Governance: Principles and Practices**
  Distils international consensus into a Five-Pillar Model of effective climate governance, covering long-term vision and targets, high-level coordination, policy integration, transparency and oversight, and stakeholder engagement. This framework provides the analytical lens applied in later chapters of the report.

How to Use This Pack
Pack One can be read on its own as a conceptual and comparative foundation. It is particularly suited for:
- Readers seeking an overview of climate governance challenges, and
- Participants preparing for multi-stakeholder discussions, who want a common reference point before engaging specific analysis.

The subsequent packs build on this foundation:
- Pack Two (Chapters 4–8) applies the Five-Pillar Model to Hong Kong's governance system in detail.
- Pack Three (Case Studies) provides standalone, policy-specific cases designed to illustrate concepts and support practical discussion and cross-sector learning.

Together, the three packs are intended to facilitate informed, open, and forward-looking engagement on how Hong Kong can strengthen its climate governance and translate long-term targets into sustained delivery.

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CHAPTER 1

UNDERSTANDING THE GOVERNANCE CHALLENGE

INTRODUCTION

This engagement discussion document is intended to be a structured contribution to shared learning and dialogue, using governance analysis and case studies to support collective learning and problem-solving using a common language.

I. CLIMATE CHANGE AS A SYSTEMIC GOVERNANCE ISSUE

Human civilisation developed within an unusually stable climatic period. For roughly 10,000 years, the Holocene provided a "safe operating space" in which temperature, rainfall patterns, and ecological conditions fluctuated within narrow bounds. This environmental stability made agriculture reliable and supported the rise of cities and complex societies. Scientific assessments reaffirm that modern prosperity has depended on this climatic stability, with Earth-system scientists warning that several planetary boundaries underpinning this safe operating space are now under intense pressure.[1]

Industrialisation dramatically accelerated societal development, powered overwhelmingly by fossil fuels. The combustion of coal, oil, and gas enabled mass production, global transport, electrification, and an increase in modern living standards. Yet, the effects of the same process have driven the planet outside the stable conditions in which civilisation evolved. Today, the climate system is warming, extreme weather is intensifying, and ecological systems are under unprecedented stress. These changes affect every aspect of society, from food systems, health, and infrastructure to water security, biodiversity, and even the functioning of markets.

Because climate change reshapes the environmental foundation on which societies depend, the challenge is not merely scientific or technological. It is fundamentally a governance challenge. Governments must now respond to cross-sectoral risks that interact in complex and unpredictable ways. They must coordinate mitigation, adaptation, and resilience, and strategise for development across multiple policy domains, time horizons, and stakeholder groups. This requires institutional capacity, foresight, and long-term direction. This is not an easy task. Governments must prepare themselves to urgently find solutions, mobilise resources, and secure societal support, in the face of climate change's accelerating detrimental effects.

II. WHY GOVERNANCE MATTERS MORE THAN EVER

Responding effectively to climate change requires a governance system capable of sustaining action across decades. Three aspects highlight the importance of a strong and coordinated governance system.

1. The transition touches everything

Decarbonisation, adaptation, and resilience span the entire economy. They cover virtually all policy domains. No single agency can manage these issues alone. Climate risks are interconnected, and effective responses depend on strong coordination across government.

2. The transition is expensive and long-term

Climate action, whether saving energy, electrifying transport, upgrading buildings, protecting coastlines and forests, or strengthening health and social systems, requires large investments over many years. Deciding who pays, when, and how is inherently a social and political negotiation. The way to navigate these trade-offs is through open, structured processes that build societal understanding and consent on a continuous basis.

Financing is particularly important. Public budgets cannot fund the transition on their own; societies must find ways to mobilise capital from multiple sources. Meeting climate goals is fundamentally about sharing risks and benefits, which will require blended approaches that combine public funding, private capital, market-based incentives, philanthropic resources, and impact-driven investment. First movers often bear higher risks, and new financial instruments can help distribute these risks across governments, investors, businesses, and individuals. Users and consumers also play a critical role, as many solutions ultimately depend on their adoption and willingness to pay. These financial, regulatory, and behavioural dimensions cannot be separated; effective governance must recognise how each reinforces the others. Governments therefore need to create clear long-term policies, supportive regulatory environments, and spaces for collaborative problem-solving.

3. The transition requires collective intelligence

Climate solutions are interdisciplinary. Scientists, engineers, architects, contractors, managers, financiers, insurers, social workers, educators, entrepreneurs, and community organisations all hold different forms of knowledge that are critical to designing workable solutions. A governance system must be able to draw on this diverse expertise, integrate perspectives, and support innovation across disciplines.

III. THE UNFCCC AND PARIS AGREEMENT: A GLOBAL FRAMEWORK FOR NATIONAL ACTION

Climate governance operates within a shared global architecture developed over several decades of international cooperation. The United Nations Framework Convention on Climate Change (UNFCCC)[2] sets the foundational principles for coordinated global action, while the Paris Agreement[3], adopted in 2015 by 195 parties, provides the overarching framework through which jurisdictions articulate and update their national climate strategies. Both instruments shape how countries organise their responses, but they intentionally allow flexibility for different political and administrative systems.

The Paris Agreement centres on three core ideas. First, countries commit to pursuing long-term ambitions to curb climate risks and build resilience. Second, through Nationally Determined Contributions (NDCs), each jurisdiction sets its own plans in climate mitigation and adaptation according to national circumstances. Third, parties participate in a common transparency system that encourages continuous progress and strengthens confidence in collective action.

While the Paris Agreement does not dictate how governments must be organised internally, it has raised expectations that jurisdictions will create governance systems capable of long-term planning, cross-sector integration, public engagement, and transparent reporting. These expectations increasingly inform national reforms and have become important reference points for assessing a jurisdiction's readiness to deliver climate action.

IV. CHINA'S APPROACH: ECOLOGICAL CIVILIZATION AND CENTRAL COORDINATION

China has become a central actor in global climate governance, both as the world's leading emitter and as a leader in renewable energy, electrification, and green industrial development.

China's climate governance is rooted in three pillars:

1. Central planning through five-year plans (FYPs)

Climate and ecological objectives are incorporated into national development plans and cascaded down to provinces and municipalities for implementation.

2. The 30/60 commitment

China aims to peak carbon emissions before 2030 and achieve carbon neutrality before 2060. These long-term objectives are supported by the "1+N" policy architecture, combining overarching guidance with sector-specific implementation plans.

3. Ecological civilization

As China's evolving concept of ecological civilization emphasises, development models must increasingly be aligned with ecological limits and long-term sustainability. Now a constitutional principle, ecological civilization elevates environmental stewardship as a core dimension of national development. It drives regulatory reforms, green finance, and expanded adaptation measures, from flood management to early-warning systems. This requires new institutional arrangements, innovations in finance, and ongoing dialogue and cooperation across sectors.[4]

China's model shows how a highly centralised system can align climate action with broader national development strategies, mobilise state institutions at scale, and set long-term direction across multiple levels of government.

V. HONG KONG UNDER "ONE COUNTRY, TWO SYSTEMS": AUTONOMY AND ALIGNMENT

The UNFCCC and the Paris Agreement apply to Hong Kong following declarations by the Central People's Government.[5] Their application sets the context within which Hong Kong operates, even as the city retains significant autonomy to design and implement its own climate policies. Hong Kong therefore contributes to China's overall national commitments while determining its own governance pathways.

Hong Kong's separate legal and administrative system allows it to implement international obligations through local law and policy. Although the Paris Agreement has not been incorporated into local legislation, the government can still take robust administrative action to advance climate mitigation and adaptation. This flexibility has enabled Hong Kong to craft its own strategies within the wider national and international framework.

Hong Kong's strategic opportunity

Hong Kong enters this transition with distinctive strengths. As a global financial centre and regional knowledge, education and professional services hub, Hong Kong is well positioned to convene expertise, mobilise capital, and pilot innovative solutions. It can provide a platform for interdisciplinary deliberation, testing new policy and financial models that may be scaled within the Greater Bay Area and across Asia.

To do so, Hong Kong must strengthen its climate governance system, ensuring long-term direction, high-level leadership, cross-government coordination, transparency, monitoring, standards-setting, and meaningful stakeholder engagement. This aligns with national priorities for Hong Kong to improve local executive-led governance, promote high-quality development, and deepen participation in the Greater Bay Area.

VI: THE FIVE PILLARS OF EFFECTIVE CLIMATE GOVERNANCE

This report focuses on climate governance as the central enabler of Hong Kong's long-term climate objectives, including its commitment to achieve carbon neutrality before 2050. The following chapters analyse how jurisdictions with different political and administrative structures organise themselves to accelerate climate action and what lessons Hong Kong can draw to strengthen its own system.

This report proceeds as follows:

1. Chapter 2 compares the climate governance systems of the United Kingdom, Chinese Mainland, Singapore, and Hong Kong, four jurisdictions with distinct political and legal traditions. This comparative analysis shows how different systems organise themselves to implement the Paris Agreement.

2. Chapter 3 distils global insights into a Five-Pillar Model of good climate governance, drawn from international best practice.

3. Chapters 4 to 8 evaluate Hong Kong's policymaking structure and performance through the Five-Pillar Model lens.

4. Case Studies provide four specific, standalone policy areas seen through a climate governance lens:
   - Decarbonising existing buildings in Hong Kong
   - Protecting nature through the Biodiversity Strategy and Action Plans (BSAP)
   - Financing climate and nature-based solutions
   - Decarbonising shipping and the port in Hong Kong

Taken together, these case studies illustrate how similar governance challenges – coordination across bureaux and departments, alignment of incentives, integration of expertise, and continuity of decision-making – recur across very different policy domains, and how solutions in one area can inform action in others.

VII. CONCLUSION: THE GOVERNANCE DECADE

The coming decade will determine whether Hong Kong, and the world, can avoid the worst climate impacts. Technology is advancing rapidly, finance is increasingly available, and international cooperation is expanding. But governance capacity will determine whether these opportunities translate into real-world progress. Jurisdictions with strong, coordinated governance systems will be able to more fully harness these opportunities.

Hong Kong's ability to meet its 2050 carbon neutrality target, strengthen climate resilience, and sustain its role as a leading global city will depend on how effectively it can embed climate priorities across its entire governance architecture.

ENDNOTES

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CHAPTER 2

COMPARATIVE CLIMATE GOVERNANCE:

UNITED KINGDOM | CHINESE MAINLAND SINGAPORE | HONG KONG

I. INTRODUCTION

Political, legal, and administrative traditions fundamentally shape how jurisdictions approach climate governance, leading to wide variations in the architecture of policy and regulation. Some rely on comprehensive climate legislation, while others on central planning, sectoral policy, or technocratic coordination. Despite these differences, all face the common task of turning high-level commitments under the UNFCCC and the Paris Agreement into credible domestic action.

This chapter examines four contrasting governance systems – those of the United Kingdom, Chinese Mainland, Singapore, and the Hong Kong Special Administrative Region – to illustrate how different jurisdictions organise climate leadership, coordination, legislative tools, and accountability. These cases are chosen deliberately: the United Kingdom and Singapore share a common law tradition with Hong Kong, with the former providing the institutional foundations of Hong Kong's administrative system, while Singapore offers a highly coordinated, technocratic model on the same foundation. China, as Hong Kong's sovereign state, represents a different but highly effective governance system. The purpose is not to rank systems, but to understand the institutional logic behind each and identify takeaways for Hong Kong as it strengthens its own climate governance framework. Hence, this analysis highlights the governance mechanisms through which long-term climate commitments are translated into implementation in each regional context.

II. THE UNITED KINGDOM: LEGALLY ANCHORED, INDEPENDENT OVERSIGHT

The United Kingdom remains the global benchmark for statutory climate governance. It has one of the world's most established climate governance architectures, built around the Climate Change Act (CCA) of 2008 – the first national climate law to introduce legally binding long-term targets.[6] In 2019, the CCA was amended to commit the United Kingdom to achieving net-zero greenhouse gas emissions by 2050, further strengthening its relevance.[7] The CCA also obliges the government to prepare for climate impacts in addition to reducing emissions, demonstrating a two-pronged strategy of layered risk management through simultaneous adaption and mitigation.[8]

In December 2020, the UK Government's NDC[9] committed to a 68% reduction in greenhouse gas (GHG) emissions by 2030, while in January 2025 the updated NDC[10] committed to an 81% reduction in greenhouse gas emissions by 2035, both relative to 1990 levels. This strengthens the medium-term trajectory and reinforces the importance of carbon budgets as the operational pathway for delivering the target.[11]

The CCA continues to be regarded as a vital, durable framework that has persisted across multiple administrations and political cycles, anchoring long-term direction, institutional responsibilities, and mechanisms for accountability. Emissions in the United Kingdom have fallen significantly under

the CCA's guidance, particularly in the energy and industrial sectors. Key features of the CCA's framework include:

1. Legally binding long-term targets

The statutory commitment forms the foundation of the United Kingdom's climate governance model. This legally binding target to achieve net-zero greenhouse gas emissions by 2050, and associated budgets, provide clarity for policymakers, regulators, and investors, guiding decisions across energy, buildings, transport, infrastructure, and public spending. By embedding the long-term goal in law, the CCA creates policy continuity that survives electoral cycles and ensures sustained national commitment (refer to Box 2A).

2. Carbon budgets to drive ongoing action

The CCA translates its long-term ambition into actionable steps through a system of five-year carbon budgets, which cap national emissions and chart a rolling pathway toward the 2050 target, forcing timely near- and medium-term decisions and a credible track to net-zero. They operationalise the long-term trajectory and provide a structured mechanism for monitoring and adjusting policy.

Alongside carbon budgets, the UK Emissions Trading Scheme (UK ETS) provides a market-based instrument for reducing emissions in energy, industry, and aviation. The government has tightened the ETS cap, signalled plans to expand coverage, reinforcing its role as a core mitigation tool, and extended the scheme to 2040.[12]

BOX 2A

Carbon Budget System – A Structural Mechanism for Economy-wide Mainstreaming

The United Kingdom's carbon budget system is one of the most developed examples globally of a legally mandated mechanism that mainstreams climate action across government. Established under the CCA, carbon budgets set binding, economy-wide, five-year limits on greenhouse gas emissions on the pathway to the 2050 net-zero target. Budgets must be set at least 12 years in advance to give policymakers, businesses and individuals certainty and enough time to prepare. They function as a structural device that compels all government departments to integrate climate considerations into their policies, planning, and regulatory actions.

Each carbon budget requires the government to produce a comprehensive cross-sector strategy demonstrating how energy, transport, buildings, industry, agriculture, waste, and land-use policies will collectively remain within the statutory emissions envelope. This process forces departments to internalise climate objectives, reconcile competing priorities, and align resource allocation with the national trajectory. The Treasury increasingly incorporates carbon budget requirements into spending reviews, ensuring that public investments are assessed against their contribution to meeting legally binding emissions limits.

Independent oversight by the Climate Change Committee (see below) reinforces this mainstreaming effect that evaluates progress toward each budget, identifies gaps, and advises Parliament on areas requiring stronger policy interventions. Its annual progress reports create transparency, shape public debate, and exert continuous pressure on policymakers. When strategies fall short, judicial review provides an additional backstop: courts have ordered the government to revise climate plans that did not adequately explain how budgets would be met.

The carbon budget system illustrates how statutory duties, institutional oversight, and transparent planning combine to integrate climate action across government. It has enabled the United Kingdom to sustain long-term decarbonisation across multiple political cycles, providing a durable model of whole-of-government climate governance.

3. Central government responsibility and accountability

Responsibility for meeting the carbon budgets rests with the central government. Individual ministries are responsible for developing detailed sectoral strategies, demonstrate how they will contribute to emissions reductions, and participate in annual progress reporting. This embeds climate duties across Whitehall and requires sustained interdepartmental coordination.

The Department for Energy Security and Net Zero (DESNZ) is now the central ministry responsible for driving delivery of carbon budgets, supported by the Cabinet Office and HM Treasury. Climate governance increasingly extends beyond environmental departments and regulatory bodies: the Environment Agency (in England with equivalents in Scotland and Wales) enforces a wide range of environmental laws, the Office for Environmental Protection (OEP), an independent watchdog, monitors compliance with environmental law,[13] and financial regulators such as the Financial Conduct Authority (FCA) and Financial Reporting Council (FRC) enforce climate-related reporting and disclosure obligations for listed companies and large LLPs. Transition-plan disclosure requirements are being strengthened, embedding climate-risk supervision across the regulatory state.

The combination of statutory duties and transparent reporting promotes continuous planning and regular policy adjustment.

4. Independent oversight by the Climate Change Committee (CCC)

A defining feature of the United Kingdom's model is the Climate Change Committee (CCC), an independent statutory body established under the CCA. The CCC advises Parliament and the government on carbon budgets, evaluates the adequacy of policies, and publishes public reports that assess progress and highlight gaps. Its independence is central to the credibility of the system, with CCC assessments routinely shaping policy debates, influencing budget prioritisation, and providing long-term confidence to the private sector.

Recent CCC progress reports (2023-2025) have warned of significant policy risks and gaps for the 2030 NDC target, particularly in buildings, transport, and agriculture and land use. While the statutory framework remains robust, the CCC has stressed that the pace of policy implementation must accelerate to remain on track for the United Kingdom's sixth carbon budget and its 2030 NDC target.[14]

5. Judicial enforceability of climate obligations

The United Kingdom's system is further distinguished by the legal enforceability of the CCA. Courts have the authority to determine whether government strategies comply with statutory requirements. Civil society organisations have successfully challenged inadequate climate plans, compelling revisions when policies were found not to align with carbon budgets.[15] Although used sparingly, judicial review forms an important backstop that reinforces accountability and ensures that climate obligations cannot be overlooked for political expediency.

In summary, the United Kingdom's statutory framework, carbon budgeting system, central government accountability mechanisms, independent oversight by the CCC, and the possibility of judicial enforcement create a governance architecture that sustains climate ambition across political cycles. Recent developments, including the 2030 and 2035 NDCs, tightening of the UK ETS, and judicial decisions demonstrate an evolving system that continues to adapt and strengthen its governance tools. The model illustrates how legislation, institutions, accountability, and independent expertise work together to maintain momentum and provide long-term certainty to government, markets, and society.

III. CHINA: CENTRAL PLANNING, STRATEGIC DIRECTION, AND ECOLOGICAL CIVILIZATION

China's climate governance model is structurally different from that of parliamentary systems. Its climate governance reflects a highly centralised political system capable of sustained long-term planning and rapid resource mobilisation. Unlike the United Kingdom's statutory model, China does not rely on a single framework climate law with judicially enforceable budgets. Instead, its governance structure is built around top-level political goals, Five-Year Plans, the "1+N" policy system created to guide the climate change response, and administrative mechanisms that cascade targets through China's unique party-state apparatus. These arrangements are framed by the overarching concept of "ecological civilization", which links environmental protection to the country's development strategy and the authority of the Chinese Communist Party (CCP) (please see below).

China's headline climate goals are to achieve carbon peaking before 2030 and carbon neutrality before 2060 – the so-called "30/60" or "dual-carbon" goals. These objectives, announced by President Xi Jinping in 2020, are now embedded in national development planning and are increasingly shaping energy, industrial, and regional policies.

1. Long-term political goals and the "1+N" policy system

China's climate governance begins with political goals set by central party leadership rather than statutory mandates. The dual-carbon targets are translated into policy through the "1+N" system, where a single top-level guidance document on carbon peaking and carbon neutrality is accompanied by multiple supporting plans and sectoral roadmaps.

The central "1" document, the *Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality*, sets the strategic direction and principles,[16] while the "N" documents include the *Action Plan for Carbon Dioxide Peaking before 2030*[17] and sectoral plans for energy, industry, transport, construction, and others. Together, these outline when key sectors should peak emissions and how energy structures should shift toward non-fossil sources, primarily renewables and electrification. This architecture provides an integrated policy framework that is politically authoritative under the Chinese system.

2. Five-year plans and sectoral targets

Five-Year Plans (FYPs) remain the backbone of China's development governance, including in environmental and climate policies. The 14FYP (2021-2025) sets binding targets for reducing energy and carbon intensity, an 18% reduction in CO_2 intensity and 13.5% reduction in energy intensity between 2020 and 2025, and calls for raising the share of non-fossil energy in primary energy consumption to around 20% by 2025.[18] Final data for the 14FYP will not be available in due course, and China has historically taken corrective actions near the end of planning cycles to ensure headline objectives are achieved.

Regardless of the outcome, the experience of the 14FYP places added pressure on policymakers to ensure that the 15FYP (2026-2030) continues to drive structural change and keeps the country firmly on the pathway toward peaking emissions before 2030, as committed under the 30/60 goals. The 15FYP, as signalled in Central Committee plenums and policy commentaries,[19] points to "high-quality" innovation-driven growth, a faster build-out of a "new power system"[20] dominated by renewables, tighter control of new coal power, and efforts to plateau oil consumption during the 15FYP period before 2030. Industrial upgrading, especially in steel, cement, autos, batteries, and clean-tech manufacturing, is framed as a key lever for both economic competitiveness and emissions reduction. In this sense, FYPs serve simultaneously as vital climate, industrial, and macroeconomic strategies.

3. Ecological civilization and leadership accountability

"Ecological civilization" (生態文明) is the guiding political concept that links environmental protection to the Party's long-term legitimacy and development vision. It was written into the CCP constitution in 2012[21] and the state constitution in 2018,[22] and now permeates planning, legal reform, and cadre management.

One of the ways this concept is operationalised is through performance evaluation of party and government leaders. Environmental and climate indicators have been increasingly integrated into cadre assessment systems, including "lifetime accountability" for serious ecological damage. New provisional regulations issued in 2025 further clarify that local leaders will be held accountable for both pollution control and ecological protection outcomes, deepening the integration of environmental performance into the governance of promotions, appointments, and discipline. This mechanism creates strong internal incentives within the party-state: local leaders understand that failure to meet environmental and 30/60 targets may directly affect their career prospects.[23]

4. Administrative coordination and monitoring

China's climate governance relies heavily on administrative coordination and monitoring. High-level groups and commissions, such as the Central Leading Group on Carbon Peaking and Carbon Neutrality, set direction, while the National Development and Reform Commission (NDRC) and the Ministry of Ecology and Environment (MEE) play central roles in planning, policy design, data collection, and enforcement. Targets from the top are broken down and allocated to provinces, cities, industry sectors, and major enterprises, especially state-owned enterprises (SOEs). Implementation is monitored through statistical systems, inspections, special audits, and regular publication of policy action reports such as the annual *China's Policies and Actions on Climate Change* report. Retrofitting for energy efficiency, heavy industry upgrading, and large-scale renewable deployment are often carried out via centrally supported programmes that mobilise local governments and SOEs.

5. Consultation & engagement

The Chinese government's main mechanism to consult stakeholders is through the Chinese People's Political Consultative Conference (CPPCC) system, which serves as an advisory body comprising representatives from various sectors at the central and local levels.[24] Additionally, SOEs play a crucial role in providing feedback on policies. Public consultations are facilitated through online platforms, surveys, and local forums. Furthermore, the government engages regularly with experts and academic institutions for diverse inputs.

6. Expanding use of market and regulatory instruments: ETS and sector standards

While planning and administrative tools remain primary, China is gradually increasing its use of market-based and regulatory instruments. The national Emissions Trading System (China ETS), launched in 2021 for the power sector, was expanded in 2025 to include steel, cement, and aluminium. This expansion will bring roughly 1,500 additional enterprises into the scheme and raise coverage to more than 60% of national CO_2 emissions, making it the largest ETS in the world by volume.

At the same time, China is tightening sector-specific regulations. New renewable energy standards now require heavy industries such as steel, cement, and polysilicon, as well as certain data centres, to procure a rising share of electricity from renewable sources, with varying provincial targets. These measures support the "new power system" vision by creating demand for renewable electricity in energy-intensive industries and linking industrial policy directly to decarbonisation.

Current carbon prices in the China ETS remain very low. Analyses suggest that prices will need to rise and enforcement must be strengthened if it is to drive deep emissions reductions rather than simply regularise reporting.

7. Growing use of legal and judicial tools

China's climate governance is not primarily driven by climate-specific legislation, but the broader legal framework for environmental protection has been strengthened. The revised Environmental Protection Law, the proliferation of specialised environmental courts, and the growing use of public interest litigation by prosecutors and NGOs have expanded the role of law in enforcing pollution and ecological obligations. While climate impacts are seldom litigated in isolation, these mechanisms increasingly cover climate-relevant issues such as coal plant pollution, illegal land-use change, and protection of carbon-rich ecosystems. Model cases and judicial interpretations from the Supreme People's Court provide guidance for lower courts and regulators, contributing to a gradual 'juridification' of environmental governance, albeit under tight political control.[25]

In summary, China's political, policy, administrative, and legal architecture has proven highly effective in sustaining long-term strategic objectives, an essential quality for addressing climate change. The dual-carbon goals are backed by powerful central coordination, mechanisms for cascading targets throughout the party-state hierarchy, and a governance culture capable of mobilising national resources at scale in support of priority objectives, such as renewable energy deployment, industrial upgrading, and the construction of a new power system. As China moves into the 15FYP period, these institutional features will continue to shape the pace and direction of its transition toward peaking emissions before 2030 and advancing toward carbon neutrality.

IV. SINGAPORE: TECHNOCRATIC COORDINATION AND SECTOR-BASED POLICY

Singapore's status as a small, densely built city-state allows for tight coordination between government and key sectors. Its governance model is characterised by strong central coordination, a highly professional civil service, and the use of sector-specific legislation rather than an overarching climate law. As a small, resource-constrained island state exposed to climate impacts (especially sea level rise and heat) Singapore has framed climate policy as a long-term national survival and competitiveness issue. Its approach combines a steadily tightening carbon tax, detailed energy and land-use planning, and a growing emphasis on transparency and public-sector leadership.

Singapore's current climate targets are to reduce its annual emissions to around 60 Mt CO_2e by 2030 after peaking earlier, and to achieve net-zero emissions by 2050, as reflected in its updated NDC and Long-Term Low-Emissions Development Strategy (LEDS).[26] In February 2025, Singapore further announced a 2035 NDC to bring annual emissions down to 45-50 Mt CO_2e by 2035, tightening its medium-term trajectory.[27] Domestically, these targets are supported by the Singapore Green Plan 2030, a whole-of-nation roadmap with sectoral milestones in energy, transport, buildings, waste, and nature.[28]

Singapore demonstrates how a compact, highly coordinated city-state can advance climate action through targeted legislation, technocratic planning, and integrated public sector leadership. Its key governance features include:

1. Whole-of-government coordination under the Prime Minister's Office

Climate change strategy in Singapore is anchored under the Inter-Ministerial Committee on Climate Change (IMCCC),[29] chaired at senior ministerial level and supported by the National Climate Change

Secretariat (NCCS)[30] within the Prime Minister's Office. This arrangement elevates climate policy above individual line ministries, allowing trade-offs between economic growth, security, and emissions to be considered at the centre of government.

The IMCCC sets overall direction on climate targets, international commitments, and major policy shifts such as the net-zero 2050 pledge and carbon tax trajectory. NCCS coordinates analysis, long-term scenario planning, and stakeholder engagement, and ensures consistency across national plans, including the LEDS and the Green Plan 2030. The Singapore Green Plan itself is a multi-agency effort spearheaded by five ministries (Education, National Development, Sustainability and the Environment, Trade and Industry, and Transport) illustrating how climate and sustainability have been mainstreamed into core national planning rather than treated as a narrow environmental issue.

2. Long-term targets, NDCs, and the Singapore Green Plan 2030

Singapore's climate targets are articulated through a combination of international commitments and domestic planning frameworks. It has submitted an enhanced 2030 NDC, a 2050 LEDS, and an updated 2035 NDC, progressively raising ambition while emphasising its status as an "alternative-energy-disadvantaged" city-state.

The Singapore Green Plan 2030 translates these long-term goals into nearer-term sectoral objectives across five pillars: City in Nature, Sustainable Living, Energy Reset, Green Economy, and Resilient Future. Key targets include:

- Quadrupling solar capacity by 2025 and significantly expanding deployment going forward
- Ensuring all newly registered cars are clean energy models from 2030
- Reducing waste sent to landfill by 30% by 2030
- Planting one million trees and expanding nature parks

Together with the LEDS and NDCs, the Singapore Green Plan 2030 provides a clear narrative of how Singapore intends to reconcile growth, competitiveness, and decarbonisation.

3. Carbon Pricing Act and sector-specific regulatory tools

Singapore does not use a system of statutory carbon budgets, like the United Kingdom. Instead, it relies on a broad-based carbon tax under the Carbon Pricing Act 2018,[31] complemented by detailed sector-specific regulations. All facilities that emit 25,000 t CO_2e or more per year are subject to the carbon tax, which initially started at S$5 per tonne from 2019-2023. Following its Budget 2022, Singapore announced a sharp increase in the tax towards 2027 and then 2030:

- S$25/t$CO_2e$ in 2024-2025
- S$45/t$CO_2e$ in 2026-2027
- S$50-80/t$CO_2e$ by 2030[32]

Around 70% of national emissions are covered directly by the carbon tax, and roughly 80% when transport fuel excise duties are included, making it one of the more comprehensive carbon-pricing regimes globally. From 2024, liable facilities may use a limited share of high quality international carbon credits (up to 5% of taxable emissions), linking domestic pricing to emerging international carbon markets.[33]

Beyond carbon pricing, Singapore relies on a suite of sector-specific regulatory tools that reinforce its integrated, technocratic approach to climate governance. These include stringent building energy codes and the Building and Construction Authority's Green Mark Scheme, which functions as a comprehensive mainstreaming instrument for the buildings sector.[34] As a small, highly urbanised city-state where the built environment accounts for a dominant share of energy use and emissions, Singapore has developed mechanisms that embed climate and sustainability considerations directly into planning, design, construction, and building operations.

BOX 2B

Singapore's Green Mark System – Integrating Climate and Sustainability into the Built Environment

Singapore's Green Mark system, administered by the Building and Construction Authority (BCA), is a long-standing framework that mainstreams climate objectives into building design, construction, operations, and financing. Introduced in 2005 and steadily strengthened since, Green Mark has evolved into a comprehensive regulatory and incentive structure that shapes how buildings are planned and developed across the city-state.

Green Mark sets performance standards for energy efficiency, carbon emissions, water use, indoor environmental quality, and, increasingly, embodied carbon. Higher tiers of certification, such as Green Mark Platinum or Super Low Energy (SLE), require significant energy performance improvements, integration of renewable energy, and adoption of advanced building technologies. Through regular code tightening, BCA ensures that climate considerations continuously influence the market for building services, materials, and engineering solutions.

A central feature of Green Mark is its integration with planning and development approvals. Developers seeking to achieve higher plot ratios, premium locations, or certain incentives must meet Green Mark requirements, effectively embedding climate and sustainability objectives into land-use and planning decisions. Public sector leadership reinforces this mainstreaming: all new public buildings must achieve high Green Mark ratings, and government procurement standards require adherence to energy-efficient and low-carbon design principles.

Green Mark also interacts with the financial ecosystem. Green loans, sustainability-linked financing, and government grants frequently rely on Green Mark ratings as eligibility criteria or performance indicators, aligning capital flows with Singapore's decarbonisation pathway. Large developers and REITs use Green Mark to structure pipeline investments and portfolio-wide energy efficiency programmes, reflecting the scheme's influence beyond regulatory compliance.

Overall, Green Mark has become a central mechanism for integrating climate priorities into Singapore's built environment policies. By combining regulation, financial signals, planning incentives, and public-sector leadership, it demonstrates how a coordinated, technocratic system can mainstream climate action across one of the most carbon-intensive sectors of any city.

Additional sector-specific tools include vehicle-emissions standards and road-pricing measures, supported by aggressive timelines for fleet electrification;[35] industrial energy-efficiency requirements and incentive schemes;[36] and land-use planning that prioritises compact, transit-oriented development.[37]

Taken together, this policy mix reflects Singapore's preference for clear price signals and targeted regulation operating within a unified planning framework, rather than reliance on a single overarching climate law.

4. Public sector leadership, transparency, and sustainability reporting

Singapore places significant emphasis on the public sector leading by example. Under the GreenGov.SG initiative,[38] the public sector aims to peak emissions around 2025 and achieve net-zero emissions around 2045, five years ahead of the national 2050 net-zero target. GreenGov.SG sets quantitative targets for government agencies to reduce energy and water use by 10% and waste disposal by 30% by 2030 and publishes detailed annual performance data.

Transparency obligations have also been extended to statutory boards, which are required to publish annual environmental sustainability disclosures from FY2024 onwards.[39] This reinforces the expectation that public entities treat climate and sustainability as core governance responsibilities.

On the corporate side, Singapore Exchange (SGX) rules have progressively tightened sustainability reporting requirements for listed issuers, and Singapore is implementing a mandatory climate reporting regime aligned with ISSB standards. From FY2025, all SGX-listed companies must report Scope 1 and 2 emissions, with climate-related financial disclosures structured around international standards.[40] This emerging disclosure framework, combined with the carbon tax, is steadily integrating climate risk into financial and corporate governance.

5. Limited role for litigation and emphasis on administrative accountability

Public interest environmental litigation remains rare in Singapore. Standing rules, the design of administrative law, and political norms mean that climate-related disputes are usually resolved within government processes, parliamentary oversight, or through technocratic policy review rather than through the courts. Accountability for climate policy outcomes is exercised primarily via internal performance management, parliamentary scrutiny, public reporting, and periodic policy updates, rather than judicial enforcement. Singapore instead relies on reputation, performance metrics, and central coordination within a small, tightly managed system to keep ministries and statutory boards aligned with national targets.

In summary, Singapore's climate governance illustrates how a compact, highly coordinated state can advance decarbonisation without an overarching climate act. Long-term targets (net zero by 2050, the 2030 and 2035 NDCs), the Singapore Green Plan 2030, and GreenGov.SG provide strategic direction and clear milestones. A steadily rising, broad-based carbon tax, combined with sector-specific regulations, gives a coherent policy signal to industry and investors. Strong whole-of-government coordination under the Prime Minister's Office, disciplined public-sector leadership, and increasingly robust sustainability reporting requirements anchor the system.

V. HONG KONG: EXECUTIVE-LED GOVERNANCE UNDER "ONE COUNTRY, TWO SYSTEMS"

Hong Kong shares some features with Singapore's technocratic model but operates under a very different constitutional and political framework. Hong Kong represents a hybrid case, combining elements of common law administration, executive-led governance, and alignment with the Chinese Mainland's national direction. Unlike the United Kingdom, Hong Kong does not have statutory carbon budgets or an independent oversight body; unlike Singapore, its sectoral plans are not fully consolidated; and unlike China, it does not operate under a unified national planning system.

Hong Kong's climate governance sits at the intersection of local autonomy and national direction. Under "one country, two systems", the Hong Kong Special Administrative Region retains its own legal, administrative, and financial systems. Between 2020 and 2021, the HKSAR Government announced its own long-term target, aiming for carbon neutrality before 2050 with an interim goal of reducing emissions by 50% before 2035 compared with 2005 levels. This commitment builds on earlier planning efforts. In 2017, Hong Kong published its first comprehensive climate strategy, *Climate Action Plan 2030+ (CAP2030+)*,[41] structured around four pillars: cleaner electricity generation, energy saving and green buildings, green transport, and waste reduction.

In 2021, Hong Kong released its *Climate Action Plan 2050 (CAP2050)*,[42] which essentially retained these four pillars. CAP2050 placed policy weight on decarbonising electricity generation and deepening regional energy cooperation. CAP2030+ was complemented by thematic strategies on energy saving, improving air quality, and reducing waste.

Likewise, CAP2050 is complemented by the Clean Air Plan 2035, the Roadmap on Popularisation of Electric Vehicles, and the Waste Blueprint for Hong Kong 2035. Hong Kong's system relies on a combination of top-level policies and political steering, sectoral planning documents, and a rapidly developing green finance and disclosure architecture.

1. Long-Term targets and Climate Action Plan 2050

Hong Kong's current headline climate commitment is to strive for carbon neutrality before 2050, with an interim target to halve absolute emissions by 2035 compared with 2005. The HKSAR Government also maintains the earlier 2030 carbon-intensity target in CAP2030+ (65%-70% reduction from 2005, equivalent to a 26%-36% absolute reduction and per capita emissions of about 3.3-3.8 tonnes), positioning 2030, 2035, and 2050 as key milestones.

The CAP2050 sets out indicative sectoral pathways rather than legally binding carbon budgets. In electricity, the HKSAR Government commits to:

- Cease using coal for daily electricity generation by 2035, keeping remaining units only for back-up.
- Increase the share of renewable energy in the fuel mix to 7.5%-10% by 2035 and around 15% thereafter.
- Move towards net-zero electricity generation before 2050 through a combination of local renewables, new energy (e.g. hydrogen or other zero-carbon fuels), and deeper regional cooperation with neighbouring Guangdong Province.

On the demand side, the CAP2050 aims to cut electricity consumption in commercial buildings by 30%-40% and in residential buildings by 20%-30% by 2050, achieving about half of these reductions by 2035, largely through tightening building energy regulations, retrofits, and behavioural change. Transport and waste strategies focus on electrifying road transport, phasing out conventional vehicles over time, expanding charging infrastructure, and moving away from reliance on landfills by scaling up waste-to-energy and waste reduction initiatives.

These targets are ambitious considering Hong Kong's constrained land, lack of indigenous energy resources, and highly built-up urban form. The CAP2050 thus functions as a strategic roadmap rather than a statutory plan: it sets direction, identifies investment priorities, and signals to utilities, transport operators, developers, financiers and the public where policy is headed.

2. Political leadership and cross-government coordination

To strengthen top-level coordination, the HKSAR Government has established several governance bodies. The Steering Committee on Climate Change and Carbon Neutrality (SCCCN) was established in 2021 and initially chaired by the Chief Executive to formulate overall strategy and oversee inter-departmental coordination.[43] Following the 2022 government reorganisation, chairmanship shifted to the Chief Secretary for Administration, reflecting the new administration's emphasis on cross-bureau coordination under the Chief Secretary's portfolio.[44]

Supporting the SCCCN, the HKSAR Government set up an Office of Climate Change and Carbon Neutrality (OCCN) within the then Environment Bureau (now the Environment and Ecology Bureau (EEB)) to strengthen internal coordination, policy design, and public engagement.[45] EEB was created in 2022 through a restructuring that consolidated environmental protection, ecology, climate, energy, food and environmental hygiene, and the Hong Kong Observatory (HKO) under a single bureau, bringing climate change and meteorology under one roof.

In addition, the Council for Carbon Neutrality and Sustainable Development (CCNSD) provides external advice.[46] Comprising experts from business, academia, and civil society, it is tasked with advising the HKSAR Government on strategies to achieve the 2035 interim target, carbon neutrality before 2050, and broader sustainable development priorities, as well as promoting public awareness.

On infrastructure adaptation, the Climate Change Working Group on Infrastructure (CCWGI) was established in 2016 under the leadership of the Civil Engineering and Development Department (CEDD under the Development Bureau)[47] to coordinate efforts among works departments to strengthen the resilience of coastal defences, drainage, transport networks, utilities, and other critical infrastructure against extreme weather and sea level rise. The CCWGI reports to the SCCCN, with updated design standards informed by climate-risk studies.

Taken together, these arrangements create a multi-layer governance structure: political steering by the Chief Executive, policy integration through EEB and the OCCN, advisory input from the CCNSD, and technical coordination on resilience via the CCWGI.

3. Sectoral strategies and policy instruments

Hong Kong's decarbonisation strategy is largely sector-based, implemented through a suite of policy documents and regulatory instruments rather than a single climate law.

In electricity, the HKSAR Government works through regulatory frameworks with the two private sector power companies under the Scheme of Control Agreements, coupled with targets in the CAP2050 to phase down coal, scale up renewables, and explore new zero-carbon energy options and regional power-trading arrangements with the mainland.

In buildings, which account for about 90% of Hong Kong's electricity consumption and about 50% of the city's emissions, energy efficiency measures are advanced primarily through the Buildings Energy Efficiency Ordinance (BEEO), the revision of codes of practice, and green building promotion schemes, alongside targeted support for retrofits in public housing and government buildings.

Hong Kong's Roadmap on Popularisation of Electric Vehicles sets out plans to cease new registrations of fuel-propelled private cars (including hybrids) by 2035 or earlier, expand charging infrastructure, and promote electrification of commercial and public transport where feasible. This is complemented by broader transport planning that favours rail-based, transit-oriented development, reflecting long-standing land-use patterns that already give Hong Kong a relatively low per capita transport emissions profile.

The Waste Blueprint for Hong Kong 2035 and the introduction (and subsequent adjustment) of municipal solid waste charging aim to drive down disposal at landfills and support a transition towards waste reduction, recycling, and energy-from-waste facilities, although implementation has been slower and more contested than in other sectors.

These sectoral roadmaps are backed by various funding commitments. The government signalled that it expects to devote about HK$240 billion over 15-20 years to climate-related infrastructure and decarbonisation measures, including power, buildings, transport, and waste.[48]

4. Financial and disclosure architecture

A distinctive feature of Hong Kong's climate governance is how it leverages its role as an international finance centre to advance climate and sustainability goals.

In 2020, regulators and policy bureaux established the Green and Sustainable Finance Cross-Agency Steering Group (CASG), co-chaired by the Hong Kong Monetary Authority (HKMA) and the Securities and Futures Commission (SFC), with membership including EEB, Financial Services and the Treasury Bureau (FSTB), Hong Kong Exchange and Clearing Limited (HKEX), Insurance Authority, and the Mandatory Provident Fund Authority. The CASG's mandate is to coordinate management of climate and environmental risks to the financial sector, accelerate the development and adoption of green and sustainable finance, and support the government's climate strategies.[49]

In December 2024, the CASG launched *A Roadmap on Sustainability Disclosure in Hong Kong*,[50] which sets out a pathway for publicly accountable entities (PAEs)[51] to adopt sustainability-related disclosure standards fully aligned with the ISSB by the second half of the decade.[52] HKEX has also introduced new climate-related disclosure requirements for listed companies, with phased implementation beginning in FY2025 for Main Board issuers.[53] Under the Roadmap, PAEs are expected to adopt the Hong Kong Sustainability Disclosure Standards in full by 2028.

HKMA has also published guidance on climate-related risk management for banks and insurers, while promoting green and sustainable finance through bond issuance, grant schemes, and capacity-building initiatives. This financial sector architecture aims to align capital flows with Hong Kong's climate goals, strengthen the resilience of the financial system, and preserve the city's competitiveness as an international green finance hub in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) and beyond.

5. Accountability dimensions

Climate obligations are generally embedded within administrative policy documents, sectoral ordinances, and regulatory instruments. Accountability for climate policy thus relies more on political oversight, administrative coordination, public reporting, and advisory mechanisms, including:

- Periodic publication of climate-related plans and progress updates
- Legislative Council scrutiny, including panel discussions on climate and climate-related issues
- Advisory input from the CCNSD and various statutory/advisory bodies
- Public consultation exercises accompanying major strategy documents

At the same time, Hong Kong's climate governance is influenced by the positioning of Hong Kong within the GBA and as an international financial, trade, shipping and aviation centre supporting green development.

In summary, Hong Kong's climate governance represents a hybrid model that combines strategic planning, high-level political steering, specialised coordination, and a sophisticated green finance and disclosure framework. The system's strengths lie in its ability to activate financial and regulatory levers, integrate climate considerations into sectoral plans, and tap into both local and national initiatives. Its challenge is in coordinating across many bureaux, departments and agencies.

VI. COMPARATIVE INSIGHTS ACROSS FOUR GOVERNANCE SYSTEMS

A comparative look at the United Kingdom, Chinese Mainland, Singapore, and Hong Kong reveals that climate governance does not follow a single institutional template. Each jurisdiction reflects its own political traditions, administrative logic, and legal architecture, and yet all attempt to address the same underlying challenge: how to mobilise government capacity, markets, and society along a long-term decarbonisation and adaptation pathway.

The United Kingdom exemplifies a mature common law system that embeds climate governance in statute. The CCA anchors climate policy across electoral cycles through legally binding long-term targets, carbon budgets, and an independent advisory body in the CCC. Judicial review provides a backstop, compelling the authorities to align policies with statutory obligations. This model shows how a common law tradition and independent institutions can sustain long-term climate ambition.

China, by contrast, operates through a highly centralised party-state system grounded in political authority, long-term planning, administrative discipline, and the logic of national mobilisation. Its 30/60 goals, Five-Year Plans, and "1+N" policy framework cascade climate priorities through all levels of the state, supported by leadership accountability mechanisms and rapidly evolving

regulatory and market tools, such as the national ETS. China demonstrates how a system built on central direction and strategic planning can align national resources at scale and speed, an advantage for infrastructure-intensive transitions like energy system transformation.

Singapore and Hong Kong, though different in political systems and constitutional arrangements, share characteristics as small, externally oriented, service-based cities with limited land and resources. Both have a common law heritage as former British colonies, but each has evolved its governance framework to suit local circumstances and strategic interests. Singapore emphasises technocratic central coordination, a steadily rising carbon tax, and strong public sector leadership under the Prime Minister's Office. Hong Kong has a hybrid model combining long-term targets, sectoral roadmaps, and a sophisticated green finance and disclosure framework. The two cases illustrate how compact cities can use targeted instruments, regulatory clarity, and financial market leverage to drive climate action even without a single overarching climate law.

Across all four jurisdictions, several common themes emerge:

- First, long-term direction, whether statutory (United Kingdom), political (Chinese Mainland), technocratic (Singapore), or policy-based (Hong Kong), is indispensable for sustaining climate ambition.

- Second, effective climate governance requires central leadership and cross-government coordination, because decarbonisation spans so many policy areas.

- Third, credible oversight mechanisms, whether independent committees, party-state performance systems, technocratic reporting requirements, or disclosure frameworks, help maintain policy consistency and accountability.

- Finally, implementation remains the decisive factor in all cases: climate goals succeed or fail in the concrete domains of land use, electricity, buildings, transport, finance, adaptation and resilience etc.

The differences across systems underscore that there is no single "best" governance model, but each system's internal logic shapes its characteristics and utility. The United Kingdom leverages legal continuity and independent scrutiny; Chinese Mainland mobilises long-term planning and state capacity at scale; Singapore achieves alignment through centralised technocracy and pricing instruments; Hong Kong advances through policy commitments and financial sector priorities.

Ultimately, regardless of political tradition, administrative structure, or legal system, climate change demands long-term, consistent attention from governments. The jurisdictions examined here show that the most effective arrangements are those that integrate long-term vision, coordination mechanisms, sectoral strategies, and accountability into their governing systems. Embedding these elements, whether through law, planning, political directives, technocratic institutions, or financial architecture, greatly enhances a jurisdiction's ability to deliver sustained climate action over decades.

VII. CONCLUDING REFLECTIONS: HONG KONG'S HYBRID SYSTEM AND THE PATH AHEAD

For the purposes of this report, the goal is not to identify an "ideal" climate governance system, nor to measure Hong Kong against models that reflect different political traditions or administrative cultures. Rather, it is to examine Hong Kong's system as it is: a hybrid structure rooted in common law, executive-led administration, and longstanding sectoral governance practices, while also functioning as a highly autonomous sub-system within China.

The comparative analysis shows that climate governance can be organised in many ways. Yet, certain elements recur across successful systems: long-term direction, coordinated leadership, transparent oversight, sectoral alignment, and sustained policy implementation. For Hong Kong, the key question is how these elements can be strengthened within its own institutional logic.

Hong Kong is uniquely complex. It aims to reach carbon neutrality by 2050, ten years earlier than the national 2060 target, while facing structural constraints that few cities share. It has one of the highest high-rise densities in the world and a mountainous landscape carrying landslide risks, especially as extreme rainfall intensifies. Its subtropical climate exposes it to typhoons, storm surges, heatwaves, and extreme precipitation. As a coastal megacity, it is highly vulnerable to sea level rise. It is also a large consumer of electricity dependent on imported fuels and cross-boundary energy flows. Yet, this densely urbanised territory also hosts remarkable biodiversity and ecologically sensitive coastlines, making adaptation both more urgent and more delicate.

At the same time, Hong Kong is a major international financial centre, global shipping port, and aviation hub, deeply embedded in global supply chains and economic networks. It sits within the GBA, linking its own 2050 neutrality goal not only with the Chinese Mainland's 30/60 targets but also with Guangdong Province's regional policies and plans. Hong Kong's hybrid governance model therefore operates at the intersection of local autonomy and mainland policy direction.

The task of this report is to understand how Hong Kong's own hybrid model can be improved. The priorities emerging from this chapter include:

- Strengthening policy ambition and clarity, ensuring Hong Kong's climate-related targets are backed by clear sectoral trajectories
- Enhancing cross-bureau and cross-department coordination for joint-up policy design and implementation
- Improving implementation consistency, supported by reliable data, regulatory follow-through, transparent progress reporting, and alignment with GBA development plans
- Leveraging Hong Kong's financial system, green finance frameworks, and market institutions to drive private investment into decarbonisation and resilience
- Deepening cooperation with Guangdong Province, particularly on clean power, regional mobility, adaptation and resilience, and biodiversity conservation, plus across the Chinese Mainland on clean fuels for shipping and aviation, transportation, and financial services

Climate change demands long-term, consistent attention, and the experience of the four jurisdictions shows that effective systems are those able to embed that long-termism into their governance structures. Hong Kong's hybrid system, combining autonomy, common law traditions, sector-based governance, and alignment with national strategy, contains the foundations for such an approach.

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CHAPTER 3

GOOD CLIMATE GOVERNANCE: PRINCIPLES AND PRACTICES FOR EFFECTIVE ACTION

I. INTRODUCTION

Effective climate governance is the backbone of a jurisdiction's ability to mitigate greenhouse gas emissions, adapt to intensifying climate risks, and build long-term resilience. Technical solutions, financial tools, and scientific evidence are essential, but they cannot deliver results without governance arrangements capable of steering complex, long-duration transitions. Climate change cuts across economic sectors and social systems, requires sustained investment, and involves difficult trade-offs. The ability of governments to coordinate action, mobilise stakeholders, and maintain continuity across political and economic cycles therefore becomes decisive.

International institutions and academic research converge on a shared understanding of what makes climate governance effective. Despite differences in political systems, stages of development, and legal traditions, a global consensus has emerged around a set of functional principles.

Across international literature, five governance elements appear consistently:

1. Clear long-term targets, and strategic direction
2. High-level political leadership and whole-of-government coordination
3. Integration across all policy sectors ("mainstreaming")
4. Transparency, monitoring, reporting and independent review
5. Stakeholder and public engagement

These elements form the Five-Pillar Model adopted in this report. The purpose of this chapter is to explain the logic behind each pillar and how, together, they create the institutional foundation necessary for sustained climate action. The subsequent chapters apply this model to Hong Kong, evaluating its system and identifying opportunities for strengthening the city's climate governance architecture.

II: GLOBAL CONSENSUS ON GOOD CLIMATE GOVERNANCE

A strong global consensus exists across major institutions on what constitutes effective climate governance, drawn from authoritative findings from a variety of sources.

1. Long-term vision, targets, and strategic direction

A clear long-term vision anchored by measurable targets is widely recognised as the starting point of effective climate governance. International scientific and policy bodies consistently emphasise that without a defined end-state and time-bound milestones, governments struggle to maintain policy coherence, mobilise investment, or create accountability for progress:

- **The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6):** This underscores that long-term goals and pathways are indispensable for driving both mitigation and adaptation. AR6 states that credible long-term planning provides "directionality" for public and private decision-making and helps lock in trajectories consistent with limiting global warming to 1.5°C or well below 2°C. The report stresses that governments must articulate not only long-term

goals (such as achieving carbon neutrality) but also translate these into sector-specific pathways, supported by interim milestones, so that progress can be tracked and adjusted over time.[54]

- **Paris Agreement:** It embeds long-term planning as an expectation of parties to the agreement. Article 4 calls on each jurisdiction to "prepare, communicate and maintain successive nationally determined contributions" (NDCs) and encourages the formulation of "long-term low greenhouse gas emission development strategies." These long-term strategies provide a forward-looking framework that aligns near-term policy instruments with decarbonisation trajectories. Article 7 extends this logic to adaptation, requiring parties to undertake long-term planning processes that assess risks, strengthen resilience, and protect vulnerable communities and systems. Together, the mitigation and adaptation provisions of the Paris Agreement establish long-term strategising as a core component of international climate governance.[55]

- **OECD Climate Governance:** The OECD offers practical guidance for governments on embedding long-term strategies within their administrative systems. Drawing from cross-country institutional reviews, the OECD highlights that effective climate governance requires not only ambitious long-term goals but also "strategic and measurable targets that are legally or administratively anchored." These scans find that jurisdictions with durable long-term climate frameworks are better able to maintain continuity across electoral cycles, provide clarity to investors, and strengthen coordination between ministries and sub-national authorities (OECD, 2021).[56]

Taken together, these authoritative sources highlight the global consensus that long-term vision and targets, supported by interim milestones, constitute the essential foundation for coherent, credible, and forward-looking climate governance.

2. High-level political leadership and whole-of-government coordination

High-level political leadership is widely recognised as one of the most critical determinants of effective climate governance. Because climate change cuts across so many policy areas, it cannot be managed by any single agency acting alone. Governments that have succeeded in advancing ambitious climate agendas consistently rely on central leadership structures, anchored at the highest political level, to provide strategic direction, resolve cross-sectoral conflicts, and maintain continuity across administrations.

- **UNDP Governance Framework:** It highlights the concepts of *vertical and horizontal* integration. Horizontal integration refers to coordination across ministries and agencies at the same level of government. Vertical integration refers to alignment across national, regional, and local authorities. UNDP emphasises that without leadership that spans both dimensions, climate strategies frequently stall during implementation, particularly in federal or multi-layered governance systems. Strong leadership structures ensure that climate objectives cascade through all levels of government and that implementation barriers are escalated and resolved promptly.[57]

- **Global Commission on Adaptation (GCA 2019):** Its landmark report concludes that sustained political leadership is the single most important factor in scaling adaptation measures. The GCA notes that adaptation often suffers from invisibility, as benefits are diffuse, long-term, and difficult to quantify, resulting in chronic political underinvestment. Leadership government is essential to elevate adaptation from a technical concern to a strategic national priority, mobilise finance, and ensure that ministries responsible for infrastructure, land use, and public safety integrate adaptation into core operations.[58]

- **OECD Climate Governance:** The OECD highlights the central importance of robust institutional arrangements that elevate climate coordination to senior political leadership. Across its country scans and horizontal studies, the OECD finds that jurisdictions with strong climate performance typically establish "central coordinating bodies" such as cabinet committees, Prime Minister's Office units, or cross-ministerial task forces that hold authority over multiple departments. These bodies ensure that climate priorities are not siloed within environment ministries but instead embedded across sectors. The OECD stresses that without such central coordination, climate policy tends to fragment, resulting in inconsistent sectoral actions and slow implementation.[59]

These international analyses demonstrate that high-level political leadership is not a supplementary feature of climate governance, but a foundational requirement. Central leadership bodies ensure coherence, resolve policy trade-offs, maintain ambition, and sustain climate efforts across political cycles.

3. Integration across all policy sectors ("mainstreaming")

Climate governance cannot succeed unless climate considerations are embedded across all major sectors of government. This idea, commonly described as *mainstreaming*, is one of the most consistent findings across global climate governance literature. Mainstreaming ensures that every part of government integrates climate mitigation, adaptation, and resilience into its core functions and decision-making processes.

- **IPCC AR6:** It highlights that mitigation and adaptation measures are most effective when they are incorporated directly into the decision-making frameworks of high-impact sectors such as land use planning, energy supply, transport networks, public health, and infrastructure development. According to AR6, mainstreaming avoids the inefficiencies and contradictions that arise when climate objectives are isolated within environmental agencies while other sectors continue operating on conventional assumptions.[60]

- **Paris Agreement Article 7.5:** This article requires parties to integrate climate adaptation into "relevant socioeconomic and environmental policies and actions." It signals that adaptation must not be viewed as a separate policy track but rather a mainstreamed component of all national development strategies, economic planning, and sectoral policy frameworks.[61] By explicitly calling for integration, Article 7.5 recognises that uncoordinated sectoral policies risk undermining national adaptation efforts and exposing populations and infrastructure to escalating climate risks.

- **World Bank's Climate Change Institutional Assessment (CCIA):** It identifies mainstreaming as a central component of institutional readiness for climate action. The CCIA framework stresses that mainstreaming requires ministries of finance and other parts of governments to incorporate climate considerations into budgeting processes, regulatory design, infrastructure appraisal, and long-term development strategies. The World Bank also underscores the need for technical guidance, staff training, and clear interdepartmental responsibilities to prevent climate plans from remaining largely aspirational.[62]

Across these authoritative sources, mainstreaming is recognised as a governance function that ensures consistency across the entire public sector. It enables governments to align economic and social policies with climate goals, avoid contradictory investments, and strengthen the effectiveness of both mitigation and adaptation.

4. Transparency, monitoring, reporting (TMR) and independent review (IR)

Transparency and accountability are central to credible climate governance. International frameworks repeatedly stress that without robust monitoring

systems, public reporting, and independent oversight, climate strategies risk becoming symbolic rather than actionable. Transparency enables governments, markets, and society to understand whether policies are delivering results, and if not, where corrective action is needed.

- **Paris Agreement Article 13:** This is one of the most important innovations in global climate governance. Article 13 requires all parties, developed and developing, to regularly monitor, report, and verify progress toward their mitigation, adaptation, and support commitments. Unlike earlier UNFCCC reporting systems, the enhanced transparency framework standardises reporting formats, frequency, and methodologies. This ensures consistency and comparability across jurisdictions and enables early identification of gaps between national commitments and actual performance. The framework also emphasises the need for transparent communication of greenhouse gas inventories, progress toward NDCs, adaptation efforts, and climate finance flows.[63]

- **OECD and World Bank:** It identifies transparency and monitoring as indispensable components of effective domestic governance. The OECD notes that jurisdictions with strong climate performance adopt clear indicators, publish regular progress reports, and disclose underlying data in accessible formats. Such transparency strengthens accountability across the bureaucracy, supports evidence-based policymaking, and provides investors with market certainty, especially in sectors with long asset lifetimes like energy, infrastructure and buildings.[64] The World Bank underscores that effective monitoring systems are essential for ensuring climate investments yield measurable results.[65]

- **Grantham Research Institute at the London School of Economics:** It has documented the significant influence of statutory or arm's length expert bodies in strengthening climate governance. The most prominent example is the United Kingdom's Climate Change Committee (CCC). Research shows that such independent bodies contribute to policy stability, reduce political volatility, and help maintain long-term ambition across electoral cycles.[66]

Taken together, these insights show that transparency and independent review function as the credibility backbone of climate governance. They transform climate commitments from aspirational statements into measurable, verifiable outcomes.

5. Stakeholder and public engagement

Stakeholder and public engagement is vital to effective climate governance. Because climate change affects every sector of society, governance frameworks must extend beyond governmental action and meaningfully involve businesses, community organisations, professional bodies, academia, and the broader public. International institutions consistently highlight that inclusive, participatory processes strengthen legitimacy, enhance policy quality, and support social acceptance of difficult transitions.

- **IPCC AR6:** It notes that inclusive governance improves both the legitimacy and the effectiveness of climate action. AR6 concludes that when decision-making processes incorporate diverse perspectives, policies are better aligned with social realities and more likely to achieve durable results. The IPCC also stresses that engagement is essential to addressing distributional impacts of mitigation and adaptation measures, ensuring that vulnerable populations are protected and that transitions support rather than undermine social equity.[67]

- **Paris Agreement Article 12:** This article requires parties to "cooperate in taking measures" to enhance climate education, public awareness, public participation, and public access to information. This article embeds engagement as a legal expectation within international climate

law, not as a discretionary or optional activity. By positioning participation and awareness as obligations, the Paris Agreement acknowledges that climate governance cannot succeed without informed and active societal involvement.[68] Article 12 is therefore foundational for national and subnational strategies seeking to mobilise communities, encourage behavioural change, and ensure that vulnerable groups are included in the policymaking process.

- **United Nations Development Programme (UNDP):** It emphasises that stakeholder engagement must be both *inclusive and locally informed*. Its analyses highlight the value of participatory decision-making processes that draw on local knowledge, cultural contexts, and community expertise. These processes are especially important in adaptation planning, given that the impacts of climate change vary widely across locations, and in mitigation policies that affect communities' livelihoods and daily activities. UNDP's work shows that policies designed without local involvement often face implementation barriers, lower public trust, and weaker long-term outcomes.[69]

Taken together, these findings demonstrate that stakeholder and public engagement is not a peripheral activity but an essential governance function. Inclusive engagement strengthens political support for climate policies, increases the pace and effectiveness of implementation, and enhances the legitimacy of government decisions.

III. THE FIVE PILLARS OF GOOD CLIMATE GOVERNANCE

Having established the global consensus on what constitutes effective climate governance, this section sets out the **Five Pillars Model** that form the analytical framework for this report.

These pillars translate international best practice into a coherent structure that can be applied to any jurisdiction, regardless of administrative tradition or political system. They represent the core functional capacities that governments must possess to deliver mitigation, adaptation, and resilience at the scale and speed required under the Paris Agreement.

FIGURE 3.1: Essential Elements of Good Climate Governance

Pillar	Governance	Assessment
I. Long-term Vision, Targets, and Strategic Direction	Clear long-term goals & interim milestones	• Is there a clear long-term climate goal? • Are there specific interim targets to guide policy and investment?
II. High-level Political Leadership and Whole-of-Government Coordination	Whole-of-government coordination with political authority	• Is there a high-level body empowered to coordinate across government? • Does this body resolve cross-sector conflicts and set strategic priorities?
III. Integration Across All Policy Sectors ("Mainstreaming")	Embedding climate considerations across government	• Are climate objectives integrated into energy, transport, buildings, planning, finance, nature, health, and disaster management? • Are roles clearly defined to avoid fragmentation?
IV. Transparency, Monitoring, Reporting and Independent Review	Robust and timely reporting, data transparency, and expert review	• Are progress indicators tracked and publicly reported regularly? • Is there independent expert oversight to assess progress and recommend course corrections?
V. Stakeholder and Public Engagement	Structured engagement with stakeholders and society	• Are businesses, utilities, academia, and communities/ NGOs engaged? • Are efforts made to raise public awareness and build societal support?

The sections that follow translate these internationally recognised governance principles into the Five-Pillar Model used in this report. While the previous section demonstrated the global consensus behind these elements, the next five sections explain the specific governance functions each pillar represents and how they collectively form a comprehensive framework for assessing climate governance performance.

Pillar One: **Long-term Vision, Targets, and Strategic Direction**	Long-term targets are the anchor of climate governance. They create clarity for alignment among policymakers, markets, investors, and communities. This includes:			
	A formal commitment to a long-term goal (e.g., carbon neutrality by 2050).	Clear interim milestones (e.g., 2030, 2035).	Sectoral pathways consistent with these milestones.	Integration into long-term fiscal, infrastructure, and land-use planning cycles.
	As recognised by the IPCC and embedded in the Paris Agreement, jurisdictions without such long-term targets struggle to maintain policy continuity and attract investment for decarbonisation.			

Pillar Two: **High-level Political Leadership and Whole-of-Government Coordination**	Because climate change is crosscutting, high-level political leadership is indispensable. Effective coordination requires:			
	A central decision-making body, ideally chaired by the jurisdiction's top leader or deputy.	Authority to direct government policy bodies, departments and regulatory bodies.	Responsibility for resolving inter-departmental-agencies conflicts.	Oversight of implementation across sectors.
	International practice from the United Kingdom's Cabinet Office to Singapore's IMCCC to China's central planning mechanisms and Hong Kong's executive-led system all show that high-level coordination is essential for coherence and speed.			

Pillar Three: **Integration Across All Policy Sectors ("Mainstreaming")**	Mainstreaming ensures climate objectives are not confined to a single environment bureau but integrated across government. This includes:			
	Embedding climate considerations into energy, buildings, transport, planning, finance, health, nature conservation, and disaster risk reduction functions.	Clear mandates and roles for bureaux.	Mechanisms for cross-bureau alignment and conflict resolution.	Tools, guidance, and skills building for civil servants.
	Mainstreaming is indispensable for whole-economy decarbonisation, adaptation, and resilience.			

Pillar Four: **Transparency, Monitoring, Reporting and Independent Review**	Transparency, monitoring, reporting, and independent oversight confer credibility on climate governance and actions. Credible climate governance requires:		
	Regular monitoring of progress using clear indicators.	Public reporting that is accessible and frequent.	Independent expert oversight capable of providing objective assessments, diagnosing shortfalls, and recommending corrective action.
	International experience shows that independent review bodies (e.g., the UK's CCC) also help maintain ambition, manage risks of backsliding, and provide stability for markets.		

Pillar Five: **Stakeholder and Public Engagement**	Climate governance must be inclusive. Effective systems:			
	Engage utilities, building owners, developers, transport operators, investors, financial institutions, academics, NGOs, and youth groups.	Use consultation platforms to gather feedback and improve policy design.	Raise public awareness to foster behavioural change and political support.	Provide accessible information to empower communities.
	Stakeholder engagement is essential to achieving legitimacy, social acceptance, and practical implementation.			

IV. TOWARD HOLISTIC CLIMATE GOVERNANCE

Good climate governance is not a checklist but a context-dependent, integrated system combining long-term vision, political leadership, cross-government coordination, sectoral alignment, transparent reporting, and broad-based engagement. As the IPCC emphasises, climate governance must continuously evolve in response to new science, shifting risks, and societal expectations.

The Five-Pillar Model outlined in this chapter provides the analytical framework for evaluating Hong Kong's governance architecture and will inform the recommendations developed in due course after a series of engagement discussions. The model describes how climate ambition is translated into sustained delivery through institutions, coordination, and implementation capacity.

As climate change accelerates globally and regionally, jurisdictions with strong governance systems will be best positioned to protect their populations, sustain economic competitiveness, and contribute to the global effort to limit warming to 1.5°C. Hong Kong's ability to embed these elements into its governance architecture will directly shape the city's capacity to deliver on its commitments and build a resilient, future-ready city.

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